USING FRAMEMAKER

UNIX

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FrameMaker

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WELCOME TO FRAMEMAKER

Welcome to FrameMaker® document publishing software from Frame Technology® Corporation. FrameMaker is integrated publishing software that gives you everything you need to create a wide range of publication-quality documents—books, technical manuals, letters, memos, reports, newsletters, and presentations.

Using this manual (first-time users)

This may be the manual you turn to most often as you work with FrameMaker. It contains step-by-step instructions for most tasks you perform.

The eight parts of this manual deal with general areas of interest such as text, graphics, and page design. The table of contents that precedes this preface lists the eight parts, the chapters in them, and the major sections of each chapter. A table of contents at the beginning of each chapter lists the contents of that chapter in detail.

The appendixes provide additional information to help you work with FrameMaker as well as companion products. The glossary defines FrameMaker and industry-wide printing terminology.

Using this manual (upgrade users)

This manual is an improved version of your familiar FrameMaker manual. It has new and revised step-by-step instructions that incorporate the new FrameMaker features. The following table lists some of these features and the parts of the manual where they're mentioned. If you want detailed information about the new FrameMaker features, consult the online manual *What's New in FrameMaker*.

For new information about	See
QuickAccess bar	"Using commands and dialog boxes" in Chapter 2
Text imported by reference	"Importing text" in Chapter 3
Paragraph straddles	"Formatting special headings" in Chapter 4
Table straddles	"Inserting and manipulating tables" in Chapter 6
Footnote straddles	"Creating a footnote" in Chapter 11
Small Tools palette	"Setting up the drawing environment" in Chapter 13
Text runarounds	"Using text with graphics" in Chapter 13
Joined Bézier curves	"Arranging objects" in Chapter 14
Anchored frame positions	"Creating an anchored frame" in Chapter 15
Anchored frame straddles	"Creating an anchored frame" in Chapter 15
Text frames	Chapter 18, Chapter 19, and Chapter 20
Hypertext enhancements	Chapter 27

Command conventions

This manual identifies commands on submenus by referring to both the submenu and the command name. For example, the New Master Page command on the Page Layout submenu is referred to as Page Layout>New Master Page.

Keyboard conventions

This manual refers to a key called Meta. The following table shows how the Meta key is labeled on keyboards from several manufacturers.

Keyboard	Meta key is labeled
Sun	With a diamond; Left and Right on older keyboards
Hewlett-Packard	Extend Char
IBM	Alt
DEC	Compose Character
Silicon Graphics	Alt

This manual uses concise conventions for the key combinations you use for keyboard shortcuts. The following table explains the conventions.

Shortcut	Explanation
Control-e	Hold down Control and press the letter *e*.
Shift-Control-hyphen	Hold down Shift and Control, and press the hyphen key.
Esc v B	Press and release the Esc key, then press the letter *v,* and hold down Shift while you press the letter *B*.

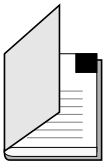
When this manual uses Esc as the default command prefix, you can use Control-r as the command prefix instead. Your system administrator can tell you whether your platform is configured for a different command prefix.

This manual also uses the following conventions for mouse actions.

Instruction	Action
Click	Click the left mouse button.
Middle-click	Click the middle button of a three-button mouse, or simultaneously click both buttons of a two-button mouse.
Right-click	Click the right mouse button.
Double-click	Click the left mouse button twice rapidly without moving the mouse.
Shift-click	Hold down Shift and click the left mouse button.

Using FrameMaker documentation

Whether you're a publishing novice or a production expert, FrameMaker documentation provides a clear and easy path to productivity: a tutorial to get you started, booklets describing installation and shortcuts, online Help, and more. Some of the documents are provided in printed form; most are available online and are accessible through online Help.



What to look for in print

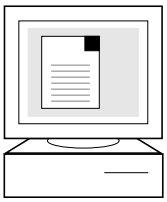
The following information is available in print.

Product overview *Introducing FrameMaker* describes features and functions of FrameMaker. It includes samples of the kinds of documents you can create.

Installation instructions *Installing Frame Products* explains how to install FrameMaker and set up licensing at your site. *Installation Notes* includes last-minute changes in installation procedures.

User's manual *Using FrameMaker* has step-by-step instructions for a comprehensive range of FrameMaker tasks. It is organized logically by task groupings.

Abbreviated task instructions and shortcuts The *Quick Reference* for FrameMaker contains abbreviated instructions for many tasks, and it lists all of the keyboard shortcuts. The *Pocket Guide* for FrameMaker lists keyboard shortcuts you can use when typing and editing text.



What to look for online

The following information is available online. You can reach most online information from online Help. You can reach online manuals from the Online Manuals pop-up menu in the Help main menu.

New and changed features If you are already familiar with earlier versions of FrameMaker, you may want to read the online manual *What's New in FrameMaker*. This manual describes the new and changed features in this release of FrameMaker and directs you to further information.

Overview *FrameMaker Overview* is a brief online introduction to key FrameMaker concepts. If you are new to FrameMaker, it is your best online starting point.

Online tutorial If you are new to FrameMaker, the online tutorial, *Learning FrameMaker*, will teach you the basics as you work with real FrameMaker documents. Do the tutorial after you read *FrameMaker Overview.* To start the tutorial, choose Tutorial from the Help main menu.

Last-minute information The online manual *Release Notes* provides late-breaking information on FrameMaker that could not be included in the printed manuals.

Online reference FrameMaker online Help includes both indexed and context-sensitive help with commands, dialog boxes, and keyboard shortcuts.

Application management The online manual *Managing Frame Products* gives information on adding fonts to FrameMaker, the files contained in this release, and FrameMaker scripts and environment variables.

Custom use The online manual *Changing Setup Files* explains how to customize FrameMaker and its environment.

Templates Predesigned templates are available for a variety of uses—for example, common business correspondence, newsletters, reports, outlines, and books. To see a list of templates, choose New from the File menu and then click Explore Standard Templates.

Samples Sample documents, available through online Help, show the types of documents you can create with FrameMaker.

Clip art FrameMaker provides a collection of line art that you can copy and paste into your own documents.

Filters The online manual *Using Frame Filters* provides information on converting a wide range of documents between FrameMaker and other applications.

Multiple-platform use The online manual *Using Frame Products on Multiple Platforms* describes how the UNIX, Windows, and Macintosh versions of FrameMaker differ.

Maker Interchange Format (MIF) The online manual *MIF Reference* explains the MIF text format, which allows FrameMaker to share information with another application while preserving graphics, text, and formatting information.

Maker Markup Language (MML) The online manual *MML Reference* describes a markup language that you can use with any standard text editor to create simple FrameMaker documents.

PART I

Basics

1 OVERVIEW

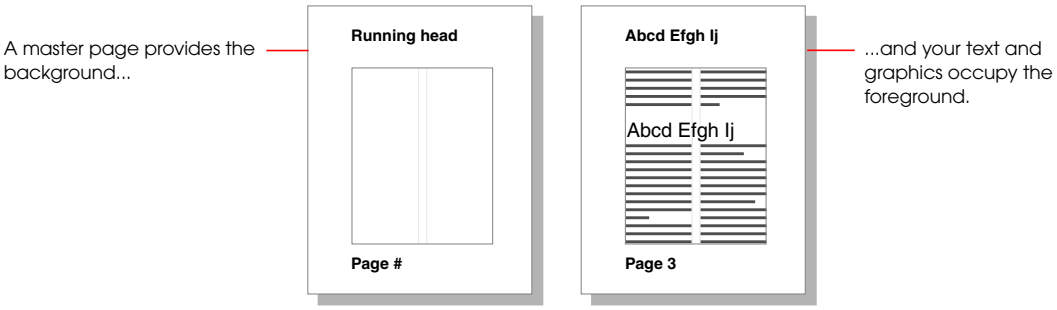
FrameMaker is a complete publishing system. It's a word processor, page designer, graphics editor, and book builder rolled into one package. You can use this versatile application to write simple one-page memos or to produce complex multichapter documents with imported graphics.

Full word processing power

FrameMaker provides the text editing, spell-checking, and search capabilities you expect from a full word processor. You can format text as you type or apply predefined formats later, using advanced text management features such as paragraph and table format catalogs. FrameMaker can automatically manage cross-references and footnotes to further streamline and simplify your work.

Flexible page design

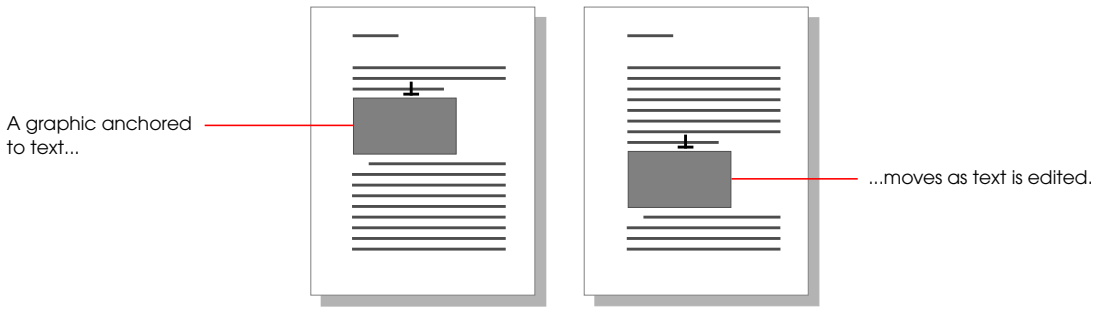
Page design in FrameMaker is fast and flexible. You create master (background) pages that contain the design elements you want to appear on all body (foreground) pages. You specify the number and position of text columns and the appearance of background text and graphics. Text, tables, and graphics flow from column to column automatically, and can even straddle columns.



Portrait and landscape pages can be mixed and can contain any combination of columns.

Graphics tools, with color

With the FrameMaker drawing tools, you can draw and edit objects to add visual interest (and perhaps some color) to a document. You can capture an image on your screen and then import the image into a document. Graphics can be anchored to text so that they move with the surrounding text as you edit.



Or they can be placed at a fixed location on the page, with text running around the graphics automatically.

A gateway for other products and platforms

FrameMaker supplies tools for importing graphics and text from other application programs to FrameMaker documents. FrameMaker can maintain a link between the document and the source of the imported information so the document is updated automatically when the source changes. And when you import text, you can retain the formatting from the source document or use the formats stored in the current one.

FrameMaker is available for several operating systems, including Microsoft Windows, the Apple Macintosh® operating system, and UNIX. The FrameMaker document format is the same on every platform. So you can create documents on one platform, edit them on a second, and distribute them on a third.

Book building and revision management

FrameMaker provides a book building feature that lets you manage multiple files as a single document. You can generate a table of contents or an index for the entire book or for a selected chapter automatically. Lists of captioned illustrations are just as easy to assemble.

As you revise and refine a book, you can track the changes by using change bars or by comparing a revision with the original.

Professional color control

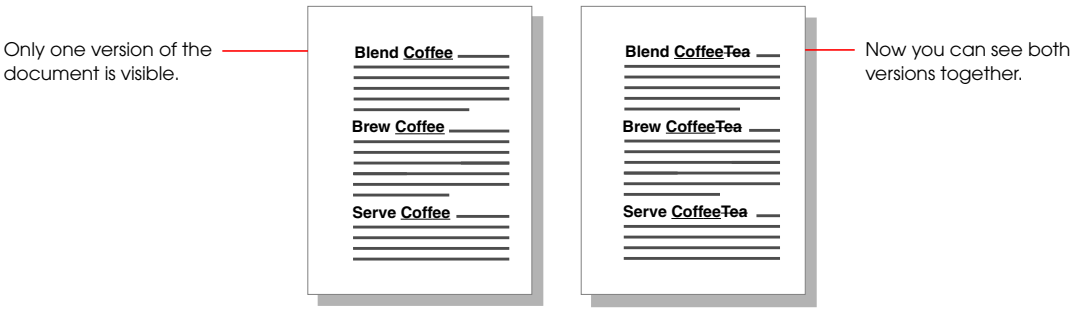
Color separations can be expensive if you leave them to outside vendors. With FrameMaker, you can prepare color separations for spot color and for four-color process printing yourself. You can review and correct color work long before your document goes to press, saving time and money in the process.

Attractive tables for organizing information

When you want to present information in a tabular format, FrameMaker simplifies the job. You can create attractive tables with any combination of ruling lines and shading. You can make cells straddle columns or rows. For a professional look, you can rotate headings to create table categories that stand out.

Conditional text for multiple versions of a document

If you need to create several versions of the same document, the FrameMaker conditional text feature lets you hide or display different versions in the same document.

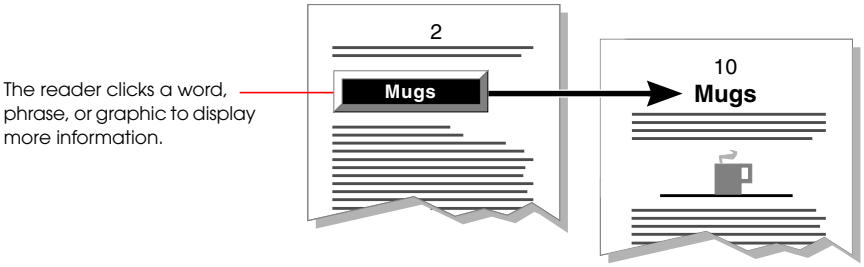


Templates for standardized documents

If you're creating a document that must have a consistent, polished look throughout, using a template speeds up the job. When you create a document from a template, you use the template's page layouts, predefined formats, and other properties. FrameMaker provides a variety of templates for letters, memos, reports, newsletters, outlines, books, and viewgraphs.

Information links can be built in

You can use FrameMaker hypertext commands to set up links between related locations. When readers view a linked document online, they can click an active location to jump to the related information at the linked location.



Locations in the same document or in different documents can be linked. When you generate tables of contents and indexes, you can include links to the items they list so that users can jump right to them.

If your readers don't have FrameMaker for reading online hypertext documents, you can distribute FrameReader® or FrameViewer® with your hypertext system. With FrameReader or FrameViewer, readers can open and navigate documents and also use a few appropriate FrameMaker commands, such as Print, Copy, or Find.

Step-by-step instructions

This brief introduction has given you a broad overview of FrameMaker publishing features. The rest of this manual supplies the details. Part I concludes with Chapter 2, "Basic Procedures," which explains essentials such as creating new documents and managing windows. Parts II through VIII contain step-by-step instructions for the many jobs you'll do as you use FrameMaker to prepare your work for publication.

2

BASIC PROCEDURES

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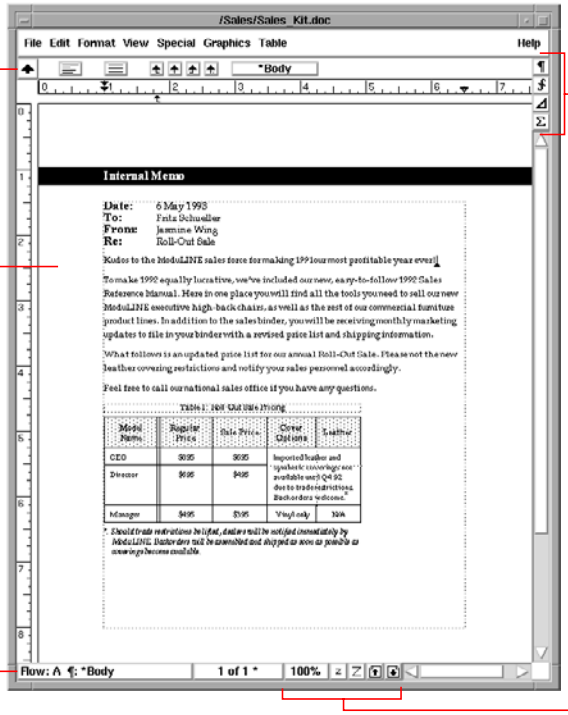
2 BASIC PROCEDURES

FrameMaker lets you create and publish great-looking documents through its easy-to-use commands and tools. Once you master the basics of using FrameMaker, you'll want to learn more about the program and add more skills to your repertoire.

A quick look at the FrameMaker document window

FrameMaker displays a document in a document window. Within this window, you can write new text, view pages in different ways, and fine-tune every detail of a publishing project.



The formatting bar makes it easy to format paragraphs.

Buttons give you access to formatting, drawing, and math tools.

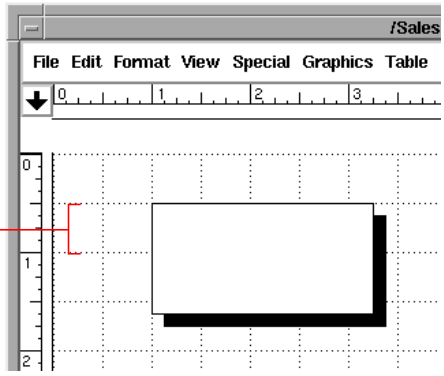
You view your document here.

The status bar displays information on paragraphs and pages.

Controls let you magnify or enlarge your view and turn pages.

Window settings can suit your preferences

FrameMaker gives you several ways to change your view of a document. You can zoom to view your document at any percentage up to 1600, and you can display one, two, or more pages at a time. You can also use a variety of nonprinting borders, text symbols, rulers, and grid lines as aids for precise text placement and editing. When you need a different unit of measurement for the rulers or a different grid size, you can easily customize these features.



Saving documents lets you be creative and secure

If you've worked with a computer, you already know the importance of saving your work—and saving it often. A saved document spares you the grief of losing a day's work when the power fails unexpectedly. FrameMaker can automatically save your document and create backup copies for you. These saved documents can also help if you want to make sweeping revisions to a document but don't want to discard the original until you're sure you want to keep your changes.

In this chapter

This chapter shows you how to create and open documents and how to work with commands, dialog boxes, and windows. It also covers setting up the document window, saving files, making backup copies, printing black-and-white copies, and what to do when you finish with a document or with FrameMaker.

STARTING FRAMEMAKER

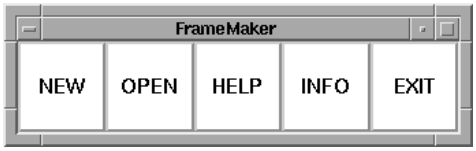
Before you can use FrameMaker you must have a UNIX window open on your screen. Your system administrator should have installed a licensed copy of FrameMaker on your system according to the instructions in *Installing Frame Products.*

You start FrameMaker in a UNIX window. FrameMaker then displays its main window. From this window, you can create a new document or open an existing one, if you have a license. If you don't have a license, you can get one by using commands and dialog boxes. (If you don't know how to choose a command or use a dialog box, see "Using commands and dialog boxes" on page 2-16. Also, the instructions in this manual assume that you are familiar with your window manager's methods for scrolling in windows and closing them.)

To start FrameMaker

If you don't see the FrameMaker icon or the main FrameMaker window, start FrameMaker.

Icon



Main FrameMaker window

- **Type one of the following commands in a UNIX window and press Return.**

FrameMaker edition desired	Command
United States	maker
International Edition	imaker -l *language* Type `imaker -l` (lowercase *L*) and the name of the language you want to use—for example, `ukenglish`, `francais`, `deutsch`, `italiano`, or `svenska`.

FrameMaker displays the main FrameMaker window. (If you don't see the main FrameMaker window, contact your system administrator.) You can now create or open a document. If you want to work on more than one document at a time, open another document. Don't start another copy of FrameMaker.

For instructions on how to open a specific document when you start FrameMaker, see the online manual *Changing Setup Files*.

To get a license

You can use FrameMaker if you have either a shared or a personal license. You can get a shared license from your network on a first-come, first-served basis; however, your system administrator can reserve a shared license for your exclusive use. A personal license can be used only by a specific user. If you can successfully open an existing document or create a new one, you have a license and you do not have to follow these instructions. Use this procedure when you see an alert that tells you that you do not have a license.

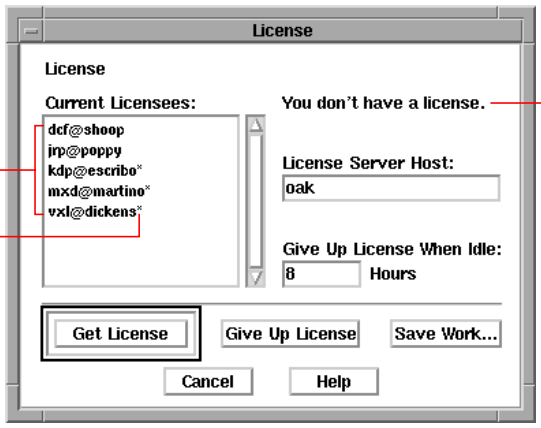
Occasionally, you may find that no shared licenses are available. In that case, you can use FrameMaker only in demonstration mode until someone else gives up a license.

In addition, your system administrator can specify how long FrameMaker can remain idle before a user loses a license. As a result, if you start FrameMaker and then leave it idle for some time, you can lose your license. If you're using a shared license and don't intend to use FrameMaker for a while, but don't want to quit the application, consider giving up your license so that it becomes available to another user. For information on giving up a license, see "If you've lost your license or want to give it up" on page 2-6.

For a detailed description of Frame® licensing policy and instructions for setting up and customizing licenses, see *Installing Frame Products*.

1. **Click Info in the main FrameMaker window.**
2. **Click License.**
3. **Click Get License.**
   FrameMaker gives you a license if one is available.

If you can't get a license on your current host, you can type the name of another server host in the License Server Host text box and click Get License again.



Displays the users who currently have shared licenses from the host named in the License Server Host text box

The asterisk indicates a reserved license.

Tells you whether you have a license

IF YOU'VE LOST YOUR LICENSE OR WANT TO GIVE IT UP

If your system sits idle for too long, FrameMaker may give up your license. If this happens, you can't edit a document, but you can still manipulate FrameMaker windows, save any unsaved work in a document or book file, exit FrameMaker, or get another license and continue your work. If you have any unsaved documents open, click Save Work before you try to get another license.

If you want to make your license immediately available to others, click Give Up License. You can also specify the length of time FrameMaker can remain idle before you lose your shared license. You must specify a whole number of at least 1 hour. Your system administrator sets an upper limit on the amount of time you can leave FrameMaker idle without losing your shared license.

CREATING AND OPENING DOCUMENTS

After you've started FrameMaker, you begin to work with a FrameMaker document, either by creating a new one or by opening an existing one. When you create a new document, you can use a template that already defines much of what a document looks like, or you can start with the FrameMaker equivalent of a blank piece of paper. Either method lets you create a document that looks exactly like the document you want.

A template is a FrameMaker document that can contain all the information necessary for laying out a new document. It includes paragraph, character, and table formats as well as page layout information (such as margins, page numbering, and spacing for headers and footers). Some templates also contain formats for running headers and footers. Templates let you create professional-looking documents and help standardize documents created by different authors.

When you use blank paper to create a new document, you start with a document that includes a few basic paragraph and character formats. If none of the FrameMaker templates looks like what you want, use a blank paper document and create your own formats.

After you create or open a document, you can make changes to the document window through which you view the document, you can add to the document, and you can change the document's layout.

For you to create or open documents, you must know how to use commands and dialog boxes. If you don't know how to choose a command or use a dialog box, see "Using commands and dialog boxes" on page 2-16.

To create a document from a template

When you create a document based on a template, all the formatting instructions are copied from the template to the new document. For general information on templates, see "FrameMaker templates" on page 2-8. For detailed information on templates, see Chapter 21, "Document Templates."

FrameMaker provides templates for letters, memos, reports, newsletters, outlines, books, and viewgraphs.

1 **Click New in the main FrameMaker window.**
You can also choose New from the File menu of an open FrameMaker document to create a new document.

FrameMaker opens a dialog box and displays the contents of the `Templates` directory or, if it cannot find this directory, the contents of your home directory. (If the current directory isn't `Templates`, in the Use Template dialog box type `$FMHOME/fminit/`*`usenglish`*`/Maker/Templates` and click Create.)

If you are using an international version of FrameMaker, substitute your language name for *`usenglish`*. If you don't have a FrameMaker license, you'll see an alert. See "To get a license" on page 2-5.

FRAMEMAKER TEMPLATES

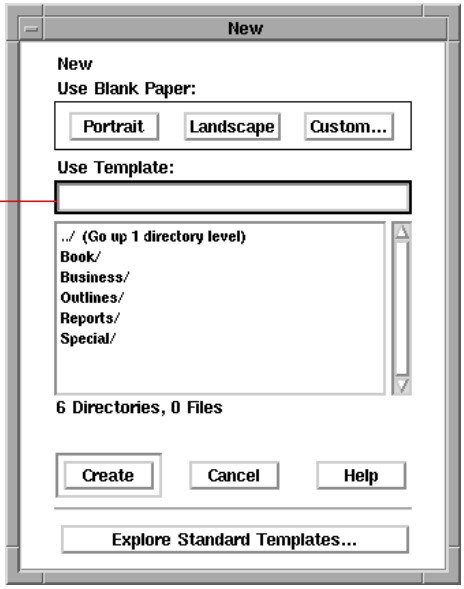
Templates are the foundation of the FrameMaker approach to document publishing. They affect the appearance of every aspect of a document and help to keep that appearance consistent from one page to the next and from one chapter to another.

A template can contain:

- Paragraph, character, and table formats that you can apply anywhere in the document. These formats are stored in catalogs that are always available as you work.
- Page layouts that determine the number of columns on a page and their positions. The page layouts also contain the text and graphics that appear in the background on body pages.
- Reference pages that hold graphics and formatting information accessible from anywhere in the document.
- Cross-reference formats that determine the text and appearance of cross-references.
- Variable definitions that let you use a placeholder for text that FrameMaker can update as the definitions change.
- Conditional text formats and settings that manage the different versions of a single document in the same file.
- Colors specific to a document. FrameMaker provides a basic set of colors, but a template can include custom colors.
- Math definitions that include equation size, font settings, and custom math element definitions.

For information on creating templates, see Chapter 21, "Document Templates."

2 Select a directory and click Create.



Type the name of the directory you want to open, or select a directory name in the scroll list.

FrameMaker displays a list of templates in the selected directory.

3 Select a template and click Create.

FrameMaker opens a new document, copying the formats from the template. Initially, the name of the document is `NoName`, but you can use the Save As command on the File menu to rename it. For information on using this command, see "To change a document's name, location, or file format" on page 2-31.

4 Enter text in the document.

If there is sample text in the document when you create it, you can either remove it and then start to type, or you can select the sample text and type over it. Whether you delete the sample text or just type over it, the document still contains all the paragraph and character formats of the template. For information on deleting some text or typing over text, see Chapter 3, "Editing Text."

If you can't select sample text or a graphic from the newly created document, the text or graphic is located on one of the document's master pages. For information on making changes to a master page, see Chapter 19, "Custom Page Design."

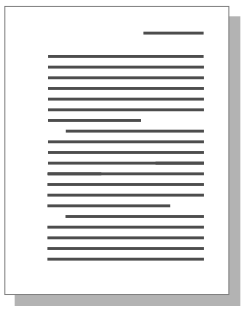
EXPLORING STANDARD TEMPLATES

If you're not sure which standard template to select in the scroll list in the New dialog box, click Explore Standard Templates. In the Standard Templates dialog box, select a template in the scroll list to see some descriptive information about the template and a thumbnail image (or preview) of it.

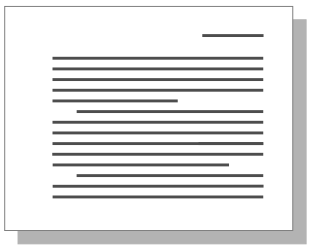
To create a document from blank paper

If none of the FrameMaker templates has the format you want, you can use a blank paper document to design your own format. FrameMaker provides three kinds of blank paper documents—portrait, landscape, and custom.

Portrait and landscape blank paper documents display a page with one text frame. When you create a custom document, you can specify exactly the page size, margins, and number of columns you want. For information on creating a custom document, see "To create a custom document," next.



Portrait orientation



Landscape orientation

1 **Click New in the main FrameMaker window.**
You can also choose New from the File menu of an open FrameMaker document to create a new document.

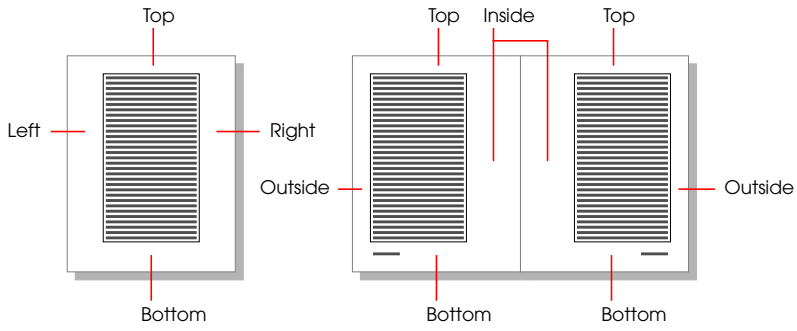
If you don't have a FrameMaker license, you'll see an alert. See "To get a license" on page 2-5.

2 **Click Portrait or Landscape to create a new document, or click Custom to design your own page format.**
If you click Portrait or Landscape, FrameMaker opens a new, untitled document with either vertical or horizontal orientation. You can use the Save As command on the File menu to rename the document. If you click Custom, see "To create a custom document," next.

To create a custom document

Once you have clicked Custom in the New dialog box to create a custom document, you can define any of the items that make up the general page layout of the document. You can change the document's page size, the number of columns on a page and their spacing, the width of the margins, whether the document is single- or double-sided, and the default units of measurement. Make your selections and then click Create.

- **Choose a page size from the pop-up menu to set the general page layout options for a variety of preset page sizes.**
  If you choose a page size from the pop-up menu, FrameMaker changes some of the other options in the dialog box. You may change any of the options.
- **Type a width and height for your pages.**
- **Type the number of columns and a gap value.**
  The gap is the space between columns.
- **Type values for the margins.**
  These margins are measured from the edge of the page.
- **Click a pagination setting.**
  If you select Double-Sided, choose Right 1st Page or Left 1st Page from the pop-up menu to determine on which side a document starts. The text boxes for the left and right column margins change so you can enter values for inside and outside column margins to create a different margin on the inside of the document to allow for binding.



- **Choose the units for the document.**
  These display units are the units of measurement FrameMaker uses when it measures distances in your document. These display units appear in dialog boxes and in the document window's status bar.

To open an existing document

You can open an existing FrameMaker document or a document created in a compatible application. If you open any file other than a FrameMaker file, FrameMaker tries to convert it to a FrameMaker document. If the file is from another application, a filter for that application must be installed so that FrameMaker can recognize and open the file. For information on file types FrameMaker can open and for a list of filters provided with FrameMaker, see "File types you can open" on page 2-12. If you are opening a text file, see "To open a text file as a document" on page 2-16.

1 **Click Open in the main FrameMaker window.**
You can also choose Open from the File menu of an open FrameMaker document.

If you don't have a FrameMaker license, you'll see an alert. See "To get a license" on page 2-5.

FILE TYPES YOU CAN OPEN

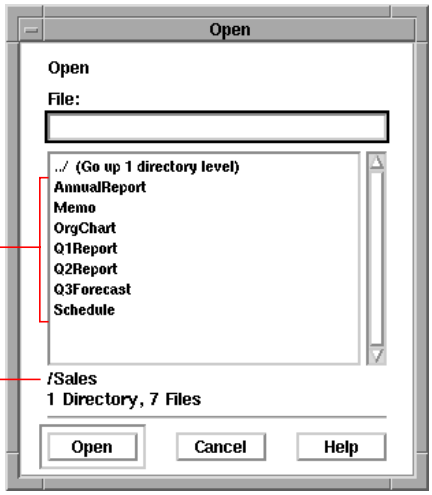
FrameMaker can open the following types of files.

Maker Interchange Format (MIF) or Maker Markup Language (MML) files MIF is an ASCII format that lets you exchange information between FrameMaker and other applications. MML is a markup language you can use with any standard text editor to create simple FrameMaker documents. When you open a MIF or an MML file, FrameMaker normally converts it to a FrameMaker document. To open the file without converting it so you can edit the MIF or MML statements, hold down Shift and click Open in the Open dialog box. FrameMaker opens the file without interpreting its commands.

Text files These files do not have graphics or paragraph and character formatting information. For information on how to open a text file document, see "To open a text file as a document" on page 2-16.

Files created in other applications FrameMaker provides you with the filters to open files created in Microsoft Word, WordPerfect, Interleaf, and troff. Much of the file's formatting is retained when you open the file. Consult your system administrator about other types of files you can open at your site. For more information on FrameMaker filters, see the online manual *Using Frame Filters*.

2 **Select the name of the document you want to open.**



To open the document in one step, double-click the document name in the scroll list.

If the file you want to open isn't in the scroll list, change to another directory by double-clicking a directory name in the scroll list or by typing a different directory name in the text box above the scroll list and clicking Open.

3 **Click Open.**

Typically, the document opens immediately. Occasionally, FrameMaker displays an alert or dialog box before opening the document. The following describes these special cases.

- If FrameMaker can locate all the fonts and imported graphics in the document, it opens the document. If you are opening a text file, FrameMaker first may ask you to confirm that the file is text by presenting the Unknown File Type dialog box with Text preselected. Click Convert to continue. You see the Reading Text File dialog box. For more information, see "To open a text file as a document" on page 2-16. If you try to open a document already in use, you will see a dialog box that tells you that your changes to the file may conflict with the work of others. For more information, see "Documents in use" on page 2-14.

- If the document uses fonts that are not available on your computer, or if the document uses different font metrics, FrameMaker displays an alert. If you continue, FrameMaker substitutes new fonts for those missing and reformats your file. Your line breaks, page breaks, and text lines may look different. If you don't want your file reformatted with new fonts, click Cancel. If you open a document with substitute fonts, the document doesn't change permanently until you save it. For information on adding fonts to FrameMaker, see the online manual *Managing Frame Products*.
- If you try to open a document that was open when a system crashed, FrameMaker may ask whether you want to open an automatically saved version of the file. For more information on opening this file, see "If your system crashes" on page 2-36.
- If you try to open a file containing imported *art* that FrameMaker can't locate, FrameMaker displays the Missing File dialog box, in which you can tell FrameMaker where the graphic is located or instruct FrameMaker to skip the missing graphic. For information on locating missing art, see "To locate a graphic FrameMaker can't find" on page 16-14.

DOCUMENTS IN USE

To keep track of open documents, FrameMaker creates a lock file named *filename*.lck (where *filename* is the name of the open document). A lock file is located in the same directory as the original document. If you try to open a document that's already open, and if you have permission to write to that document, FrameMaker displays a Document in Use dialog box that shows the name of the document, who opened it last, the host on which it is open, and when it was opened. You also see this dialog box when your system crashes and when you open the document you were last using.

If you do not want to open the lock file, click Cancel.

If you want to open the lock file, you have three choices. If you want only to look at the file, and if you don't want to change it at all, click Open for Viewing Only and click Continue.

If you want to open a copy of the file that you can edit, click Open Copy for Editing and click Continue. There will be two versions of this document—the one you use and the original document.

If you want to edit the file and know that no one else is using it, click Reset File Lock and Open, and then click Continue to open the file. Use this option when your system crashes and you are opening the document you were last using.

FrameMaker removes the lock file when you close the document.

Cross-platform use For information on how to ensure file locking across platforms (Windows, Macintosh, and UNIX), see the online manual *Using Frame Products on Multiple Platforms*.

- If you open a file containing a *text inset* whose source FrameMaker can't locate, FrameMaker displays an alert. For information on text insets, see "To locate the source for an unresolved text inset" on page 3-23.
- If you open a file containing unresolved cross-references in a file set for automatic updating, FrameMaker displays an alert. For information on resolving cross-references, see "To resolve a cross-reference after automatic updating" on page 10-18.
- If you open a non-FrameMaker file, FrameMaker may display the Unknown File Type dialog box and selects its best guess as to the file type. You can select any type in the list. Click Convert to continue.

LIMITING THE CONTENTS OF THE SCROLL LIST

By typing wildcards in the Open File Named text box, you can limit the files listed in the scroll list. For example, if you type `*.new`, you see any subdirectory or document that has the extension `.new`. To redisplay the entire directory, type `*` in the text box. For information on other wildcards, see "Wildcards" on page 8-8.

OPENING RECENTLY OPENED DOCUMENTS

At the bottom of the File menu, FrameMaker lists the five documents you have most recently opened or saved with the Save As command. To open a document listed, simply choose it from the File menu. The filenames appear in chronological order, with the most recently opened document at the top of the list. When FrameMaker adds a filename to the list of five files, it removes the name at the bottom.

To open a text file as a document

When you open a text-only file in FrameMaker, FrameMaker queries you about how to treat the text in the document.

1 **Follow the usual steps for opening a FrameMaker document.**

For details, see "To open an existing document" on page 2-12. When you open a text file, FrameMaker first may ask you to confirm that the file is text by presenting the Unknown File Type dialog box with Text preselected. Click Convert to continue. The Reading Text File dialog box then prompts you for information on how to import the text.

2 **Specify how to treat the imported text and click Read.**

Selection	Text example	Comment
Merge Lines into Paragraphs	Paragraph-oriented text file such as a file containing document text	Merges adjacent nonblank lines into paragraphs and breaks the text into paragraphs at a blank line.
Treat Each Line As a Paragraph	Line-oriented text file such as computer code	Breaks the text into paragraphs at the end of each line. This option maintains a file's original line breaks and blank lines.

USING COMMANDS AND DIALOG BOXES

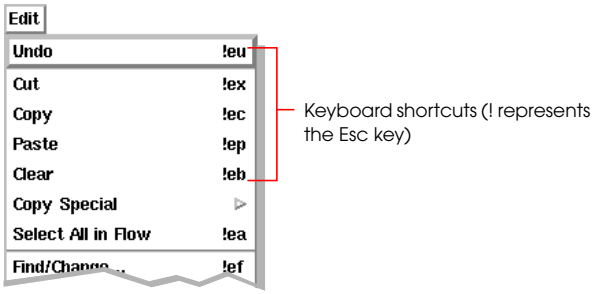
Once you start FrameMaker, you use commands, dialog boxes, and windows for almost every task. You choose commands in FrameMaker just as you do in other applications—by using a menu in the FrameMaker menu bar or by using keyboard shortcuts. You can undo most commands with the Undo command on the Edit menu. If you need help on a command, dialog box, or window, you can choose a Help command, click a Help button, or start context-sensitive Help.

FrameMaker uses dialog boxes and windows to accept input from you. The document window is only one of the windows you see in FrameMaker; the others look like dialog boxes. Dialog boxes must be dismissed before you can continue working in your document. Windows, such as the Spelling Checker and Find/Change windows, can remain displayed while you work. Some text boxes in dialog boxes and windows display a preset measurement—the display units (inches or centimeters, for example). You can change these settings for each document.

To choose a command from a menu

You can choose commands from the menus in the menu bar, and you can choose some frequently used commands such as Cut, Copy, and Paste from the Maker menu.

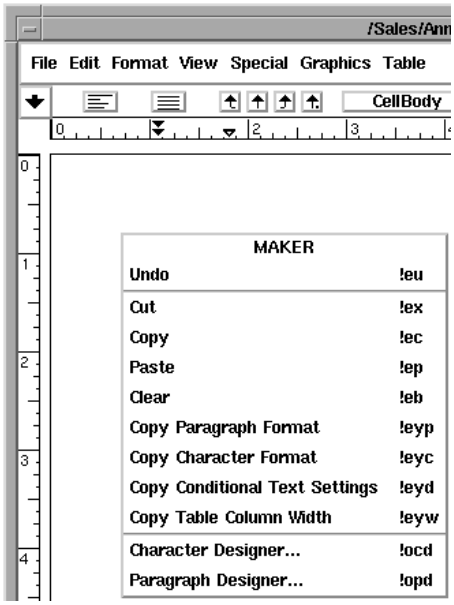
FrameMaker provides keyboard shortcuts for each menu command. As you become familiar with the application, you may want to use the keyboard shortcuts to choose commands because keyboard shortcuts are faster to use. Keyboard shortcuts appear on the menu to the right of the command. For a complete list of shortcuts, see the *Quick Reference*.



- **To choose a command from the menu bar, click the menu name and then click the command on the menu.**

  Or point on the menu name, hold down the mouse button, move the pointer to highlight your choice, and release the mouse button.

- **To choose a command from the Maker menu, point anywhere inside the document window, hold down the right mouse button, move the pointer to highlight your choice, and release the mouse button.**
  Or click the right mouse button in the document window and then click the command on the menu.



The Maker menu appears when you press the right mouse button.

- **To choose a command by using a keyboard shortcut, point in the document window and type the shortcut.**

  Because keyboard shortcuts are case-sensitive, be sure to type lowercase and uppercase letters just as they appear on the menus. The ! key represents the Esc key prefix. (This means you should press Esc before typing any other keys in the shortcut. You can also use Control-r for the Esc key. Your system administrator can change your setup so that the ! key represents a different key or key combination. For more information, see the online manual *Changing Setup Files*.) If a shortcut doesn't seem to work at first, make sure that the Caps Lock key is off and try it again. FrameMaker provides keyboard shortcuts for nearly every command. For a complete list, see the *Quick Reference*.

UNDOING A COMMAND

You can cancel the effects of most commands by choosing Undo from the Edit menu. If you choose a command that cannot be undone, FrameMaker asks whether you want to continue. FrameMaker remembers only the last command you used. Therefore, to cancel a command, choose Undo immediately.

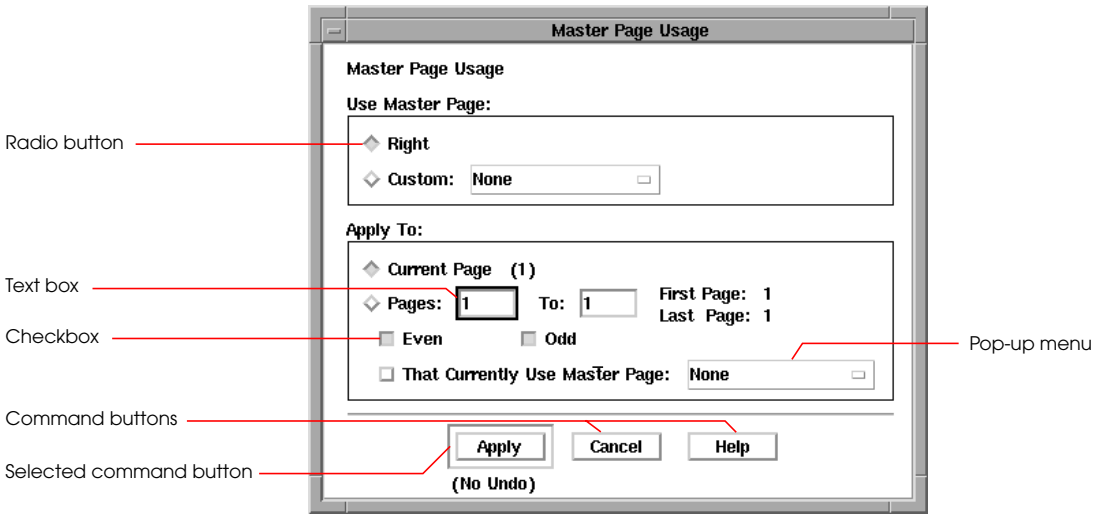
IF YOUR MENUS LOOK DIFFERENT

Menus in your version of FrameMaker may look different from the menus shown and described in the FrameMaker documentation. The documentation describes the complete menus. However, your version of FrameMaker may display a subset of the FrameMaker menus—quick menus—or may display a site-specific menu configuration that has been customized for you. You can display either complete menus or quick menus. You might want to use quick menus when you aren't using all the FrameMaker features. To display quick menus, choose Menus>Quick from the View menu. To display complete menus, choose Menus>Complete from the View menu.

You can also customize the menus shown in your version of FrameMaker. For information on how to customize menus, see the online manual *Changing Setup Files*. Contact your system administrator for information if your menus have been customized.

To use a dialog box

FrameMaker uses dialog boxes that contain scroll lists, pop-up menus, radio buttons, command buttons, checkboxes, and text boxes. You work with scroll lists, radio buttons, and checkboxes just as you do in other applications. FrameMaker doesn't accept any input in a document window while you have a dialog box open.



- **To choose from a pop-up menu, click the menu to reveal its contents and then click the item you want.**

  You can also point on the menu, hold down the mouse button, move the pointer to highlight your choice, and release the mouse button to make a selection from a pop-up menu.

  Pop-up menus in dialog boxes have a small bar on them to distinguish them from text boxes. A pop-up menu gives several options, with the current option showing. If you change your mind about using the pop-up menu, click outside the menu or point outside it and release the mouse button.

- **To type a value in a text box, click in the text box and type.**

  Don't press Return when you finish typing text unless you're finished with the dialog box. Pressing Return tells FrameMaker to execute the selected command button.

- **To apply changes and close a dialog box, click the preselected command button or press Return.**
  The preselected command button displays a selection box around it when the dialog box opens and has a name such as Set, Create, or Insert.
- **To cancel the changes and close the dialog box, click Cancel.**
  If you click Cancel when a pop-up menu is open, the command closes the menu. Click Cancel again to close the dialog box.
- **To display help information on the dialog box, click Help.**
  The pointer changes to a question mark. Move the question mark over an item and click to get help on that item.

  To cancel the help request, press Control-c.
- **To select an option by using the keyboard only, press Tab until the item you want is highlighted and then press the space bar.**
  Pressing the space bar when a pop-up menu is highlighted opens the pop-up menu. Press the up and down arrow keys to highlight items in the pop-up menu. Press the space bar again to select the highlighted item and to close the pop-up menu.

FRAMEMAKER WINDOWS AND DIALOG BOXES

FrameMaker displays a window instead of a dialog box when you choose some commands—for example, Find/Change and Spelling Checker. These windows look much the same as dialog boxes—with any combination of pop-up menus, text boxes, command buttons, radio buttons, checkboxes, and scroll lists—but windows can stay open while you work. Before you work in a window, you must make it active by moving your pointer over it (or, if you are set up in click to-type mode, you must click in a window to make it active). When you want to close a window, make it active and press Control-c (hold down the Control key and press c). If you want to close the Help window, press Control-x, Control-c (hold down the Control key and press x, and then hold down the Control key and press c).

To use the QuickAccess bar

The FrameMaker QuickAccess bar gives you easy access to frequently used commands.

- **To display the QuickAccess bar, choose QuickAccess Bar from the View menu.**
- **To change the orientation of the QuickAccess bar, click** **on the bar.**

- **To choose a command from the QuickAccess bar, click its command button.**
  For a list of commands and for information on using the QuickAccess bar, see the *Quick Reference* or click on the QuickAccess bar.
- **To close the QuickAccess bar, choose QuickAccess Bar from the View menu.**

To change the preset display units

Some text boxes in dialog boxes and windows require a unit of measurement, such as points or inches, for the value you type. The default units of measurement—the display units—appear after the values in the text boxes. If you type a value without a unit of measurement, FrameMaker uses the preset display units.

1. **Choose Options from the View menu.**
2. **In the View Options dialog box, choose a unit from the Display Units pop-up menu and click Set.**

USING DIFFERENT DISPLAY UNITS IN A TEXT BOX

If you want to use different display units for a particular entry, type the units; FrameMaker will convert the entry to the correct number of preset display units when you click the command button. Use this feature when you don't know the formula for converting one display unit to another. For example, if your document's display units are picas, and if you want to set a paragraph indent of 1 inch, type `1"` in the First Indent text box. When you click Apply, FrameMaker converts the measurement to the number of picas that corresponds to 1 inch.

To specify	Type this after the number
Centimeters	`cm`
Millimeters	`mm`
Inches	`"` or `in`
Picas	`pc`, `pi`, or `pica`
Points	`pt` or `point`
Didots	`dd`
Ciceros	`cc` or `cicero`

To get online Help

The FrameMaker Help system is a guide to the parts of FrameMaker you work with—windows and dialog boxes, controls and commands, and so on. It complements this manual, which describes the work you can do with FrameMaker and explains how to do it.

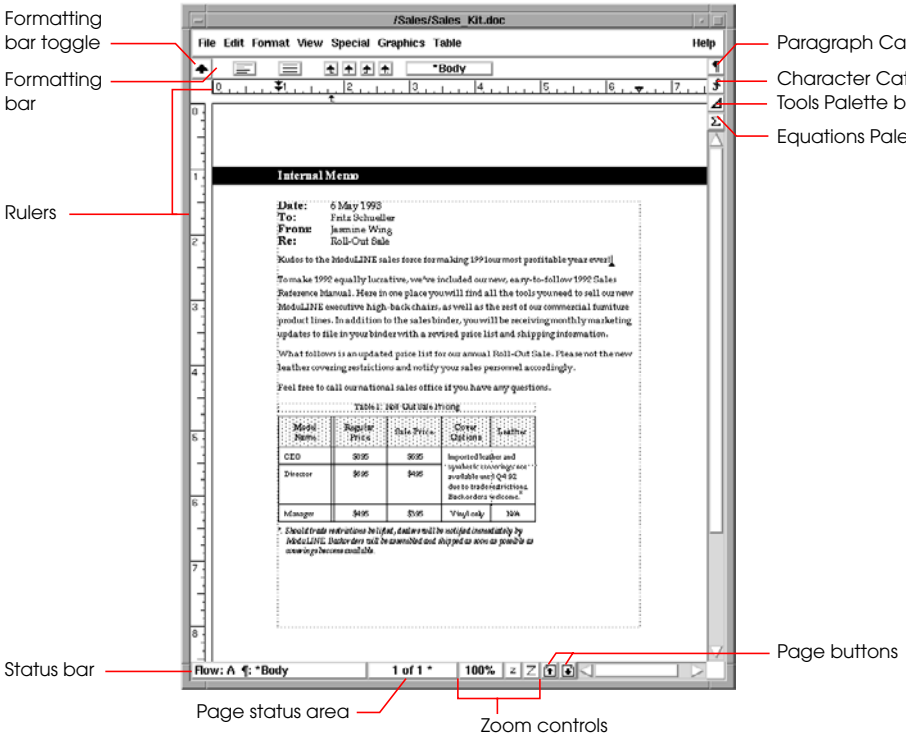
FrameMaker Help is also your access point to syntax descriptions, samples, clip art, and FrameMaker's online manuals.

You can get online Help by choosing a command from a document window's Help menu, by clicking Help on the main FrameMaker window, by turning on context-sensitive Help, and by clicking a Help button in a dialog box. Open online Help to see instructions on using it to get the information you need.

- **To see the Help main menu, choose Contents from the Help menu.**
  The FrameMaker Help main menu contains a list of topics for which help is available. Click About Help to get information on how to use the Help system.
- **To activate context-sensitive Help, press the Help key on your keyboard or click Help in a dialog box.**
  This changes the pointer to a question mark. Move the question mark over any item in a document window or other window, dialog box, or menu, and click to get help on that item. If you change your mind, you can cancel context-sensitive Help when the pointer is a question mark by pressing Control-c.

USING THE DOCUMENT WINDOW

Once you create or open a FrameMaker document, you work in a document window through which you view the contents of the document. For each document, you can change the way the document window looks according to your preferences and needs.



FrameMaker provides several ways to customize the document window. You can magnify your view of the document by using the Zoom buttons or the Zoom pop-up menu. Or you can turn on the grid, rulers, and borders to help you line up objects.

All of the items in the document window are discussed in the tasks that make use of them. You'll find information about the rulers, zoom controls, and page buttons in this chapter.

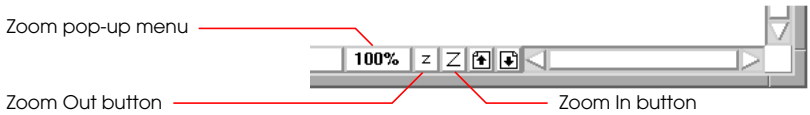
If you want information on the status bar, which shows you the names of paragraph, character, condition, and variable formats; the size and position of graphic objects; and flow names (depending on the insertion point's location or

what is selected), see Chapter 5, “Format Catalogs,” Chapter 26, “Conditional Documents,” Chapter 12, “Variables,” Chapter 14, “Editing Illustrations,” and Chapter 20, “Flow Design.”

If you want information on the Paragraph Catalog, Character Catalog, Tools palette, and Equations palette buttons, which display a small window of formats or tools, see Chapter 5, “Format Catalogs,” Chapter 13, “Illustrating a Document,” and Chapter 28, “Creating Equations.”

To zoom in and out

You can zoom in to focus on details or zoom out to display more than one page. The Zoom pop-up menu shows the current zoom setting.



- **To make text and objects appear smaller and to fit more in the window, click the Zoom Out button.**
- **To magnify text and objects, click the Zoom In button.**
  FrameMaker zooms in on the area of the page containing the insertion point or a selected object. If there’s no insertion point, and if nothing is selected on the page, FrameMaker zooms in on the center of the page.
- **To display text and objects at a particular percentage, choose a percentage from the Zoom pop-up menu.**
- **To display the entire page in the current window, choose Fit Page in Window from the Zoom pop-up menu.**
- **To resize the window so that it is the same size as the page, choose Fit Window to Page from the Zoom pop-up menu.**

To customize the zoom settings

FrameMaker provides default zoom settings. You can change these settings to fit your needs. For example, if documents displayed at 126 percent work best on your monitor, you can create a setting for 126 percent. This procedure explains how to change the zoom settings for a document. If you want to customize the zoom settings FrameMaker uses when you start it, see the online manual *Changing Setup Files*.

1. **Choose Set from the Zoom pop-up menu.**

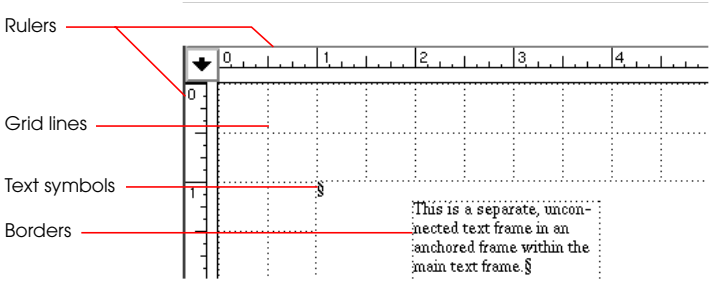
2 **In the Zoom Menu Options dialog box, select the percentage you want to change, and type the new percentage.**
FrameMaker sorts the values from lowest to highest, so you can type values in any text box.

To return to the default percentages, click Get Defaults.

3 **Click Set.**

To use document window guides

FrameMaker provides four different types of window guides—borders, text symbols, rulers, and grid lines—to help you work with a document.



You can turn guides on when you need them and off when you want to see how your document will look when it's printed. Even if displayed, these guides do not appear in the printed document.

- **To display the borders, choose Borders from the View menu.**
Borders are dotted lines that define the edges of text frames, graphic frames, and imported objects.

- **To display the text symbols, choose Text Symbols from the View menu.**
FrameMaker uses text symbols to show tabs, ends of paragraphs and text flows, markers, and other items. You can display or hide text symbols by choosing Text Symbols from the View menu. For a list of all the text symbols, see "Text symbols," next.

  Text symbols are visual cues that give you information about content, position, and format of objects in a document. You can move, copy, delete, and search for these symbols. Working with Text Symbols on can help you make precise editing changes—for example, selecting text at the end of a paragraph without selecting the end-of-paragraph symbol.

- **To display the rulers, choose Rulers from the View menu.**
  The rulers help you accurately place text and objects. The top ruler can be expanded to a formatting bar that displays pop-up menus for formatting text.
- **To display the grid lines, choose Grid Lines from the View menu.**
  The grid lines provide visual cues to help you accurately place text and objects.
- **To hide a document window guide, choose the command that displayed it from the View menu.**
  If a command is turned on, choosing it again from the View menu turns the command off.

TEXT SYMBOLS

Here are the symbols you may see in a document window when you turn on Text Symbols.

Symbol	Meaning
¶	End of paragraph
§	End of flow
❭	Tab
⊥	Anchored frame or table anchor
⊤	Marker
❬	Forced line return
|	Manual equation alignment point
▫	Nonbreaking space
¬	Discretionary hyphenation
–	Suppressed hyphenation

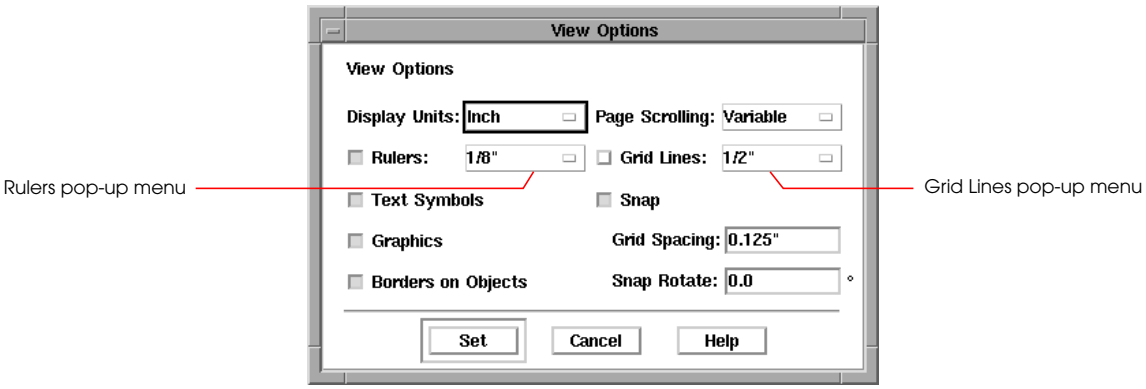
In addition, you can show or hide Macintosh publisher boundaries, [ ], by pressing Esc v l (lowercase *L*).

To change grid and ruler intervals

You can change the spacing of the intervals on the rulers or on the grid. When you change the intervals, you change only the distance between the lines displayed on the rulers and the lines on the grid. Objects on the page do not change position.

1. **Choose Options from the View menu.**

2 **Choose a new setting from the Rulers pop-up menu or from the Grid Lines pop-up menu.**



3 **Click Set.**

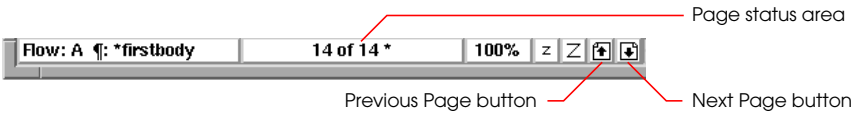
MOVING THROUGH A DOCUMENT

As you're working in a document, you'll need to display different pages. FrameMaker provides several ways for you to move through a document—by displaying the next or previous page, by going to a specific page or line or to the page containing the insertion point, or by scrolling one line or one screen of text at a time. If moving around your document is slow, you can turn off the graphics display or display small text as a gray bar.

You can control the direction in which FrameMaker scrolls pages on your monitor. You can scroll up and down or left and right.

To display a specific page

FrameMaker provides several ways for you to display specific pages in the document window.



- **To display the next page, click the Next Page button.**
- **To display the previous page, click the Previous Page button.**

- **To display the first page, Shift-click the Previous Page button.**
- **To display the last page, Shift-click the Next Page button.**
- **To display a specific page, click in the page status area.**
  Specify which page you want and click Go.

Select	To go to	And
Page Number	A numbered page	Type the page number in the text box
Page Containing the Insertion Point	The page where you last clicked	
Line Number	A particular line in the current flow	Type the line number in the text box

You can also display the Go to Page dialog box by choosing the Go to Page command from the View menu.

To display pages faster

If you want FrameMaker to display pages faster, and if you don't need to see the graphics, you can turn off the graphics display.

Another way to save time when displaying pages is by greeking text—displaying any text that's smaller than a specified size as a gray bar.

- **To turn off the graphics display, choose Options from the View menu, turn off Graphics, and click Set.**
  FrameMaker hides all drawings that have been created with FrameMaker drawing tools and all imported graphics.
- **To display small text as a gray bar, choose Preferences from the File menu, type a point size in the text box after Greek Screen Text Smaller Than, and click Set.**
  Whenever you have text in your document that is smaller than the point size you type here, FrameMaker displays that text as a gray bar.

To set how pages scroll

You can control the way FrameMaker scrolls a document. Select a scrolling method based on how you prefer to work. For example, you might want to scroll through facing pages when you're laying out a newsletter.

1. **Choose Options from the View menu.**

2 **In the View Options dialog box, choose one of the four options from the Page Scrolling pop-up menu and click Set.**

Select	To display pages
Vertical	From top to bottom (for example, page 2 below page 1)
Horizontal	From left to right (for example, page 2 to the right of page 1)
Facing Pages	Side by side
Variable	As many pages as will fit in the window from left to right

SAVING A DOCUMENT

As you work, save early and often; don't wait until you finish working. As an added precaution, FrameMaker can back up your file when you save it and periodically while you work. Sometimes, when you're working on a document, you may want to throw away the changes you've made and start again. FrameMaker provides a command so you can easily revert to the last-saved version of a document.

You can also save a document in a different format, with different access permissions, or with a different name or pathname.

When you close a document or exit FrameMaker, you can save the document at that time. The instructions that follow are for saving while you work on a document. For information on saving a document when exiting, see "To close a document" on page 2-42.

To save a document

Save your document frequently.

- **To save changes made to the current document, choose Save from the File menu.**
  If this is the first time you've saved the file, FrameMaker displays the Save Document dialog box. Type a new name for the file and click Save. For more information on saving a document for the first time, see "To change a document's name, location, or file format" on page 2-31.
- **To save changes made to all open documents, hold down Shift and choose Save All Open Files from the File menu.**

To revert to the last-saved version

If you make changes to a document and then decide you don't want to keep the changes, you can return to the last-saved version of the document. If the document was saved automatically since the last time you saved it, you are returned to the version you saved, not the one FrameMaker saved for you. For information on automatic saving, see "To back up and save automatically" on page 2-35.

1. **Choose Revert to Saved from the File menu.**
2. **In the dialog box, click OK to confirm the choice.**
   FrameMaker opens the version of the document you last saved when you used the Save or Save As command. FrameMaker does not open its own automatically saved version.

To change a document's name, location, or file format

When you save a document, you can change its name, its location, or its file format. When you change a document's name or location, you create a copy of the document. For information on the different types of file formats available, see "File formats you can save" on page 2-31.

1. **Choose Save As from the File menu.**

FILE FORMATS YOU CAN SAVE

You can save a file in several formats.

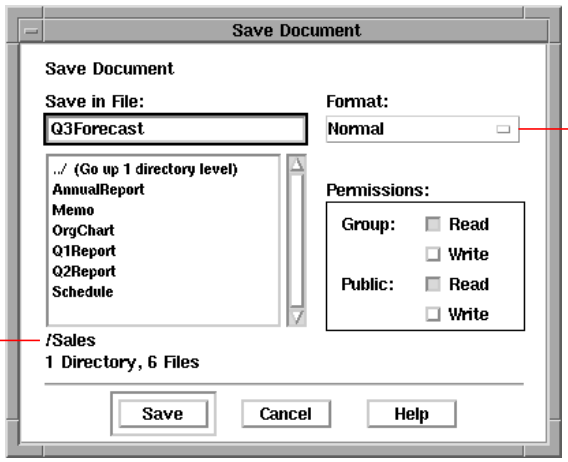
Normal Produces a regular FrameMaker document. This format is the most compact and requires the least amount of time to save and open.

View Only Produces a document that users can open but can't edit. If you accidentally save a file in View Only format, you can unlock it by moving the pointer inside the document window and pressing Esc F l (lowercase *L*) k. Then you can save the document in Normal format.

Interchange - MIF Creates an ASCII text file that contains FrameMaker statements that describe all text and graphics. When you save a document in Maker Interchange Format (MIF), add a `.mif` extension to the end of the filename to avoid overwriting your FrameMaker document the next time you save it. For more information on MIF, see the online manual *MIF Reference*.

Text Only Creates a text file without graphics or formatting information. To avoid overwriting the formatted document, it's a good idea to save the text file under a name different from that of the current document and to add a `.txt` extension to the end of the filename. When you save a document as text, FrameMaker queries you about how you want to treat the text and any tables in your document. For information on saving a document as text, see "To save a document in Text Only format" on page 2-33.

2 **Change the name of the document, open a different directory to hold the document, or do both.**



To save the document in a different directory, navigate through the directories until the correct one is displayed. If the directory in which you want to save the document is not displayed, you can type a new path for the file in the Save in File text box.

3 **Choose a file format from the Format pop-up menu.**
For information on the different types of formats, see "File formats you can save" on page 2-31.

4 **In the Permissions area, select the type of access you want to provide to other users.**
Turning on Read allows others to look at, copy, or print your document. If you want others to be able to edit the document and save the changes, turn on Write.

5 **Click Save.**
FrameMaker saves the document. If you have chosen Text Only format, you see the Save As Text dialog box. For more information, see "To save a document in Text Only format" on page 2-33.

SAVING "BEFORE" AND "AFTER" VERSIONS

If you change the name of the document or open another directory to hold it, you'll have two copies of the document. However, the original document will not reflect the changes you saved. If you want to save the changes made to the document and then create a copy of the document, first save the document by using the Save command. Then create another copy of the document by using the Save As command. You can also use your window manager to save a copy of a file by copying it into another directory.

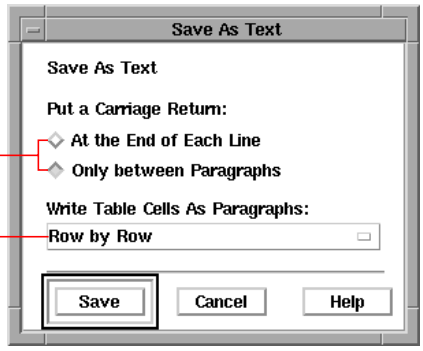
To save a document in Text Only format

Saving a document in the Text Only format creates an ISO Latin-1 text file. When you save a document as text, FrameMaker asks how you want to treat the text and any tables in your document. Only the text in text frames and tables is saved; text lines, footnotes, graphics, and formatting information will not be saved. (A text line is a single line of text that FrameMaker treats independently from other text. Text lines are often used for callouts in illustrations.) When you save a FrameMaker document containing table cells as a text-only file, you can have FrameMaker write the cells across rows or down columns. Reformat line lengths and hyphenation to the way you want them before saving the file. For information on reformatting line lengths, see "To control hyphenation" on page 4-23 and "To control line breaks" on page 4-25.

1 **Follow the usual steps for changing a document's file format.**

For details, see "To change a document's name, location, or file format" on page 2-31. With a text-only document, a dialog box appears before the document is actually saved.

2 Choose how you want to save the text.



Select where you want to place Returns.

Choose how to write table cells from the pop-up menu.

Selection	Text example	Comment
At the End of Each Line	Line-oriented file such as computer code	Breaks the text into paragraphs at the end of each line. This option maintains a file's original line breaks and blank lines.
Only between Paragraphs	Paragraph-oriented file such as a file containing document text	Merges adjacent nonblank lines into paragraphs and breaks the text into paragraphs at a blank line.
As Paragraphs Row by Row	Table with text that you read across rows (for example, a parts list)	Creates a paragraph for each item in the first row, then creates a paragraph for each item in the next row, and so on.
As Paragraphs Column by Column	Table with text that you read down columns (for example, a calendar that shows what is scheduled for the next four Thursdays)	Creates a paragraph for each item in the first column, then creates a paragraph for each item in the next column, and so on.
Skip	Any table	Ignores the table and doesn't save any text in it.

3 Click Save.

CONVERTING SPACES IN TEXT FILES

When FrameMaker converts a document to text, it handles some space characters in special ways. Numeric spaces appear as a space character. Nonbreaking spaces appear as `\x11`, thin spaces as `\x12`, en spaces as `\x13`, and em spaces as `\x14`. If you want all space characters to be saved as regular space characters in the text file, change the `Maker.textCharacterEncoding` resource to `ASCII`. See the online manual *Changing Setup Files* for more information.

If you are sharing text files with special spaces across platforms, refer to the online manual *Using Frame Products on Multiple Platforms* for information.

To back up and save automatically

Using FrameMaker preference settings, you can choose two ways to back up your work—Automatic Backup on Save and Automatic Save. In each case, FrameMaker writes the backup file to the directory in which the document is saved. For information on how FrameMaker creates these files, see "Automatically created files" on page 2-35.

AUTOMATICALLY CREATED FILES

FrameMaker automatically creates backup and autosave files that save your document in case you want to go back to an earlier version. It also creates recover files if your system crashes.

.backup files When you have turned on Automatic Backup on Save in the Preferences dialog box, `.backup` files are automatically created when you choose Save. This creates a copy of the file before your latest changes are saved. The backup copy is named *`filename`*`.backup` (where *`filename`* is the name of your document and `.backup` is a filename extension provided by FrameMaker). If *`filename`*`.backup` already exists, the new backup file overwrites it.

.auto files When you have turned on Automatic Save in the Preferences dialog box, `.auto` files are automatically created at regular intervals. You don't have to choose Save. Automatic Save saves the current document at regular intervals to an autosave file named *`filename`*`.auto` (where *`filename`* is the name of your document and `.auto` is a filename extension provided by FrameMaker). When you save manually (using Save or Save As) or revert to the last-saved version with the Revert to Saved command, FrameMaker deletes the autosave file.

.recover files If your system begins to crash, FrameMaker tries to create a recovery file with your most recent changes before the system finishes crashing. This file is named *`filename`*`.recover` (where *`filename`* is the name of your document and `.recover` is a filename extension provided by FrameMaker). Even though FrameMaker tries to create this file, you should still regularly save your work, and not rely on a `.recover` file.

Automatic Backup on Save creates a backup copy of the current document when you choose the Save command.

Automatic Save saves the current document at regular intervals to an autosave file. Automatic Save can protect you from losing work in the event of an equipment or software failure.

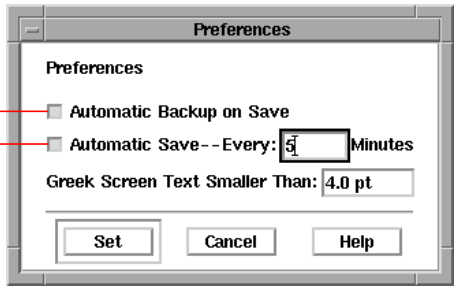
FrameMaker doesn't automatically save a copy of a document unless you made a change to it since the last time it was saved.

1 **Choose Preferences from the File menu.**

2 **Select an automatic save option.**

To create a backup file every time you save, click here.

To turn on autosave, click here and type the number of minutes you want between saves.



3 **Click Set.**

IF YOUR SYSTEM CRASHES

Open the document on which you were working. If a recover file exists, FrameMaker asks whether you want to open it. Open the file and check to see if your latest changes are there. If so, save this file with the same name as the document you were originally working on and then delete the recover file.

If FrameMaker didn't create a recover file, it looks for an autosave file. Save the autosave file with the same name as the file you were originally working on. This file has all the changes you made up until the time of the last autosave. The amount of changes lost depends on the time you set between saves and when your system crashed.

For information on how FrameMaker names recover and autosave files, see "Automatically created files" on page 2-35.

PRINTING A DOCUMENT

FrameMaker is preset to print one copy of the entire document on a preselected printer. You can customize printing the document in several ways—for example, by printing a document double-sided or by printing a scaled image of your document.

FrameMaker remembers all the settings you specify, except for the starting and ending page range. The next time you print the document, FrameMaker displays the changed settings in the Print dialog box.

If several people are using the same printer, you may want to check the printer queue before sending a document to print. If the queue is long, you may want to send the document to another printer. For information on how to use the printer queue, see "To manage the printer queue" on page 2-41.

Printing speed depends on the complexity of the pages. A page containing a complex graphic takes longer to print than one containing only text in a single font. Many printers cannot print along the outer margins of a page. If you place text or a graphic too close to the page edge, it may not appear in the printed document. Also, if you turned off Graphics in the View Options dialog box, graphics will not appear in the printed document.

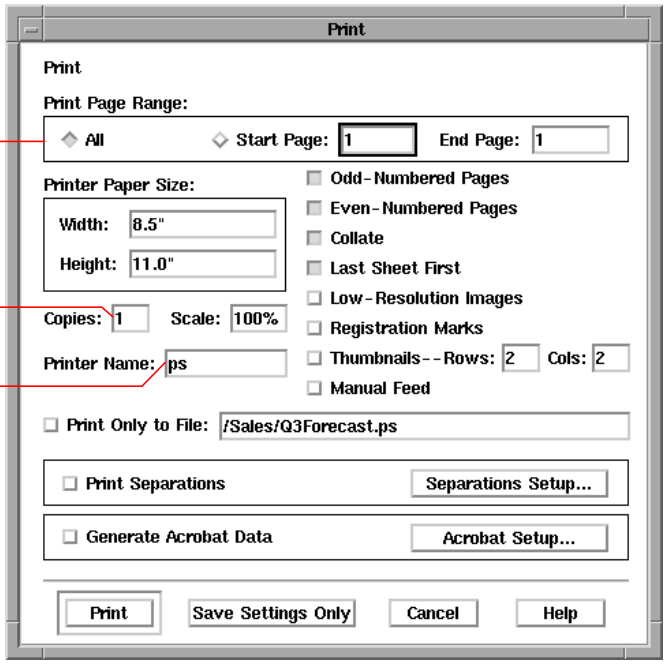
For information on printing a book made up of several documents, see "To print files" on page 24-24. For information on printing color documents, see "Printing colors" on page 17-13.

To print a document

Before you print a document, it is a good idea to check the spelling and to update the cross-references if the document contains any. For information on spell-checking a document, see Chapter 9, "Spelling and Word Choice." For information on updating cross references, see "To update cross-references manually" on page 10-19.

1 **Choose Print from the File menu.**

2 Specify the page range you want to print.



Click All to print the entire document or type page numbers to print part of the document.

The Start Page text box always displays the current page number, but you can change it. To print one page, type the same page number in both the Start Page and End Page text boxes. Type a starting page number and an ending page number to print a few of the document's pages.

3 Make sure the printer listed is the one you want.

If you need to change the name of the printer, see your system administrator for the names of the printers you can use.

4 If you need to change the number of copies, type the number in the Copies text box.

5 Make sure the numbers in the Printer Paper Size area match the size of paper in the printer.

If your document's pages are larger than the size of the paper, you'll see an alert. If you decide to print the document, the printer crops the document so it fits on the page.

6 **Make sure all the other settings are correct.**
For information on the other settings in the Print dialog box, see "To customize printing," next.

7 **Click Print.**

CHANGING THE PRINTING SETTINGS FOR A DOCUMENT

If you want to change the printing settings for a document, but don't want to print it yet, change the settings in the Print dialog box and click Save Settings Only. For example, if you've just printed multiple copies of a document and want to make sure that the next time you print the document you print only one copy, change the number of copies in the Copies text box to 1 and click Save Settings Only. Nothing will print now; but, the next time you click Print, FrameMaker will print only one copy.

To customize printing

If you want to customize the way your document is printed, you have a number of options to choose from—for example, printing double-sided pages, adding registration marks for a commercial print shop, and printing reduced images of several pages on one piece of paper.

When you change a setting in the Print dialog box, FrameMaker keeps track of the changes, except for the starting and ending page range. The next time you print a document, FrameMaker displays the changed settings as the defaults.

- **To have FrameMaker print one complete copy before printing the next copy, turn on Collate when you're printing multiple copies.**
  Printing might be slower when Collate is turned on. If you don't care how printed pages are sorted, you can turn Collate off to print faster.
- **To print a double-sided document if you're not using a duplex printer, print the odd-numbered pages, turn the paper over in the printer, and print the even-numbered pages.**
  Turn on Odd-Numbered Pages and turn off Even-Numbered Pages for the first pass. Reverse the settings for the second. Depending on how your printer produces pages, you may need to turn on Last Sheet First before you click Print, because turning the paper over in the printer may reverse the page numbering.
- **To print a document starting with the last page, turn on Last Sheet First.**
  Use this option if your printer produces pages face up.
- **To print a document more quickly, turn on Low-Resolution Images.**
  FrameMaker prints imported images more quickly by lowering the resolution quality. For final printing, turn this option off so you get the highest-resolution graphics possible.

- **To print a document for reproduction by a commercial print shop, turn on Registration Marks.**
  FrameMaker prints crop marks and registration marks.
- **To print a reduced or enlarged page image, type a percentage in the Scale text box.**
  FrameMaker centers the scaled image on the page.
- **To print thumbnails (small images of several pages on one page), type values in the Thumbnails text boxes.**
  In the Rows text box, type the number of thumbnails you want to print down the page. In the Cols text box, type the number of thumbnails you want to print across the page.
- **To ensure that colored items in the document print either 100% black or 100% white, edit the beginning of the `ps_prolog` file.**
  For more information on PostScript printing controls, see the online manual *Changing Setup Files*.
- **To print the document on paper that is not in your printer's paper cassette, turn on Manual Feed.**
  You must feed the paper into the printer while the document prints.
- **To print the document on a special paper size, type the paper dimensions in the Width and Height text boxes.**
  These dimensions describe the physical size of the paper in the printer's paper cassette, not the orientation of the document.
- **To create a print file rather than print the document, turn on Print Only to File and type the filename in the text box.**
  A print file is a description of the document in a language specific to your printer. You might want to type an extension for your file that describes it—for example, `.ps` for a PostScript file. You can edit a print file, convert it for use with other printers, or send it to a service bureau for typesetting. You can also print the print file by using the UNIX `lpr` command (the `lp` command in System V).

  If you are generating a PostScript file to be used for creating an Adobe Acrobat (`.pdf`) file, click Acrobat Setup. For more information, see "Converting FrameMaker files to Adobe Acrobat files" on page 27-36.

To manage the printer queue

To print, FrameMaker uses the UNIX command that's appropriate for your system, usually either `lpr` or `lp`. Print jobs go into the UNIX printer queue. You use UNIX commands to manage the printing of your documents. Type all UNIX commands at a UNIX shell prompt.

Printer-queue commands appear in the two most popular forms of UNIX, Berkeley Software Distribution (BSD) and System V. BSD is the UNIX used in SunOS 4 computers, and System V is used in Solaris (SunOS 5) and Hewlett-Packard computers. If you're not sure what version of UNIX your computer uses, ask your system administrator or consult your UNIX documentation.

- **To list jobs in the printer queue for the default printer, do one of the following.**

  BSD `lpq`

  System V `lpstat`

- **To list jobs in the printer queue for a printer other than the default printer, do one of the following.**

  BSD `lpq -P`*`printer-name`*

  System V `lpstat -o` *`printer-name`*

  Replace *`printer-name`* with the name of the printer.

- **To remove a job from the default printer queue, do one of the following.**

  BSD `lprm` *`job-number`*
  Use the `lpq` command to obtain the *`job-number`*.

  System V `cancel` *`job-number`*
  Use the `lpstat` command to obtain the *`job-number`*.

- **To remove all your print jobs from the default printer queue, do one of the following.**

  BSD `lprm -`

  System V `cancel -u` *`login-ID`*
  Replace *`login-ID`* with your login name.

- **To remove all your print jobs from a printer queue on a named printer, do one of the following.**

  BSD `lprm -P`*`printer-name`* `-`

  System V `cancel -u` *`login-ID printer-name`*

  Replace *`printer-name`* with the name of the printer. With System V, replace *`login-ID`* with your login name.

CLOSING A DOCUMENT AND EXITING FRAMEMAKER

When you've finished using a document, you can close it to remove the document from your system's memory. When you're finished using FrameMaker, you can exit it to end the current session. If you're using a shared license, as soon as you've finished your work you can either exit FrameMaker or manually give up your license. Exiting FrameMaker automatically gives up your license. For information on giving up a license, see "If you've lost your license or want to give it up" on page 2-6. When you exit, FrameMaker asks whether you want to save any changes that haven't been saved.

Be sure to exit FrameMaker before exiting your window system or logging out.

To close a document

Close a document when you're finished using it.

- **To close the current document, choose Close from the File menu.**
  If changes made to the document haven't been saved, FrameMaker asks whether you want to save the changes or cancel closing the document.
- **To close all open documents, hold down Shift and choose Close All Open Files from the File menu.**

To exit FrameMaker

Exit FrameMaker when you've finished all your document tasks.

- **To exit FrameMaker, click Exit in the main FrameMaker window.**
  If any modified documents are open and haven't been saved, FrameMaker asks whether you want to save the documents. After you indicate whether you want to save each open document, FrameMaker asks whether it's OK to exit. Click OK to exit FrameMaker.

PART II

Text

3

EDITING TEXT

Typing, importing, and revising text in a document

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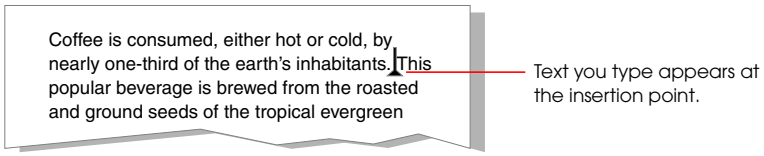
3 EDITING TEXT

FrameMaker provides the tools you need to put your words into print as quickly and easily as possible.

You enter text by typing

You simply click and type in a document window to enter text. The text flows to another line or column as you type—you need to press Return only when you're ready to start a new paragraph.When you reach the end of a page, FrameMaker automatically creates a new page so that text can flow freely from one page to the next.

When you click in a document, an insertion point appears where FrameMaker will put text.



Along with the standard set of characters you see on your keyboard, you can also type bullets, mathematical symbols, spaces of various widths, international characters, and other special characters.

Smart Quotes and Smart Spaces help you type

Smart Quotes and Smart Spaces make entering text a little easier. When Smart Quotes is on, every time you type a quotation mark or an apostrophe, FrameMaker inserts a left or right one, depending on its relationship to the text next to it. When Smart Spaces is on, you can't type more than one space at a time no matter how many times you press the space bar, so you'll always have one space between words and between sentences.

You can also import text

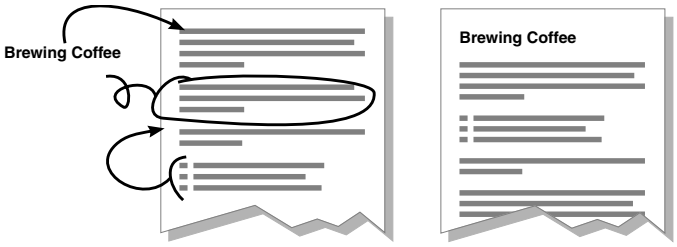
If the text you need is in another file, you can import the text to add it to your document. You can use text from other FrameMaker documents, from text files, and even from files created in other applications.

You can import text by copying it or by creating a reference to it. Text imported by copying becomes part of the document. Text imported by reference remains linked to the source document so that FrameMaker can update it whenever the source changes.

You import text from documents created in other applications by using filters—programs that convert text from one file format to another. FrameMaker provides filters for several commonly used page layout and word processing applications.

Quick, easy text editing

For text editing, FrameMaker is as flexible and straightforward as a word processor. You can add or delete text, replace it with other text, copy or move it to another location, and otherwise change text in any way you want.



In this chapter

This chapter shows you how to type, edit, and import text in a FrameMaker document. It also shows you how to manage the files from which you import text.

For information on formatting text, either as you go along or after entering the text, see Chapter 4, “Formatting Text,” and Chapter 5, “Format Catalogs.”

ENTERING TEXT

You enter text by typing in the document window. Any text you type appears at the insertion point, which you can move in a variety of ways, including by pressing the Tab key. You can type a variety of spaces and dashes, known as special characters.

FrameMaker provides many features to make typing easier and more automatic. Smart Quotes inserts the appropriate left or right quotation mark when you type a straight quotation mark. Smart Spaces prevents you from typing more than one space in a row.

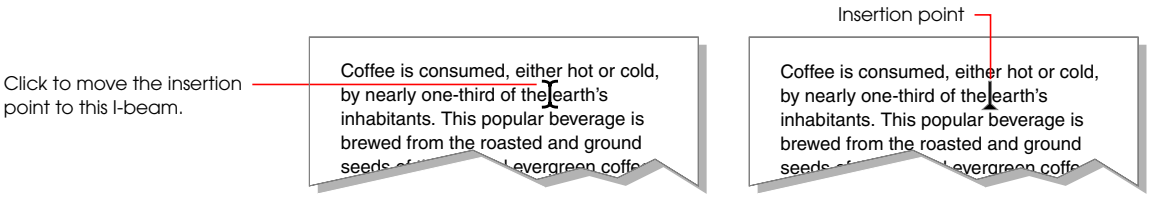
To place the insertion point

The insertion point marks where you want to enter new text. You can put the insertion point in any text in the document window and next to special text items. For information on special text items, see "Special text items" on page 3-8.

The location of the insertion point also determines which paragraph is the current one. You need to know which is the current paragraph before you choose a paragraph formatting command that applies to an entire paragraph. For information on paragraph formatting commands, see Chapter 4, "Formatting Text," and Chapter 5, "Format Catalogs."

1. **Put the I-beam where you want to place the insertion point.**
2. **Click.**

   The insertion point appears where you click.



If you can't place the insertion point in or next to text, the text is probably background text. If so, display the master page that contains the text and then put the insertion point in the text on that page. For information on master pages, see "To display master or body pages" on page 18-10.

MOVING THE INSERTION POINT WITH THE KEYBOARD

You can move an insertion point once it appears in the document window. Press the arrow keys to move the insertion point. The up and down arrow keys have no effect in a text line. (A text line is a single line of text that FrameMaker treats independently of other text. Text lines are often used for callouts in illustrations.)

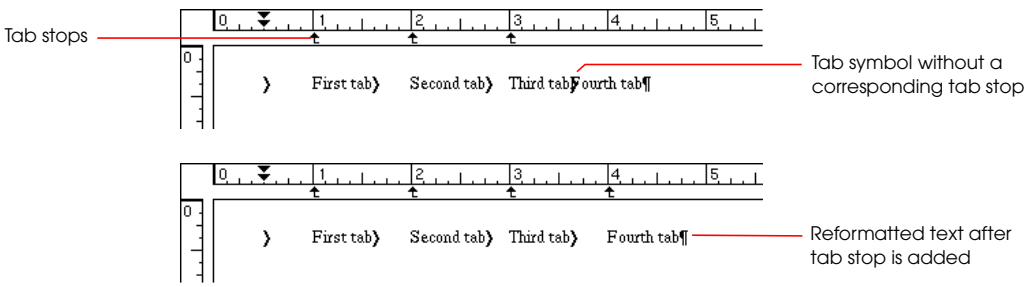
Other keyboard commands are available for moving the insertion point—for example, to the end of a line or the beginning of a paragraph. For information on these commands, see Chapter 3, "Character Sets," in the *Quick Reference*.

To use tabs

Tabs let you place text at specific horizontal locations in a line.

- **To move the insertion point and any text following it to the corresponding tab stop, press Tab.**

If Text Symbols on the View menu is on, a tab symbol (») appears on the screen but does not appear in the printed document. If the current paragraph doesn't have any tab stops set, pressing Tab does not move the insertion point and text.



A tab symbol is embedded in the text each time you press Tab even if the current paragraph does not have tab stops. FrameMaker counts the number of tabs in a line and moves the text one tab stop for each time you press Tab. You may have several overlapping tab symbols in a line if you press Tab more times than you have tab stops. If you later add tab stops to the paragraph, FrameMaker tabs the text at the tab symbols.

For information on the types of tab stops you can add to a paragraph, see "To define a tab stop" on page 4-15.

ABSOLUTE TAB STOPS

FrameMaker tab stops are absolute rather than relative. Relative tab stops mean that each time you press Tab, the insertion point moves to the next tab stop. FrameMaker tab stops are absolute in that the *n*th tab on a line moves the insertion point to the *n*th stop.

To type text

When entering text, all you need to do is type. FrameMaker automatically wraps the text from one line to the next and adds a new page for you when you reach the bottom of the current one.

1. **Place the insertion point where you want to type the text.**
2. **Begin typing, pressing Return only when you want to begin a new paragraph.**
   The text appears as you type.

You can type all of the characters you see on the keyboard—and many more. For information on bullets, symbols, fixed-width spaces, and other characters, see "To type characters not on the keyboard," next.

FORCING A LINE BREAK OR PAGE BREAK

Although FrameMaker wraps text automatically from line to line and from page to page, you may want to force a line or page break at a specific location. For more information, see "To control line breaks" on page 4-25 and "To start a paragraph at the top of a column or page" on page 4-27.

To type characters not on the keyboard

FrameMaker lets you use combinations of keys to type fixed-width spaces, dashes, symbols, and accented characters such as ç, ñ, and ö. You can also type characters in the Symbol font, such as ©, ∴, and ∞. If the Zapf Dingbats font is installed on your system, you can type any of the special symbols in that font—for example, ❑, ▲, and ✓.

This section lists a few of the special characters you can type. For a list of characters in the Symbol and Zapf Dingbats fonts, and a list of accented characters in the standard character set, see Chapter 3, "Character Sets," in the *Quick Reference*. The chapter also shows the key sequence you use to type each character. For information on changing the font of characters, see "To choose a font family, style, and size" on page 4-8.

- **To type fixed-width spaces, use one of the following key sequences.**

To type	Press
Em space	Esc space m
En space	Esc space n
Numeric space	Esc space one
Thin space	Esc space t

When you type a fixed-width space between two words, FrameMaker keeps the words together on a line. For definitions of fixed-width spaces and tips on their use, see "Using fixed-width spaces" on page 3-7.

- **To type a bullet, press Meta-period.**
- **To type a dash, use one of the following key sequences.**

To type	Press
Em dash (—)	Control-q Q
En dash (–)	Control-q P

USING FIXED-WIDTH SPACES

When you press the space bar, FrameMaker inserts a proportional space—that is, a space the width of which varies depending on the characters on either side. But there may be times when you'd prefer a fixed-width space—for example, when you want more space between two words or want to line up numbers without using tabs or tables. FrameMaker has four fixed-width spaces you can use.

Em space The same width as the point size of the font you use. For example, if you use a 10-point font, an em space is 10 points wide.

En space Half the width of an em space.

Numeric space The same width as the font's zero (0) character. All digits are typically the same width. This space is useful for aligning numbers in a column without using tabs.

Thin space One-twelfth the width of an em space. A thin space is often used when a very small space is needed to separate two characters—for example, between a number and the unit of measure that follows it.

SPECIAL CHARACTERS IN DIALOG BOXES

Some special characters, including bullets and en and em dashes, appear in dialog boxes as backslash (\) equivalents. For a list of these equivalents, see Chapter 3, "Character Sets," in the *Quick Reference*.

SPECIAL TEXT ITEMS

FrameMaker gives you a way to insert special text items such as cross-references, footnotes, variables, and markers. Inserting a variable automatically places the date, time, page count, filename, or text that you define into a document. FrameMaker updates variables when they change. Markers let you categorize text so all markers in the same category can be used to generate a list such as a table of contents, an index, or a list of comments. Markers can also be used to insert hypertext commands.

To insert any of these special text items, choose the appropriate command from the Special menu and fill in the dialog box that FrameMaker displays. (The Footnote command immediately lets you type a footnote. You don't have to fill in a dialog box.)

For more information on	See
Cross-references	Chapter 10, "Cross-References."
Footnotes	Chapter 11, "Footnotes."
Variables	Chapter 12, "Variables."
Markers for tables of contents and indexes	Chapter 22, "Generated Lists," and Chapter 23, "Indexes."
Markers for hypertext	Chapter 27, "Hypertext and View-Only Documents."

To use Smart Quotes or Smart Spaces

When Smart Quotes is on, FrameMaker uses curved left and right quotation marks whenever you press the ', `, or " key. If you prefer to use straight quotation marks, turn off Smart Quotes. FrameMaker uses a curved apostrophe whether or not Smart Quotes is on. For information on customizing quotation marks for languages other than US English, see the online manual *Changing Setup Files*.

When Smart Spaces is on, FrameMaker prevents you from typing more than one space in a row. If you want consistent spacing between words and sentences, turn on Smart Spaces. If you want to be able to type more than one space in a row, turn off Smart Spaces. However, you can type multiple fixed-width spaces whether or not Smart Spaces is on. (For information on typing fixed-width spaces, see "Using fixed-width spaces" on page 3-7.)

1 **Choose Document>Text Options from the Format menu.**

2 **In the Text Options dialog box, turn Smart Spaces or Smart Quotes on or off and click Set.**

OVERRIDING SMART QUOTES

You may want to use curved quotation marks most of the time and straight quotes only occasionally—for example, in computer code or as the symbol for *inch* ("). Or you may want to use straight marks most of the time and curved marks only occasionally.

To type	With Smart Quotes on, press	With Smart Quotes off, press
'	Control-'	Control-'
"	Control-"	"
`	Control-`	Control-`
´	Control-q +	Control-q +
‘ and ’	' and '	` and '
“ and ”	" and "	Meta-` and Meta-'

QUOTATION MARKS IN EXISTING DOCUMENTS AND DIALOG BOXES

When you turn on Smart Quotes, FrameMaker doesn't change any quotation marks that are already in the document. To correct straight quotation marks and apostrophes, use the Spelling Checker. See "To check for typing errors" on page 9-6.

Smart Quotes doesn't apply to text in dialog boxes. For information on typing quotation marks and apostrophes in dialog boxes, see Chapter 3, "Character Sets," in the *Quick Reference*.

EDITING TEXT

You can edit text once you select it—by moving it, copying it, deleting it, or replacing it. When editing text, you'll probably find it helpful to turn on Text Symbols on the View menu to help you avoid accidentally deleting paragraph symbols and markers.

To select text to edit

You must select text before you can edit it. When selected, text is highlighted.

You also select text before you change its format, such as its font size or style. For information on text formatting commands, see Chapter 4, "Formatting Text."

- **To select a range of text, drag through the text.**
  Or click at the beginning of the text and Shift-click at the end.
- **To select a word, double-click it.**
  Double-clicking a word and then dragging extends the selection a word at a time.
- **To select a paragraph, triple-click it.**
  Triple-clicking a paragraph and then dragging extends the selection a paragraph at a time.
- **To select all the text in a flow, click in the flow and choose Select All in Flow from the Edit menu.**

CHANGING A SELECTION

To shorten or extend an existing selection, Shift-click at the new beginning or end of the selection. To deselect text, click anywhere in the document window.

To move or copy text

You can move or copy text to a different location in the same document or in another document. To do this, you put the text on the Clipboard and then paste it where you want it.

1. **Select the text you want to move or copy.**
   If you want to move or copy an entire paragraph, make sure you select the paragraph symbol (¶) at the end of the paragraph.
2. **From the Edit menu, choose Cut to move the text or choose Copy to copy it.**
   The text is placed on the Clipboard. It remains there until you cut or copy something else. To see the contents of the Clipboard, you must paste them somewhere.

3 **Click where you want to insert the text and choose Paste from the Edit menu.**
If the pasted text contains paragraph symbols, the paragraph format associated with each paragraph is also pasted. Otherwise, the pasted text takes the paragraph format of the paragraph in which it's pasted. Pasted text always retains its original paragraph format's default font and remains on the Clipboard until you cut or copy something else. For information on how to change the font of selected text, see Chapter 4, "Formatting Text."

QUICK-COPYING TEXT

You can quick-copy text to another location *without* using the Clipboard. The original text and the new location for the copy must be visible, but they can be in different documents.

To quick-copy text, put the insertion point where you want to insert the text. Hold down Control and, with the middle mouse button, select the text you want to copy. FrameMaker pastes the selected text at the insertion point.

To delete text

Delete text when you want to remove it permanently from the document. If you want to move the text to another location, use Cut and Paste on the Edit menu rather than press Delete.

1 **Select the text.**

2 **Press Delete.**
You can also choose Clear from the Edit menu to delete selected text.

If the text you delete contains the end of a paragraph and the paragraph symbol (¶), the text preceding and following the deleted text is merged into one paragraph.

If you didn't mean to combine the two paragraphs, immediately choose Undo from the Edit menu. Then select the text you want to delete, but not the paragraph symbol, and press Delete again.

REMOVING EMPTY PAGES AT THE END OF A DOCUMENT

You can tell FrameMaker to delete the empty pages at the end of a document each time you save or print the document. To do this, choose Document>Numbering from the Format menu. In the Numbering dialog box, choose Delete Empty Pages from the Before Saving & Printing pop-up menu, and click Set. If you change a body page layout but not its corresponding master page layout, or if a custom master page is applied, these options will not remove the blank page. (To remove such a page, you have to display it and choose Delete Page from the Special menu.)

If you choose Make Page Count Even or Make Page Count Odd, FrameMaker leaves one blank page at the end of the document as necessary. These options are helpful when you want every chapter in a book to start on the same side of a page.

DELETING A PAGE OF TEXT

To delete a page of text, select the text and press Delete. If the page isn't part of the main text flow (if it's a disconnected page), display the page and choose Delete Pages from the Special menu. If the page contains the beginning of a table that continues on another page, the entire table is deleted. For information on connecting and disconnecting flows and pages, see "Controlling the flow of text" on page 20-7.

To replace text

You can replace text—from a single character to an entire flow—at any time.

1. **Select the text you want to replace.**
2. **Type the new text.**

   If the text you want to use is on the Clipboard, you can choose Paste to replace selected text. FrameMaker deletes the existing text, and the new text appears in its place. If the text you replace contains the end of a paragraph and the paragraph symbol (¶), the beginning of the paragraph is merged with the next paragraph in the document.

   If you didn't mean to replace the paragraph symbol, immediately choose Undo from the Edit menu. Then select the text you want to replace, but not the paragraph symbol, and type the replacement text again.

IMPORTING TEXT

You can import text into a FrameMaker document from another part of the document, from another FrameMaker document, or from a file created in an application, such as Microsoft Word, for which FrameMaker provides a filter. In this case, FrameMaker filters the document as it is imported.

When you import text from a document, you import all the text and special text items contained in a single *flow* of text. A text flow may be the whole document or part of it, and the part can appear on non-consecutive pages, such as a newsletter article that begins on one page and continues several pages later.

You can also import text into a FrameMaker document from a text file. In this case, you import all the text in the file.

You import text by copying or by reference. Importing by copying inserts a copy of the text, which you can edit, into the document. Importing by reference creates a *text inset,* linked to the text in the source document. When the source text changes, FrameMaker can automatically update the text inset, or you can update it manually.

When you import a text flow, you also decide how it's formatted—whether it retains the formatting it had in the source document or adopts the formatting of the document into which it's imported. When you import a text file, it adopts the formatting used at the insertion point.

For more information on text flows, see "To import a text flow," next. For information on the special text items that can be imported in addition to the text in a flow, see "What gets imported" on page 3-16. For information on copying selections of text from other FrameMaker documents, see "To move or copy text" on page 3-10. For information on the file formats that FrameMaker can open, see "File types you can open" on page 2-12. For information on FrameMaker filters, see the online manual *Using Frame Filters*.

To import a text flow

You import text into a FrameMaker document from another part of the document or from another FrameMaker document. The text you import is a single *flow* of text. With most documents, there is one main flow that contains all the body text, but some documents contain several text flows. For example, a newsletter might contain a separate flow for each article, with some articles beginning on one page and continuing several pages later.

You can also import a text flow from a file created in another application, such as Microsoft Word, for which there is a FrameMaker filter. In this case, the filter converts the content of the file into a single text flow as it is imported. When you import from a file created in another application, FrameMaker helps you select the filter that converts the content from that file into the flow you import.

When you import a flow, you also specify how to format the imported text and whether to import by copying or by reference. A flow imported by copying becomes part of the text flow into which you insert it. A flow imported by reference becomes a *text inset*, linked to the text in the source document.

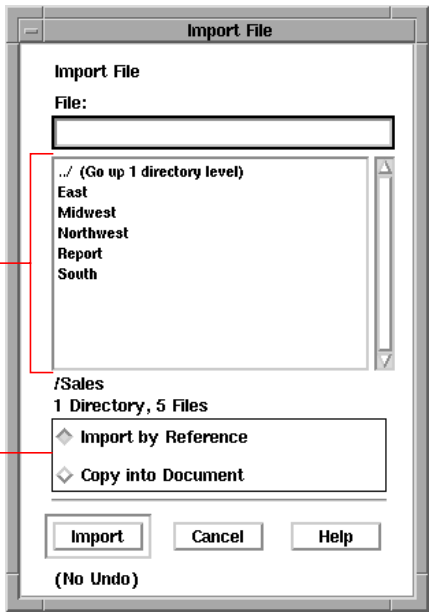
For more information on text flows, see Chapter 20, "Flow Design." For information on file formats that FrameMaker can open, see "File types you can open" on page 2-12. For information on FrameMaker filters and for details on how FrameMaker filters the contents of files created in other applications into FrameMaker flows, see the online manual *Using Frame Filters*. For information

on importing text from a text file rather than from a text flow, see "To import a text file" on page 3-17.

1 **Place the insertion point where you want to insert the text.**

2 **Choose Import>File from the File menu.**

3 **Specify the file that contains the flow you want to import and the import method.**



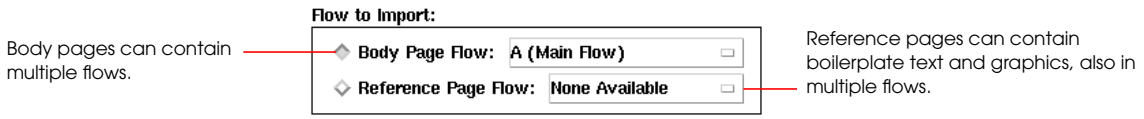
For information on the Import by Reference and Copy into Document settings, see "Import by copying or by reference" on page 3-15.

Type the name of the file you want to import in the File text box or select the name of the file in the scroll list.

4 **Click Import.**

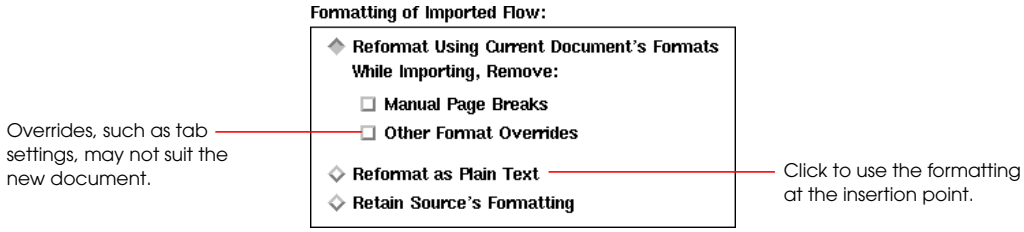
5 **If you're importing a file in a format FrameMaker doesn't recognize, select a filter in the Unknown File Type dialog box and click Convert.**
The dialog box that appears depends on the import method you chose in the Import File dialog box. The Import Text Flow by Reference dialog box contains settings for specifying how to update the imported flow.

6 **Choose a body page flow or a reference page flow.**



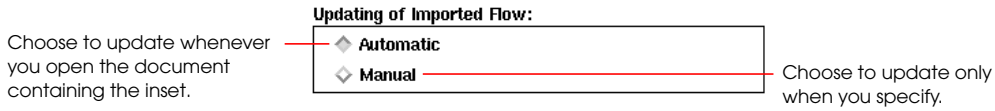
Text appears on body pages. Reference pages can contain flows with boilerplate text or graphics for use on body pages. For information on viewing flows on reference pages, see "Working with reference pages" on page 19-22.

7 **Specify how to format the text.**



For more information, see "Formatting an imported text flow" on page 3-16.

8 **If you selected Import by Reference in the Import File dialog box, specify how to update the text inset.**



9 **Click Import.**

The text appears in the document. If you imported the text by reference, it appears in a text inset.

IMPORT BY COPYING OR BY REFERENCE

Importing a text flow or text file by copying inserts the text into the document without maintaining a reference to the source file. This makes it easy to copy the document from one location to another. However, if you make changes to the source file, you must reimport the text to update the document with the latest version.

Importing by reference lets you use the same text in several places and update it in all of them at once. When you import a flow or text file by reference,

FrameMaker stores the pathname of the source document along with the text inset in the document. Each time you open the document, or whenever you specify, FrameMaker locates the source file on the disk and updates the document with the latest version.

WHAT GETS IMPORTED

When you import a flow, you import the text in the flow and any cross-references, footnotes, variables, and markers contained in the flow. For information on these special text items, see "Special text items" on page 3-8.

FORMATTING AN IMPORTED TEXT FLOW

You can format an imported text flow by using matching-tag formats in the current document. You can reformat as plain text—that is, use the format of the text at the insertion point. Or you can retain the formatting it had in the source document.

If you want imported text to use the current document's formats (or if you later want to be able to modify the imported text's formats when you modify the current document's formats), make sure the imported text's paragraph and character tags match those in the current document. Similarly, if you want tables, cross-references, and variables to be formatted and updated from the current document, make sure that the imported text's table tags, variable definitions, and cross-reference formats match those of the current document.

For details on using consistent paragraph and character formats, see "Tips on creating formats" on page 5-12. For information on paragraph and character formats and catalogs, see Chapter 4, "Formatting Text," and Chapter 5, "Format Catalogs." For information on table formats, see Chapter 7, "Table Formats." For information on variable definitions, see Chapter 12, "Variables." And for information on cross-reference formats, see Chapter 10, "Cross-References."

Reformat Using Current Document's Formats Applies the current document's formats to the imported text, whenever their tags match. If the tags don't match, the formatting of imported text is unaffected.

When you import, removing manual page breaks and other format overrides (such as tab settings) that exist in the source document ensures that formats in the imported text match the appearance of the formats with the same tags in the current document.

Reformat as Plain Text Removes the formatting the text had in the source document and applies the character and paragraph formatting used at the insertion point. However, formatting of text in tables or anchored frames retains the formatting it had in the source document.

Retain Source's Formatting Keeps the formatting the text used in the source document. Formats in the imported text aren't added to the current document's format catalogs. If you later modify the current document's formats (paragraph, character, table, or cross-reference formats, or variable definitions), the imported text formats won't be affected—even if the tags in the current document and imported text match.

If the flow contains tables or anchored graphic frames, they are also imported, including the contents of the frames. Conditional text in the flow is also imported.

Condition tags applied to text in the source document are imported, so you can show and hide the imported conditional text in the usual way. For details, see "Viewing imported conditional text" on page 26-17.

IMPORTING A MIF FILE

Maker Interchange Format (MIF) is an ASCII format that lets you exchange information between FrameMaker and other applications. To import the text in the main flow of a MIF file that has been saved on disk, use import by reference. FrameMaker imports the file without interpreting its commands. Using import by copying to import a MIF file that has been saved on disk imports the text and also interprets the commands in the MIF file—for example, commands that alter master pages in the document or change the appearance of the document window or the menu bar. The text imported by copying appears on a disconnected page. For information on connecting and disconnecting pages and flows, see "Controlling the flow of text" on page 20-7. For more information on MIF, see the online manual *MIF Reference*.

To import a text file

You specify whether to import a text file by copying or by reference, and how to treat lines in the text file. The imported text adopts the formatting of the text at the insertion point.

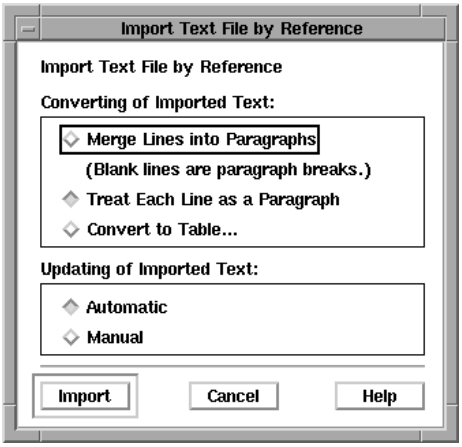
For information on importing text from a FrameMaker document, see "To import a text flow" on page 3-13.

1. **Place the insertion point where you want to insert the text.**
2. **Choose Import>File from the File menu.**
3. **In the Import File dialog box, specify the text file you want to import and the import method.**
   Type the name of the text file you want to import in the File text box or select the name of the text file in the scroll list.

   For information on the Import by Reference and Copy into Document settings, see "Import by copying or by reference" on page 3-15.

4 Click Import.

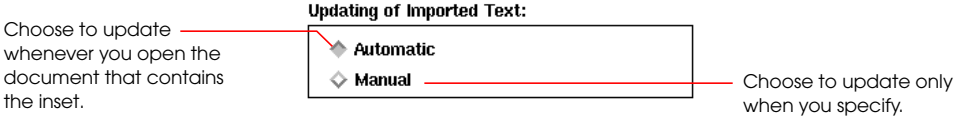
The dialog box that appears depends on the import method you chose. The Import Text File by Reference dialog box (shown here) contains settings for specifying how to update the imported text file.



5 Specify how to treat the imported text.

Selection	Text example	Comment
Merge Lines into Paragraphs	Paragraph-oriented text file such as a file that contains document text	Merges adjacent nonblank lines into paragraphs and breaks the text into paragraphs at a blank line.
Treat Each Line as a Paragraph	Line-oriented text file such as computer code	Breaks the text into paragraphs at the end of each line.
Convert to Table	Text file containing delimited text into a new table at the insertion point	The Convert to Table dialog box appears so you can specify the table format and other settings. See "To convert existing text to a table" on page 6-25.

6 If you're importing the text file by reference, select an update method.



7 **Click Import.**
The text appears in the document. If you imported the text by reference, it appears in a text inset.

To replace imported text

You may need to replace imported text if its source has changed and if you imported it by copying. Or you may simply need to replace one text inset with another. In either case, FrameMaker places the new text in the same location as the old text.

1 **Select the imported text or click in the text inset.**

2 **Import the new text.**

MANAGING TEXT INSETS

When you update a document that contains text imported by reference, FrameMaker looks for the source file and then updates the text inset in the document. In looking for the source file, FrameMaker uses the pathname that was specified when the file was imported. For information on the pathname, see "How FrameMaker locates imported files" on page 3-20.

FrameMaker may not be able to find the source file of a text inset for several reasons.

- The document was moved to a new location, but the source files weren't.
- The source file was removed or moved to a new location.
- The source file was renamed.
- The directory that contains the source file was renamed.

If FrameMaker can't find the source file it's looking for and can't update the inset, it displays an alert. You can reimport the source file from its new location using the Import>File command on the File menu.

At other times, a document may contain an inset from a file with a name you can't remember. If so, you can look up its filename.

To organize files for importing text

You'll find it easier to maintain your source files and the FrameMaker documents that contain text imported from them when you follow a few simple guidelines for organizing the files.

- **Keep all source files for a document in one directory.**
  It's easier to move or copy files in a single directory than to move or copy files scattered in several directories.
- **Put source files in the same directory as the document or in a directory below the document directory, and import them by reference.**
  If you move the document directory (and its subdirectories) to another location, FrameMaker can still find the source files when you update text insets in the document. For source files used with several documents, see the next guideline.
- **Put source files that may be used in several documents in a central directory, and import them by reference.**
  If a source file is changed, all documents that contain the source file's text can be updated.
- **Use a filename extension to indicate the source file type.**
  For example, you could use the extension `.txt` for text files. You may even want to create separate subdirectories for different types of source files.
- **Give source files descriptive names.**
  Documents are much easier to maintain when source files have filenames such as `midwest.rpt` rather than `import1.doc`.

HOW FRAMEMAKER LOCATES IMPORTED FILES

The pathname that FrameMaker stores for a file imported by reference is usually relative. That is, it shows the location relative to the directory of the document that contains the imported text. For example, `files/East` is a relative pathname indicating that `East` is in the `files` subdirectory of the document's directory. However, if FrameMaker has to traverse the root of the file system when building the pathname, it uses an absolute pathname that begins at the root (`/`).

For example, `/usr/sales/files/East` is an absolute pathname.

Because FrameMaker stores relative pathnames whenever possible, it continues to find the file even when you move the document and source files to a different directory—as long as you keep the files in the same relative locations. And if you save the document in a different directory, FrameMaker adjusts the pathnames of the imported files accordingly.

- **Consider the file-naming conventions of each computer platform on which you use your FrameMaker documents.**
  For example, the Macintosh doesn't allow colons in filenames, Windows 3.1 allows filenames of up to eight characters with a three-character extension, and spaces can cause problems on UNIX platforms. For more information, see the online manual *Using Frame Products on Multiple Platforms*.

To view the properties of a text inset

You can view the filename and file type of the source document, the date it was last modified, the date the text inset was last updated, and the inset's update setting.

1. **Click the text inset to select it.**
2. **Choose Text Inset Properties from the Edit menu.**
   You can also double-click the inset. When you double-click, you don't have to select it first.

DISPLAYING THE SOURCE OF A TEXT INSET

You can open the source of a text inset from the document by clicking Open Source in the Text Inset Properties dialog box.

MACINTOSH SUBSCRIBERS ON NON-MACINTOSH PLATFORMS

Text imported on the Macintosh with Publish and Subscribe creates a Macintosh *subscriber*—a text inset that has a Macintosh *edition* file as its source. On platforms other than the Macintosh, status information and some options in the Text Inset Properties dialog box are unavailable—for example, opening the source, changing update or format settings, and updating. For more information, see the online manual *Using Frame Products on Multiple Platforms*.

CREATING A LIST OF TEXT INSETS

You can create a list of all the text insets in a document. For information, see "To generate a list" on page 22-7.

To change the updating of a text inset

When you create a text inset by importing a text flow or a text file by reference, you specify either automatic or manual updating. If you specify manual, you can update the text inset manually, either on its own or together with all the insets in the document. If you specify automatic, the inset updates automatically when you open the document. You can later suppress automatic updating of all updates, and you can change how any single inset updates.

1. **Click the text inset to select it.**
2. **Choose Text Inset Properties from the Edit menu.**
3. **In the Text Inset Properties dialog box, click Settings.**
4. **In the dialog box that appears, specify a new update setting and click Set.**

To suppress automatic updating of all text insets

Text insets set for automatic updating are updated when you open the document. You can improve the opening time of a document by suppressing automatic updating. Later you can update the insets manually, either singly or all at once.

1. **Choose Update References from the Edit menu.**
2. **In the Update References dialog box, choose Suppress Automatic Updating from the Commands pop-up menu.**
3. **In the Suppress Automatic Reference Updating dialog box, turn on Suppress Automatic Updating of All Text Insets and click Set.**
4. **In the Update References dialog box, click Done.**

MANUALLY UPDATING A SINGLE TEXT INSET

You can update a single text inset manually by selecting it and choosing Text Inset Properties from the Edit menu. In the Text Inset Properties dialog box, click Update Now.

MANUALLY UPDATING MULTIPLE TEXT INSETS SIMULTANEOUSLY

You can simultaneously update all the insets in a document that are marked for either automatic or manual updating. To do so, choose Update References from the Edit menu, select which text insets you want to update in the Update References dialog box, and click Update. FrameMaker updates the text insets you specify if their source has changed on disk since the last update.

CONVERTING A TEXT INSET TO EDITABLE TEXT

You can convert a single text inset or all the text insets in a document. First, click the text inset to select it. Then choose Text Inset Properties from the Edit menu. In the dialog box, click Convert to Text. The Convert Text Insets to Text dialog box appears. Click Selected Text Inset or All Text Insets and click Convert. When you convert a text inset to text, FrameMaker no longer updates it.

CANCELING THE UPDATING

You can interrupt the updating of text insets in a document by pressing Control-c.

To locate the source for an unresolved text inset

If FrameMaker can't locate the source file for a text inset during updating (or if the format of the source file has changed since the last update), FrameMaker displays the Unresolved Text Inset alert box. You can locate the unresolved text inset and search for its source file. You use the Find/Change window to locate the unresolved inset. Alternatively, you can generate a list of unresolved insets.

1. **Click Continue to dismiss the alert box.**
2. **Choose Find/Change from the Edit menu.**
3. **In the Find/Change window, choose Unresolved Text Inset from the Find pop-up menu and click Find.**
   FrameMaker finds the first unresolved text inset and selects it.
4. **Choose Text Inset Properties from the Edit menu.**
   In the Text Inset Properties dialog box, note the pathname and file type of the source of the inset. For details, see "To view the properties of a text inset" on page 3-21.
5. **Click Cancel to dismiss the Text Inset Properties dialog box and then reimport the text.**
   Follow the steps in "To import a text flow" on page 3-13 or in "To import a text file" on page 3-17 to reimport the text. Use the information in the Text Inset Properties dialog box to help you locate the source of the inset.

   You can search for other unresolved insets and their sources by repeating steps 3 through 5.

MACINTOSH SUBSCRIBERS ON NON-MACINTOSH PLATFORMS

If a file contains subscribers and you try to update text insets in the file (or if you try to open the file when text insets are set to update automatically) on platforms other than the Macintosh, FrameMaker cannot update the subscriber and notifies you that the document contains unresolved text insets. To update or modify a text inset created by subscribing to text, update the file on the Macintosh or, if possible, reimport the source text using the Import>File command on the File menu. For more information, see the online manual *Using Frame Products on Multiple Platforms*.

GENERATING A LIST OF UNRESOLVED TEXT INSETS

You can generate a list of unresolved text insets by page number, with the imported text and graphics in each inset indicated. For details on generating a list, see “To generate a list” on page 22-7.

4

FORMATTING TEXT

Changing the properties of text

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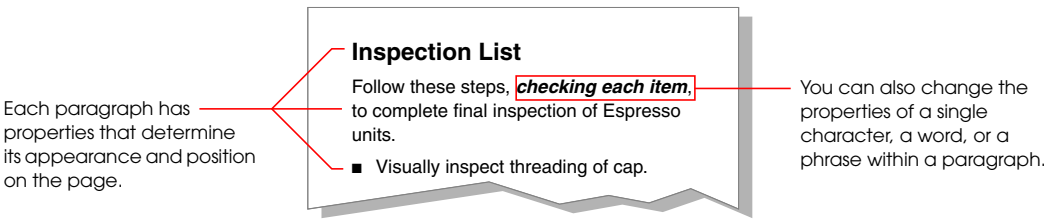
4 FORMATTING TEXT

Formatting in FrameMaker involves specifying the properties of text. Properties include the font family, size, and style, plus indents, tab stops, line spacing, and other such items.

Paragraphs are the basic formatting building block

In a FrameMaker document, the format properties you change generally apply to entire paragraphs. (A paragraph can be normal body text, a heading, an item in a list, and so on.) You can also change properties of individual characters or words within a paragraph. For example, you may want to use italics when you introduce new terms.

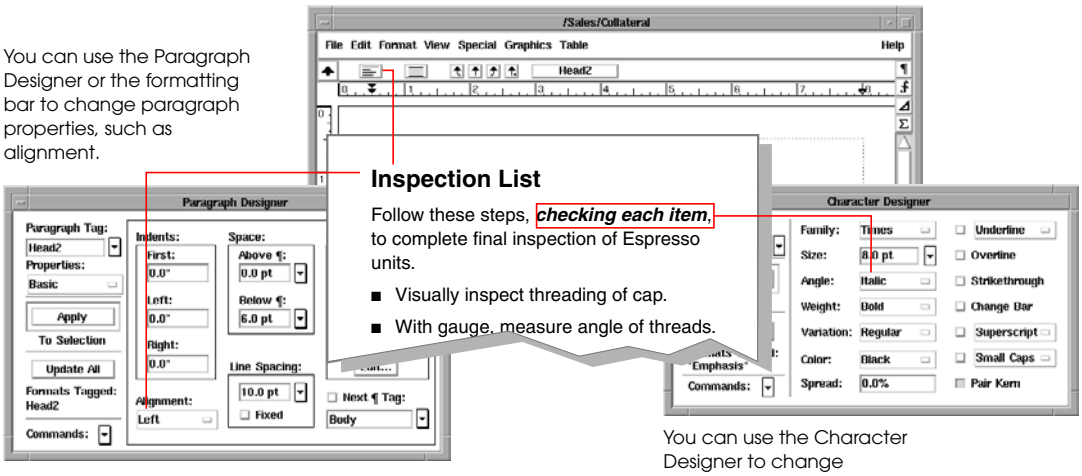


When you change properties of selected text within a paragraph, those properties are retained if you later change the properties of the entire paragraph. That way, you don't lose any special formatting.

You can use the formatting bar or a designer window

The formatting bar and the Format menu contain most of the commonly used formatting commands. For more precise control, and for access to commands that aren't available on the formatting bar, you can use the FrameMaker designer windows as you format text. If you use the

formatting bar to change a property, the new setting also appears in the designer window.



With the Paragraph Designer window, you can change some or all properties of a paragraph at once from one location. For example, you can specify a paragraph's font properties, indents, alignment, space above and below, line spacing, and tab stops.

With the Character Designer window, you can change several font properties of selected text without affecting the entire paragraph. For example, you can select a word or phrase and use the Character Designer to change its font size and style.

Font properties determine the appearance of text

Every paragraph has a default font that determines the appearance of text in the paragraph. The default font is made up of properties that you can change—for example, the font family, size, style, and color. To fine-tune the appearance of text, you can adjust the spacing between characters, apply special capitalization, and set the size and placement of superscript and subscript text.

You can change the font properties of entire paragraphs or of selected text within a paragraph.

You can change the properties of entire passages

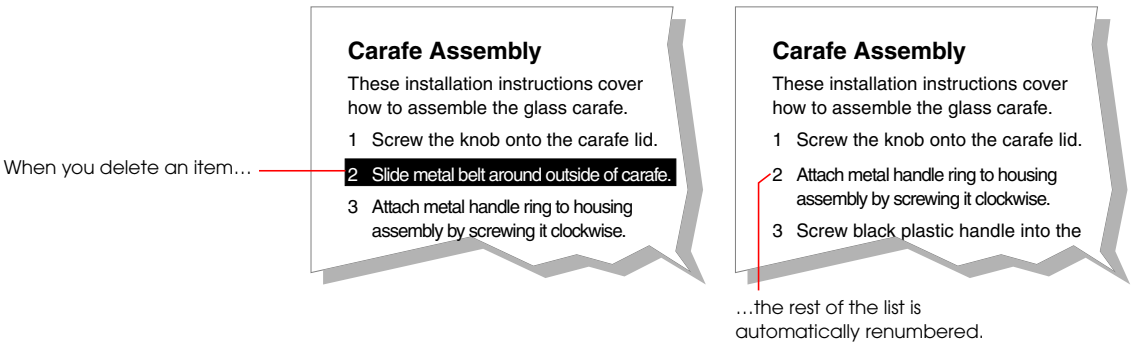
While font properties determine the appearance of the text characters, the general look of your text is provided by properties that apply to larger passages—paragraphs or groups of paragraphs. You can change the formatting properties of a single paragraph or several adjacent paragraphs at once. You can set up where paragraphs fall on the page, how they're indented and aligned, and how much space appears above and below them. You can define tab stops with leader lines, add graphic lines above and below paragraphs, and set the spacing between words and lines. Special features also let you control the way words are hyphenated and how lines and pages break.

Special headings require special formatting

With FrameMaker, you can set up headings or other paragraphs that straddle columns in a multicolumn layout. You can also set up side heads—headings that appear at the side of body text, aligned with the text. And you can design run-in heads whose text can be included in tables of contents, cross-references, and page headers and footers.

Clean lists, easy reading—and no misnumbering

You can set up special formats that automatically number items in lists. When you delete an item from a numbered list, or add one to it, FrameMaker automatically renumbers the other items.



For unnumbered lists, you can specify that a bullet symbol appear before each item. You type the text, and FrameMaker inserts the symbol.

Formats can be reused

Every paragraph in a document has a format—a collection of properties—that you can manipulate as a whole. Chapter 5, "Format Catalogs," describes working with paragraph formats. You can apply a paragraph format to other paragraphs in the same document or in a different document. You save time by not having to format each paragraph separately, and you can quickly maintain and update formats throughout a document. You store formats that you want to reuse in a catalog. Once a document's catalog is set up, you simply choose formats from the catalog and apply them to paragraphs in the document.

You can also format a word or phrase that you want to stand out from the rest of the paragraph. You can store these types of formats in a catalog and reuse them wherever necessary.

In this chapter

This chapter tells you how to change text properties such as the font family and style, character spacing, and paragraph settings. The chapter also shows you how to set up page breaks, create numbered and bulleted lists, and create straddle, side, and run-in heads. When you can use either the formatting bar or a designer window to change a property, the chapter provides the more convenient formatting bar method. It includes the designer window method only if it allows you more precise control.

Chapter 5, "Format Catalogs," shows you how to reuse formats stored in catalogs. Familiarizing yourself with the concepts in Chapter 5 will give you a broader view of how FrameMaker handles paragraph and text formatting.

USING THE FORMATTING BAR AND THE DESIGNER WINDOWS

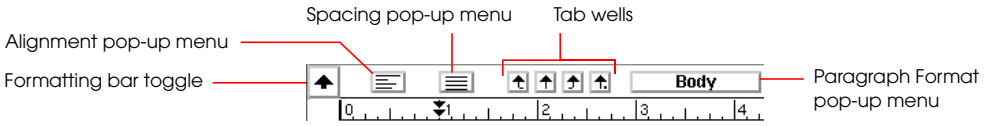
You can perform many text formatting tasks by using the formatting bar and the commands on the Format menu. This is generally the simplest way to format text. Any changes you make take effect immediately, changing the appearance of the text to reflect the new settings.

You can also use the Paragraph Designer window and the Character Designer window to format text. The designer windows give you more precise control and let you perform multiple formatting tasks at once. With the Paragraph Designer, you can change the properties of an entire paragraph. With the Character Designer, you can change the font properties of selected text within a paragraph without affecting the rest of the paragraph. When you use a designer window to change properties, the new settings do not take effect in the text until you explicitly apply them.

When you use the formatting bar to change properties, the new settings are reflected in the designer windows.

To display the formatting bar

The formatting bar contains formatting pop-up menus and tab wells that you can use to quickly set paragraph properties.



In order to display the formatting bar and the rulers, rulers must be visible.

1 **Choose Rulers from the View menu if the rulers are not already visible.**

2 **Click the formatting bar toggle.**
Clicking the toggle displays or hides the formatting bar.

To display a designer window

The Paragraph Designer divides formatting properties into six groups: basic, default font, pagination, numbering, advanced, and table cell. The Character Designer has only one group, which is the same as the Paragraph Designer's default font group.

- **To display the Paragraph Designer, choose Paragraphs>Designer from the Format menu.**

- **To display a different group of formatting properties in the Paragraph Designer, choose the group from the Properties pop-up menu.**

When you use a designer window to change properties, the new settings do not take effect in the text until you explicitly apply them. Before changing to a different property group, you should apply the current changes. To apply changes to the paragraph, click Apply To Selection.

For a brief description of how to use the designer windows, see "The Paragraph Designer" on page 5-8.

- **To display the Character Designer, choose Characters>Designer from the Format menu.**

RESETTING THE PROPERTIES

If you change properties in a designer window but then decide you don't want to apply them, you can reset the properties to match the current text.

To display the properties of the current text, choose Reset Window from Selection from the Commands pop-up menu in the designer window.

SPECIFYING FONT PROPERTIES

You can click in a paragraph (or select multiple paragraphs) and change the default font properties of the entire paragraph. You can also select specific text within a paragraph and change the text's font properties. If you change the font properties of selected text, those properties are retained when you later update the properties of the entire paragraph.

You can also change the font properties of text created with the Text Line tool. You can change the font properties of an entire text inset (text imported by reference), but only when the inset doesn't use formats from the source document. For details, see "Formatting an imported text flow" on page 3-16.

The basic font properties are the font family, style, and size. The family is the actual typeface such as Times and Helvetica. Font styles include the usual bold and italic styles as well as some less commonly used styles such as numeric

underlining, overlining, strikethrough, capitalization, superscripting, and subscripting. You can also choose a color for text.

You can improve the appearance of spacing on a line by using pair kerning and spread to adjust the space between characters. The ability to adjust character spacing is particularly useful for formatting large type such as titles or headings. Pair kerning removes space between some characters, making text easier to read. The spread is the amount of space added to (or subtracted from) the normal space between all characters.

To choose a font family, style, and size

When you choose a font, you specify the font family, style, and point size. The available font families and styles depend on which fonts are installed.

1. **Select the text whose font you want to change or click where you want to begin typing.**
   If you want to change the default font properties of a paragraph, select the entire paragraph.
2. **Choose a font family from the Format>Font submenu.**
3. **Choose a style from the Format>Style submenu.**
4. **Choose a size from the Format>Size submenu.**
   If you want a size not listed on the menu, choose Other and specify the size you want. You can type any point size from 2 to 400; the size can include a decimal fraction such as 10.5.

EFFECT ON LINE AND PARAGRAPH SPACING

When you change the size of a paragraph's default font, FrameMaker automatically changes the line spacing and then adjusts the space above and below the paragraph to maintain the proportionality. For example, if you increase the font size of a 12-point heading with 14 points of line spacing and 21 points of space above to 14 points, FrameMaker changes the line spacing to 17 points and the space above to 25.5 points.

USING A DESIGNER WINDOW

You can use a designer window to choose a font family, style, and size. To change the default font properties of an entire paragraph, click in the paragraph, choose Default Font from the Properties pop-up menu in the Paragraph Designer, and change the settings there. To change the font properties of specific text within a paragraph, select the text and change the settings in the Character Designer. When the properties are set the way you want them, click Apply To Selection.

USING VARIOUS WEIGHTS

Some fonts have more than one weight—for example, Helvetica Condensed Bold and Helvetica Condensed Black. Because the Format>Style submenu lists only Bold, you have to choose other weights from the Default Font properties of the Paragraph Designer or from the Character Designer instead.

USING NUMERIC UNDERLINING

With standard character underlining, the offset and thickness of the line is determined by the weight and size of the character's font. For example, the underline beneath bold text is thicker than the underline beneath light text.

With numeric underlining, the offset and thickness is not determined by the character's font. Numeric underlining has the same offset and thickness wherever it appears. To turn on numeric underlining, use a designer window. For information on the designer windows, see "Using a designer window" on page 4-8. The numeric underlining property does not appear in the Format>Style submenu.

USING NONALPHANUMERIC CHARACTERS

The Symbol and Zapf Dingbats font families consist of unusual characters rather than letters and numbers. You can use these characters in a variety of ways. For example, the bullet symbol ■ is a Zapf Dingbats character. For a complete list of these special fonts, see Chapter 3, "Character Sets," in the *Quick Reference*.

To choose a color

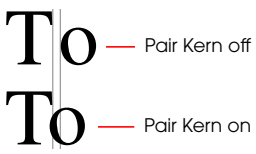
To make headings or other types of text stand out from the rest of the document, you can use color. For example, some manuals use a different color for first-level headings.

You can choose from the colors that have been defined in a document. When you assign a color to text, you see the text if the color is visible in the current view. For information on defining colors (or shades of gray) and on setting up color views, see Chapter 17, "Color."

1. **Click in the paragraph that has the color you want to change or select specific characters.**
2. **In the appropriate designer window, choose a color from the Color pop-up menu.**
   If you're formatting an entire paragraph, use the Default Font properties of the Paragraph Designer. If you're formatting characters, use the Character Designer.
3. **Click Apply To Selection.**

To use pair kerning

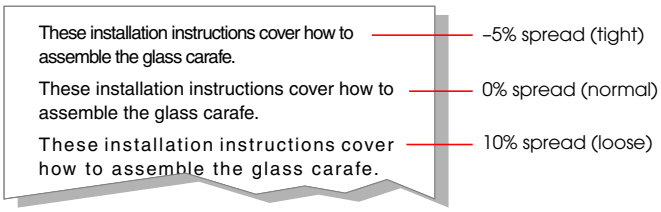
You can change the way FrameMaker spaces characters by turning on pair kerning. Pair kerning moves a character closer to the previous character in the same word to improve the appearance of text. Pair kerning also turns on ligatures (combined letter pairs such as *fi* and *fl* in printed documents). The character pairs that are kerned, the amount of kerning, and the ligatures that have been defined depend on the font. Kerning pairs are customizable. For information on customizing kerning pairs, see the online manual *Managing Frame Products*.



1. **Click in the paragraph that has the characters you want to kern or select specific characters.**
2. **In the appropriate designer window, turn on Pair Kern.**
   If you're formatting an entire paragraph, use the Default Font properties of the Paragraph Designer. If you're formatting characters, use the Character Designer.
3. **Click Apply To Selection.**

To change the spread between characters

You can change the spread between characters. You can use spread to improve the appearance of text in a large point size (such as a heading) or to increase or decrease the number of lines in a paragraph to prevent a page break.



Spread is the extra space you want to add to or subtract from a font's default space between characters. Spread is expressed as a percentage of an em space (a space as many points wide as the current font size is high). Normal spread is 0 percent.

1 **Click in the paragraph that has the characters you want to spread or select specific characters.**
Space is added to or subtracted from the space to the right of selected characters. Therefore, if you're adjusting the spread within a word, don't select the last character. Doing so changes the space after the word.

2 **In the appropriate designer window, adjust the value in the Spread text box.**
If you're formatting an entire paragraph, use the Default Font properties of the Paragraph Designer. If you're formatting characters, use the Character Designer.

To increase the space between characters, type a percentage greater than 0 (zero). To decrease the space, type a percentage less than 0 (zero).

3 **Click Apply To Selection.**

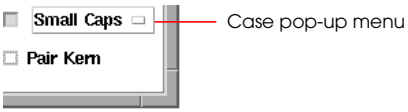
To use special capitalization

You can change the way characters are capitalized: uppercase, lowercase, small caps, or as typed.

When you apply small caps to text, FrameMaker displays all the characters in uppercase, though the text that was in lowercase appears in slightly smaller capital letters. For example, *Frame Technology* displayed in small caps appears as *FRAME TECHNOLOGY*.

1 **Select the text whose capitalization you want to change or click where you want to begin typing.**

2 **In the appropriate designer window, turn on special capitalization by choosing a capitalization style from the Case pop-up menu.**
If you're using the Paragraph Designer, the Case pop-up menu is in the Default Font properties.



3 **Click Apply To Selection.**

SPECIFYING THE SIZE OF SMALL CAPS

You can set a document preference for the font size of small caps by choosing Document>Text Options from the Format menu. In the Text Options dialog box, type a percentage in the Small Caps text box and click Apply.

When calculating the size, FrameMaker multiplies the percentage you type by the point size of the characters being affected. For example, when you enter a value of 80% and then apply Small Caps to 10-point characters, the small-cap characters are 8 points.

APPLYING SPECIAL CAPITALIZATION

Using the Paragraph Designer or the Character Designer to apply a capitalization style to text changes only the appearance of the text. For example, you can make lowercase text appear in uppercase letters by applying a capitalization style.

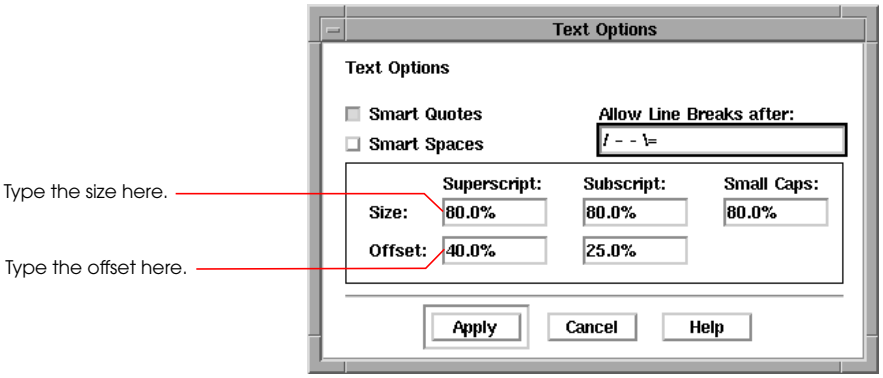
Continuing the example, if you want to display headings in all uppercase letters, but you want to display cross-references to the headings in mixed uppercase and lowercase, type the headings as you want to display them in cross-references and use the Uppercase capitalization style to make the headings all uppercase.

If you want to change the text itself, rather than just its appearance, use the Capitalization dialog box to replace selected text with text that is all uppercase, all lowercase, or initial caps. To display the Capitalization dialog box, press Esc e C.

To specify the size and placement of superscript and subscript text

FrameMaker formats superscript and subscript text (including footnote references) according to the size and offset you specify. These settings are document preferences that apply to all superscript and subscript text in the document.

1. **Choose Document>Text Options from the Format menu.**
2. **Specify the size and offset of superscript and subscript text.**



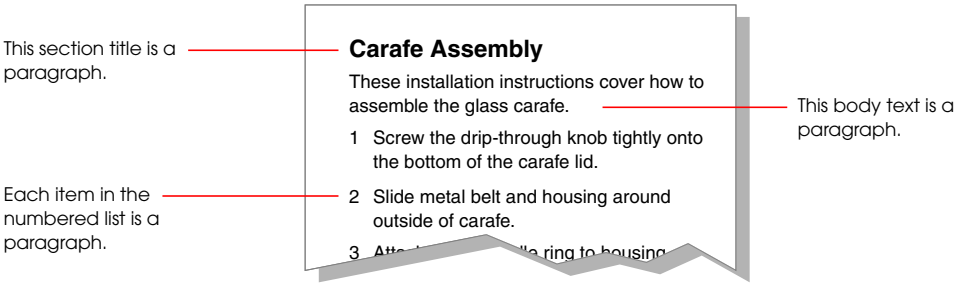
The size is a percentage of the point size of the superscript/subscript character. For example, a subscript 10-point character shrinks to 6.5 points if the size value is 65% (65% of 10 points). The minimum point size allowed for superscript and subscript text is 1 point.

The offset is the distance from the baseline that FrameMaker shifts a superscript or subscript character. The offset value is a percentage of the font size. For example, a superscript character in a 10-point font shifts up 4 points if the offset value is 40% (40% of 10 points).

3 **Click Apply.**

FORMATTING PASSAGES OF TEXT

You can change the formatting properties of a single paragraph or of several adjacent paragraphs at once. Each time you press Return, FrameMaker creates a new paragraph. A FrameMaker paragraph can be a body of text in the conventional sense, or it can be a title, a heading, or an item in a numbered or bulleted list.



A paragraph's format is made up of properties that determine its appearance. The tasks in this section show you how to change these formatting properties.

You can change the formatting properties in a text inset (text imported by reference), but only when it doesn't use formats from the source document. For details, see "Formatting an imported text flow" on page 3-16.

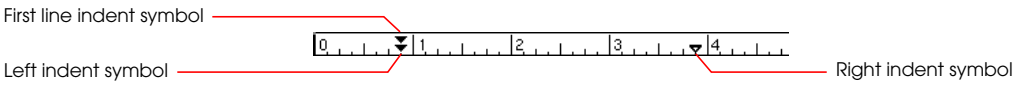
To indent a paragraph

The left indent property of a paragraph is the distance from the left edge of the text column to the start of text. The right indent is the distance from the end of the text to the right edge of the text column. As the text you type reaches the right indent, FrameMaker automatically wraps the text to the next line. You don't need to press Return unless you want to create a new paragraph.

You can specify indents for the first line of a paragraph and all lines after the first to achieve a variety of effects. For example, the first line and all subsequent lines of body paragraphs in this manual have the same indents. In numbered step paragraphs, however, the first lines are indented less than subsequent lines to achieve a "hanging indent."

1 **Click in the paragraph you want to indent.**
If you want to indent several adjacent paragraphs, select all of the paragraphs.

2 **Drag the indent symbol to a new location on the ruler.**



SPECIFYING AN INDENT VALUE

You can specify a precise indent value by using the Basic properties of the Paragraph Designer. Type the indents you want in the First, Left, and Right Indents text boxes. Then click Apply To Selection.

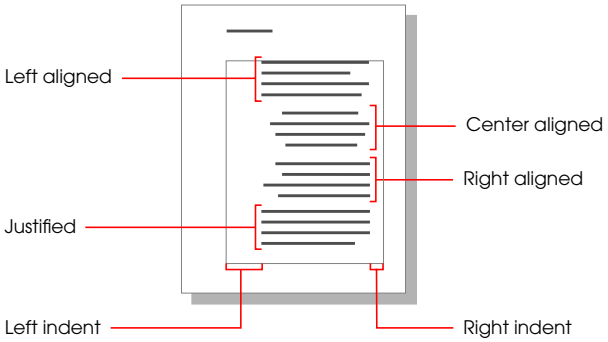
ALIGNING THE INDENT WITH A RULER MARKING

To align the indent with a ruler marking, turn on Snap on the Graphics menu. When you drag an indent symbol, it snaps to locations corresponding to the snap grid.

If the snap locations don't align with the ruler markings, you can change the snap grid interval. For instructions, see "To set the grid spacing" on page 13-6.

To align a paragraph

The alignment property of a paragraph determines how the paragraph is positioned within the left and right indents.

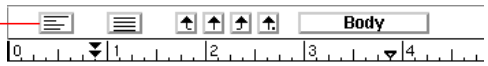


Alignment is relative to the paragraph's left and right indents, not to the edges of the column of text.

1 **Click in the paragraph you want to align.**
If you want to align several adjacent paragraphs, select all the paragraphs.

2 **Choose an alignment type from the Alignment pop-up menu on the formatting bar.**

The Alignment pop-up menu shows that the current paragraph is left aligned.



WORKING WITH JUSTIFIED TEXT

You can improve the appearance of justified paragraphs by adjusting the space between characters and words. For instructions, see "To adjust the space between words" on page 4-21 and "Allowing automatic letter spacing in justified text" on page 4-22.

To define a tab stop

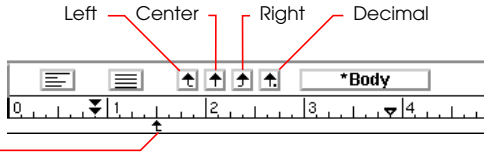
You can use tab stops to create numbered and bulleted lists, outlines, and similar material that must be aligned at specific places.

Before inserting a tab in text, you need to define a tab stop. You can use the formatting bar or the Paragraph Designer to define the locations of tab stops. Then, when you press the Tab key, FrameMaker moves the insertion point to the desired location.

You can choose from four types of tab stops—left, center, right, and decimal.

Left	Center	Right	Decimal
Apples	Apples	Apples	152.6457
Oranges	Oranges	Oranges	3.16
Grapefruit	Grapefruit	Grapefruit	3,458.75

- **To add a tab stop, click in a paragraph or select multiple paragraphs, and drag a tab symbol from the appropriate tab well on the formatting bar to the desired position below the top ruler.**



- **To move a tab stop, drag it to a new position.**
  If you change the position of a tab stop, FrameMaker moves any tabs in the paragraph at that stop to match the new position. Text following the tabs moves accordingly.
- **To add multiple tab stops at regular intervals, double-click the existing tab stop (on the top ruler) that you want to duplicate at regular intervals, and use the Edit Tab Stop dialog box to indicate the interval.**
  When you double-click a tab stop, FrameMaker displays the Edit Tab Stop dialog box. Type the interval between tabs in the Repeat Every text box and click Edit.
- **To delete a tab stop, drag it off the bottom of the top ruler.**

ALIGNING TAB STOPS WITH RULER MARKINGS

To align tab stops with ruler markings, turn on Snap on the Graphics menu. When you drag a tab symbol, it snaps to locations corresponding to the snap grid.

If the snap locations don't align with the ruler markings, you can change the snap grid interval. For instructions, see "To set the grid spacing" on page 13-6.

USING DECIMAL TAB STOPS

When you use a decimal tab stop, FrameMaker aligns the tabbed text on the decimal character. You can set the decimal character to whatever you want. For example, you can use a comma when you're working with European decimals.

Double-click a tab stop to display the Edit Tab Stop dialog box. Type the decimal character in the Align On text box in the Alignment area and click Edit.

ABSOLUTE TAB STOPS

FrameMaker tab stops are absolute as opposed to relative. For information on pressing the Tab key with absolute tab stops, see "Absolute tab stops" on page 3-6.

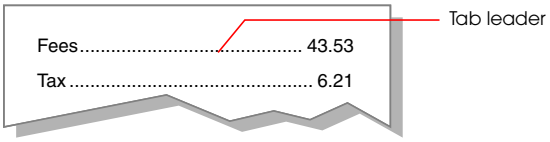
To specify an exact position for a tab stop

You can specify the exact position and alignment of an existing tab stop.

1. **Double-click the tab stop you want to edit.**
   FrameMaker displays the Edit Tab Stop dialog box.
2. **Type a new tab position in the New Position text box and choose a different alignment.**
   The position is the distance from the left edge of the column to the tab stop.
3. **Click Edit.**

To set a tab leader

You can specify a pattern of characters—a leader—to fill the space between a tab and the character following it. Typically, a leader is a series of periods, but you can use any characters, such as hyphens and asterisks. Tab leaders are useful for tables of contents that have a wide gap between columns. The leaders make it easy to match items across columns.

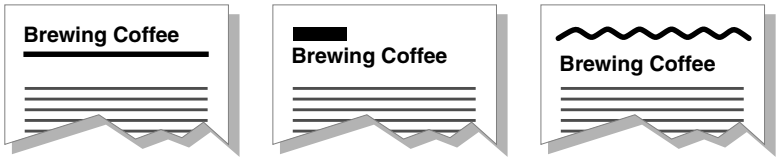


A leader can have more than one character and can use spaces.

1. **Double-click the tab stop for which you want to define a leader.**
   FrameMaker displays the Edit Tab Stop dialog box.
2. **In the Leader area, click one of the predefined tab leaders or type your own custom leader.**
3. **Click Edit.**

To put graphic lines above and below a paragraph

You can create a design element by placing a line or some other type of graphic above or below a paragraph. For example, all top-level headings in a document might rest on a long thin line. Or all of your chapter titles might be preceded by some graphic element.



You use reference frames on a reference page to create graphics that you want to include in a paragraph's format.

1. **On a reference page, draw or import the graphic in a reference frame.**
   For information on creating reference frames, see "To create a reference frame on a reference page" on page 19-23.
2. **Click in the paragraph you want to put a line above or below.**
   If you want to put a line above or below several adjacent paragraphs, select all of the paragraphs.

3 **In the Advanced properties of the Paragraph Designer, choose the reference frame from the Frame Above ¶ or from the Frame Below ¶ pop-up menu.**
All of the reference frames drawn on reference pages appear in the pop-up menus.

4 **Click Apply To Selection.**

BOXING A PARAGRAPH

You can box a paragraph of text by creating a single-cell table. Set up the table so that it doesn't have a title, heading row, or footing row. Adjust the size of the table so that the text and the box look the way you want. For information on creating tables, see Chapter 6, "Tables."

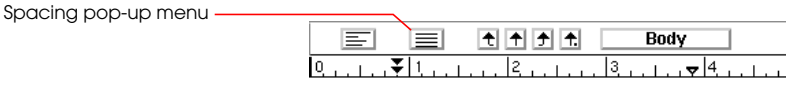
To choose the spacing between lines

The line spacing property is the amount of space between lines in a paragraph, measured from the baseline of one line to the baseline of the next line. A paragraph can have single spacing, 1.5 spacing, or double spacing. For information on specifying a custom line spacing, see "To specify custom line spacing" on page 4-19.

By default, a single-spaced paragraph's line spacing is approximately 120 percent of the default font size. For example, for font sizes of 10 and 15 points, the single-spaced line spacing is 12 and 18 points, respectively. The default line spacing for 1.5-spaced and double-spaced paragraphs is based on the single-spaced proportions. If you change a paragraph's default font size, FrameMaker automatically adjusts the line spacing.

1 **Click in the paragraph that has the line spacing you want to set.**
If you want to set the line spacing of several adjacent paragraphs, select all of the paragraphs.

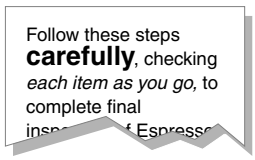
2 **Choose a type of line spacing from the Spacing pop-up menu on the formatting bar.**



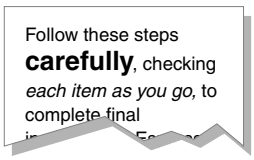
To specify custom line spacing

Rather than choosing single spacing, 1.5 spacing, or double spacing for a paragraph's line spacing, you can specify the exact line spacing you want.

You can also specify whether you want line spacing to be fixed. If a paragraph's line spacing is fixed, FrameMaker does not open up space to accommodate larger font sizes that may occur in the paragraph.



Fixed line spacing



Nonfixed line spacing based on the largest font in each line

If you want FrameMaker to increase the line spacing to accommodate a larger font size, you can turn off the fixed line spacing property.

- **To specify custom line spacing, type the spacing you want in the Custom Line Spacing dialog box.**

  Choose Custom from the Spacing pop-up menu on the formatting bar. In the Custom Line Spacing dialog box, type the line spacing you want in the Custom text box and click Set.

  For tips on choosing an appropriate line spacing for a particular paragraph, see "Guidelines for setting custom line spacing" on page 4-19.

GUIDELINES FOR SETTING CUSTOM LINE SPACING

The line spacing you specify depends on such things as the font you're using and its size, the width of the margins, and the type of document you're creating.

Default font size Choose a line spacing based on the paragraph's default font size. For a 9-, 10-, or 11-point font, you would normally add from 1 to 3 points to arrive at the line spacing. Add from 2 to 4 points for a 12-point font, from 3 to 6 points for a 14-point font, from 4 to 6 points for a 16-point font, and from 5 to 6 points for an 18-point font.

Special fonts Use more line spacing for sans serif fonts, tall or boldface fonts, and fonts with a strong vertical emphasis.

Long lines of text Use more line spacing for long lines of text to make the paragraphs easier to read.

- **To turn the fixed line spacing on or off, change the setting in the Custom Line Spacing dialog box.**
  Choose Custom from the Spacing pop-up menu on the formatting bar. In the Custom Line Spacing dialog box, change the Fixed Line Spacing setting and click Set.

To set the spacing above and below a paragraph

When you press Return to create a new paragraph, FrameMaker adds space between the first paragraph and the new one. FrameMaker determines the amount of space by choosing either the first paragraph's Space Below property or the second paragraph's Space Above property, whichever is larger.

If a paragraph falls at the top of a column, FrameMaker ignores the Space Above setting. If the paragraph falls at the bottom of a column, FrameMaker ignores the Space Below setting.

1. **Click in the paragraph that has the space above or below you want to set.**
   If you want to set the space above or below several adjacent paragraphs, select all of the paragraphs.
2. **In the Basic properties of the Paragraph Designer, specify the amount of space in the Space Above and Space Below text boxes, or choose values from the pop-up menus.**

   FrameMaker adds the value you specify to the paragraph's line spacing. Specifying zero points adds no extra space. Specifying the same number as the paragraph's line spacing adds the equivalent of one extra line of space.
3. **Click Apply To Selection.**

FACTORS THAT AFFECT PARAGRAPH SPACING

Feathering text and synchronizing text baselines can affect the spacing between paragraphs. For information on feathering and synchronizing, see "Aligning text in columns" on page 18-16.

SETTING THE SPACE BETWEEN TWO PARAGRAPHS

You can specify how much space you want between two particular paragraphs. This value changes the Space Below property of the first paragraph or the Space Above property of the second paragraph, whichever is larger. If both have the same properties, both are changed.

To set the space between two paragraphs, select them and choose Space Between from the Spacing pop-up menu on the formatting bar.

In the Space between Paragraphs dialog box, choose the number of blank lines between paragraphs or type a custom spacing. Then click Set.

If more than two paragraphs are selected, FrameMaker adjusts the space between all the selected paragraphs.

To adjust the space between words

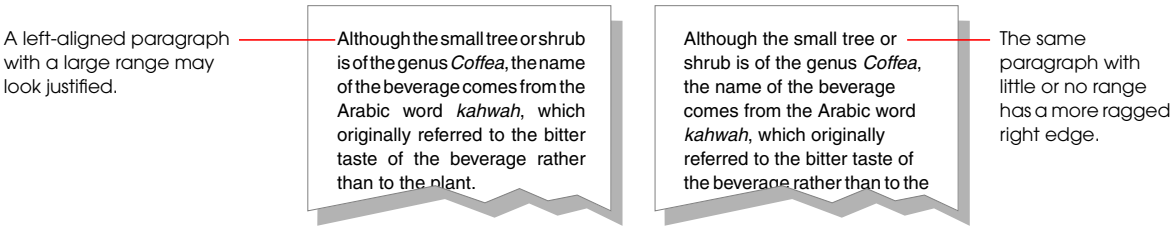
FrameMaker adjusts the space between words to achieve even spacing in a line and to fill lines consistently. You can specify how tightly you want words spaced in a line.

UNDERSTANDING WORD SPACING

You can specify the minimum, maximum, and optimum word spacing. The *minimum* spacing is the smallest space allowed between words. The *maximum* spacing is the largest space allowed between words before FrameMaker tries to hyphenate words or add space between letters in justified paragraphs. The *optimum* spacing is what FrameMaker tries to achieve.

Word spacing values are a percentage of the standard space for the paragraph's default font. The standard space is 100%. Values below 100% allow a tighter word spacing; values above 100% allow a looser spacing. For example, a justified paragraph with settings of 75% Minimum, 125% Maximum, and 100% Optimum is more readable than a justified paragraph with all settings of 100%.

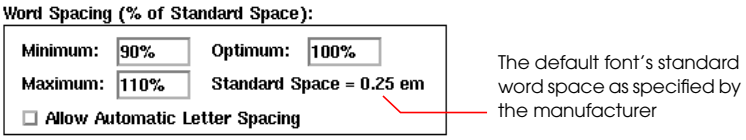
Each font has a standard space determined by the font's manufacturer. You change a paragraph's word spacing by specifying a range for how much freedom FrameMaker has in decreasing or increasing word spacing to fill a line.



The greater the range, the more adjustments FrameMaker can make and the more likely it will fill a line with text.

1 **Click in the paragraph that has the word spacing you want to change.**
If you want to change the word spacing of several adjacent paragraphs, select all of the paragraphs.

2 **In the Advanced properties of the Paragraph Designer, specify the minimum, optimum, and maximum space to allow between words.**



For information on the minimum, optimum, and maximum settings, see "Understanding word spacing" on page 4-21.

3 **Click Apply To Selection.**

ALLOWING AUTOMATIC LETTER SPACING IN JUSTIFIED TEXT

Lines of text in a justified paragraph can have more than the maximum space between words if FrameMaker can't fit a word on a line and can't hyphenate it. To try to prevent this, you can add extra space between characters in justified text by turning on Allow Automatic Letter Spacing in the Word Spacing area. If a line in justified text is more loosely spaced than allowed by the Maximum setting, FrameMaker adds a small amount of space between characters to try to keep the space between words from going over the maximum.

To control hyphenation

When FrameMaker hyphenates text, it breaks words at the ends of lines so that the lines are approximately the same length. Without hyphenation, left-, right-, and center-aligned paragraphs have more ragged edges, and justified paragraphs have more white space between words.

This procedure describes how to turn on hyphenation for a paragraph so that FrameMaker determines where the actual hyphens should be placed. For information on techniques for hyphenating specific words, see "Additional hyphenation controls" on page 4-23.

ADDITIONAL HYPHENATION CONTROLS

In addition to being able to turn on and off the hyphenation property of paragraphs, you can control hyphenation in specific situations.

Hyphenating specific words You can define the hyphenation points of any word so that when it breaks anywhere in the document, the hyphen is where you want it. You should probably do this only for important, frequently used words—for example, for product names. You can also specify that a word is never to be hyphenated.

Use the Spelling Checker window to set the hyphenation points of a word. For more information, see "To control the hyphenation of a word" on page 9-11.

Discretionary hyphen If you don't want to add a different hyphenation point for all occurrences of a word, you can define a hyphenation point for a particular occurrence of a word.

To define a discretionary hyphen, click in the word where you want to define the hyphenation point and press Control-hyphen. FrameMaker places a discretionary hyphenation symbol (¬) above the word. If necessary, FrameMaker uses that point to hyphenate the word.

Suppressing hyphenation You can specify that FrameMaker should not hyphenate a particular occurrence of a word in a document.

To suppress hyphenation, click at the beginning of the word and press Shift-Meta-hyphen. FrameMaker places a suppress hyphenation symbol (_) under the word. If the word falls at the end of a line, FrameMaker shifts it to the beginning of the next line rather than hyphenate it.

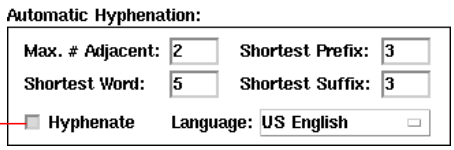
For information on suppressing the hyphenation of a word wherever it occurs in a document, see "To control the hyphenation of a word" on page 9-11.

Nonbreaking hyphen If you want an occurrence of a word to have a hyphen but you don't want lines to break at that hyphen, you can insert a *nonbreaking* hyphen. For example, this manual uses a hyphen between keys in a sequence—for example, Meta-Shift-hyphen. These hyphens are typed as nonbreaking hyphens so that the entire sequence always appears together in a line.

To type a nonbreaking hyphen, click where you want to insert the hyphen and press Meta-hyphen.

1 **Click in the paragraph you want to hyphenate.**
If you want to hyphenate several adjacent paragraphs, select all of the paragraphs.

2 **In the Advanced properties of the Paragraph Designer, turn on Hyphenate.**



Turn on hyphenation here.

3 **Type the minimum number of letters that can precede or follow a hyphen in the Shortest Prefix and Shortest Suffix text boxes, respectively.**

4 **Type the maximum number of consecutive lines that can end with a hyphen in the Max. # Adjacent text box.**

5 **Type the minimum length of a hyphenated word in the Shortest Word text box.**

6 **Click Apply To Selection.**

PREVENTING THE LAST WORD IN A PARAGRAPH FROM HYPHENATING

To prevent the last word in a paragraph from hyphenating, set the maximum number of adjacent hyphens to 1 in the Advanced properties of the Paragraph Designer. Alternatively, you can insert a suppress hyphenation symbol in the last word of the paragraph. For instructions, see "Additional hyphenation controls" on page 4-23.

HYPHENATION AND SPELL-CHECKING LANGUAGE

By default, the US version of FrameMaker hyphenates and spell-checks words according to the US English dictionary. The International English version of FrameMaker hyphenates and spell-checks words according to the UK English dictionary. You can choose a different language from the Language pop-up menu in the Advanced properties of the Paragraph Designer.

A setting of None identifies a paragraph as having no language. Choose None for paragraphs you don't want to hyphenate or don't want to check when you run the Spelling Checker—for example, for paragraphs of computer code.

TURNING HYPHENATION OFF

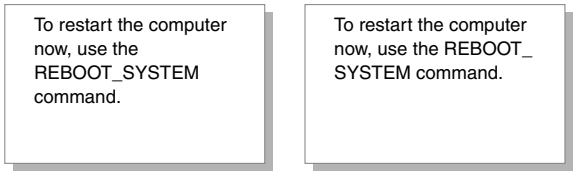
If hyphenation is on for a paragraph, you can turn it off by turning off Hyphenate in the Advanced properties of the Paragraph Designer.

To control line breaks

As you type, FrameMaker automatically wraps text and determines where lines break, either at a normal space character (which you insert by pressing the space bar) or at a place where it can hyphenate a word. You can override the FrameMaker line breaks for a specific line of text if the break doesn't seem appropriate. For example, if you have a two-word product name, you may not want FrameMaker to break the line between the two words.

These line-break controls are not paragraph properties. They affect only the particular lines of text in which they occur.

- **To force a line break, click where you want to break the line and press Meta-Return.**
  FrameMaker places a forced return symbol (↵) at the end of the line. Text to the right of the forced return moves to the next line without creating a new paragraph.
- **To keep two words together on the same line, select the space between the two words and press Control-space.**
  FrameMaker places a nonbreaking space symbol (␣) between the two words. If both words won't fit together on the line, FrameMaker moves them both to the next line.
- **To specify nonalphabetic characters after which a line break is OK, specify them by using the Document>Text Options command on the Format menu.**
  Normally, FrameMaker won't break a line after a nonalphabetic character, but you can specify otherwise. For example, you can tell FrameMaker that it's OK to break a line after an underscore character (_).



Default line breaks

Line breaks allowed after an underscore character

To specify a nonalphabetic character after which FrameMaker can break a line, choose Document>Text Options from the Format menu. In the Text Options dialog box, type the characters in the Allow Line Breaks After text box and click Set.

TYPING SPECIAL CHARACTERS

All of the special characters that you type in a document by using character combinations—for example, em dashes and bullets—can also be included in the Allow Line Breaks After text box. When you type some character combinations in the text box, FrameMaker displays a backslash (\) followed by one or two characters—not the special character. For a complete list of the special characters you can use, see Chapter 3, "Character Sets," in the *Quick Reference*.

CONTROLLING PAGE BREAKS

In FrameMaker, text usually flows from page to page as you type. When text reaches the bottom of the last page, FrameMaker creates a new page.

You control where FrameMaker breaks text across pages in several ways. You can force a page break by making a paragraph, such as a heading, start at the top of a page. You can specify how many lines of a paragraph must stay together at the top or bottom of a page. And you can force a paragraph to stay with the following paragraph.

You can combine these controls to enforce your own page-breaking rules—for example, that a heading must be followed by at least three lines of text on the same page.

To start a paragraph at the top of a column or page

You can specify that a paragraph should start at the top of a new column or page. For example, you may want a heading to always start at the top of a new page regardless of where it falls in the document.

1. **Click in the paragraph that you want to start at the top of a column or page.**
2. **Choose Page Break from the Special menu.**
3. **In the Page Break dialog box, choose where the paragraph should start from the At Top of Next Available pop-up menu.**
   You can choose whether the paragraph should start at the top of the next column, next page, next left page, or next right page.
4. **Click Set.**

USING THE PARAGRAPH DESIGNER

If you're using the Paragraph Designer, you can choose this property from the Start pop-up menu in the Pagination properties.

REMOVING A PAGE BREAK

For information on removing a page break, see "To start a paragraph wherever there's room," next.

To start a paragraph wherever there's room

If you edit your document so that you no longer want a paragraph to start at the top of a column or page, you can specify that it should start where it would normally fall.

1. **Click in the paragraph that you no longer want to start at the top of a column or page.**
2. **Choose Page Break from the Special menu.**
3. **In the Page Break dialog box, choose Wherever It Fits and click Set.**

USING THE PARAGRAPH DESIGNER

If you're using the Paragraph Designer, you can choose Anywhere from the Start pop-up menu in the Pagination properties.

To keep paragraphs together

FrameMaker can keep a paragraph in the same column as the previous paragraph, the next paragraph, or both. When you set up a paragraph in this way, you prevent paragraphs from breaking between two columns. For example, you can specify that a heading always has at least one paragraph of text below it. If the heading and the next paragraph won't fit together at the bottom of a column, FrameMaker moves them both to the top of the next column—to the top of the next page in a typical single-column page layout.

1. **Click in the paragraph that you want to keep with another paragraph.**
2. **In the Pagination properties of the Paragraph Designer, turn on Keep With Next ¶, Keep With Previous ¶, or both.**
3. **Click Apply To Selection.**

HOW FRAMEMAKER CALCULATES WHERE TO BREAK THE PARAGRAPH

The Keep With properties keep the end of one paragraph together in a column with the beginning of another. Not all lines of the paragraphs necessarily stay together.

The Widow/Orphan Lines property of each paragraph controls how many lines of the paragraphs must stay together. For more information on widow and orphan lines, see "To control widow and orphan lines," next.

To control widow and orphan lines

A widow or an orphan occurs when a few lines of a paragraph appear alone at the top or bottom of a column. These lines, isolated from the rest of the paragraph, can interfere with a reader's comprehension. You can specify the minimum number of lines that can appear alone at the top or bottom of a column—at the top or bottom of a page in a typical single-column page layout.

1. **Click in the paragraph that has the widow/orphan property you want to change.**
   If you want to change the settings of several adjacent paragraphs, select all of the paragraphs.
2. **In the Pagination properties of the Paragraph Designer, type the minimum number of widow and orphan lines to allow in the paragraph in the Widow/Orphan Lines text box.**
   The largest number of widow and orphan lines you can specify is 100.
3. **Click Apply To Selection.**

KEEPING ALL LINES TOGETHER

To keep all lines of a paragraph in the same column, specify a large number for the Widow/Orphan setting. The maximum number allowed is 100 lines.

FORMATTING SPECIAL HEADINGS

FrameMaker provides three types of special headings—side, straddle, and run-in. Side heads are prominent; they stand to the side of the normal body text and are easy to spot. As a navigation device, they're good for scanning purposes. You can also use them to create marginal notes or other types of text that you want to display outside of the normal body text.

Straddle heads span columns in a multicolumn layout. They are also good for scanning purposes.

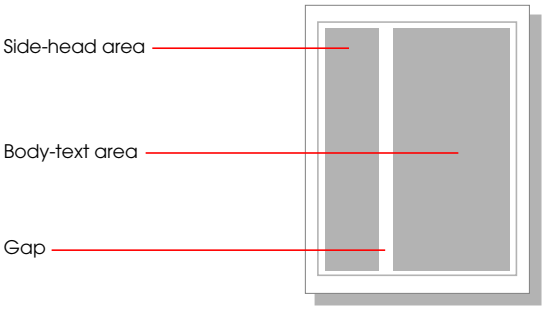
Run-in heads are less conspicuous. Although they're on the same line as normal body text, they're separate paragraphs. You can therefore include them in tables of contents, create cross-references to them, include them in headers and footers, and so on.

Original document | With side heads | With straddle heads | With run-in heads

You can use any combination of side heads, straddle heads, and run-in heads in a document.

To set up side-head and body-text areas

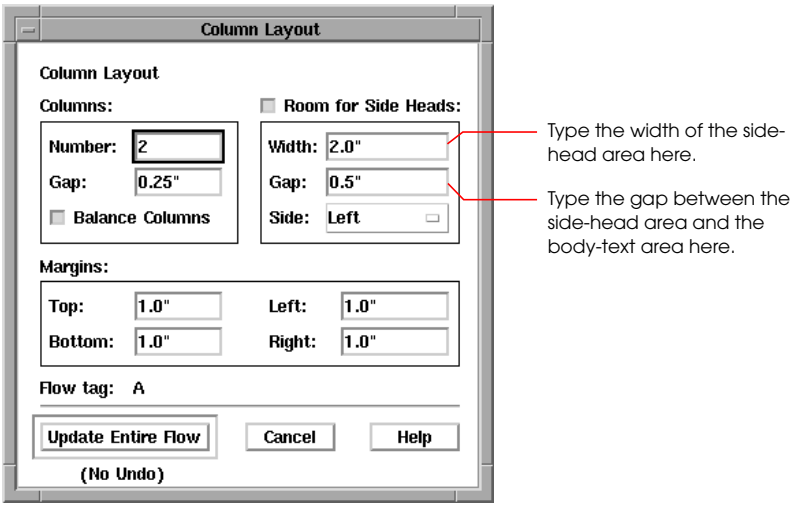
If you use side heads in a document, you designate areas of the text frame for the headings, the normal body text, and the space between (gap). You also specify where you want to display side heads—on the left or right side of the page, or on the inside or outside of facing pages.



You set up a side-head area for an entire flow at a time, but you can change the size and placement of the area in specific text frames in the flow. When you set up a side-head area in a flow, FrameMaker immediately moves all paragraphs not designated as side heads to the body-text area.

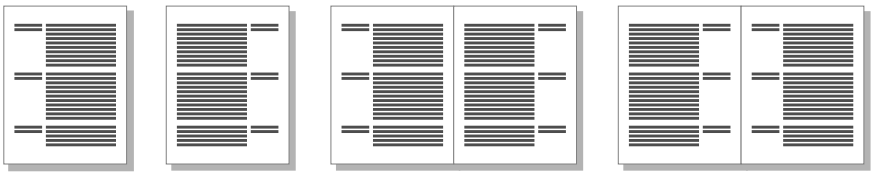
1. **Click in the flow for which you want to set up a side-head area.**
2. **Choose Page Layout>Column Layout from the Format menu.**
3. **In the Column Layout dialog box, turn on Room for Side Heads.**

4 **Specify the width of the side-head area and the gap between the side-head and body-text areas.**



When you specify the width of the side-head area and the gap, the remaining space is allocated to one or more columns of body text.

5 **From the Side pop-up menu, choose the side of the page on which you want to place side heads.**



6 **Click Update Entire Flow.**

FrameMaker moves all paragraphs not designated as side heads to the body-text area. Any paragraphs already designated as side heads move to the side-head area.

CHANGING SIDE-HEAD PROPERTIES FOR A TEXT FRAME

You allow for side heads in an entire flow at one time. However, you can change the side-head properties—the width of the side-head area, the gap between the side-head and body-text areas, and the side of the page on which the side heads appear—for individual text frames in a flow. For example, you may want to enlarge the side-head area on a page to accommodate an oversized side head.

To change the side-head properties for an individual text frame, click in the text frame and choose Customize Layout>Customize Text Frame from the Format menu. In the Customize Text Frame dialog box, change the side-head properties as necessary and click Set.

The changes are considered a layout override for the selected text frame. However, if you change the setting in the Room for Side Heads checkbox, the change applies to the entire flow. You can remove layout overrides by using the Page Layout>Column Layout command on the Format menu.

TURNING OFF SIDE-HEAD FORMATTING

Turn off the side-head property when you want to display side heads in columns with the body text. To do so, click in the flow for which you want to turn off side-head formatting and choose Page Layout>Column Layout from the Format menu. Then turn off Room for Side Heads and click Update Entire Flow.

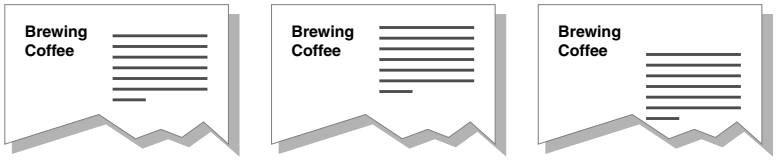
To create a side head

When you apply the side-head property to a paragraph, FrameMaker moves the paragraph to the side-head area. If there's an existing paragraph following the side head, it's shifted up, adjacent to the side head.

Before you create side heads, you define an area of the text frame for the side heads and an area for the body text. For information on setting up a side-head area for a text flow, see "To set up side-head and body-text areas" on page 4-30.

1 **Click in the paragraph you want to make a side head.**

2 **In the Pagination properties of the Paragraph Designer, click Side Head and choose an option from the Side Head Alignment pop-up menu.**



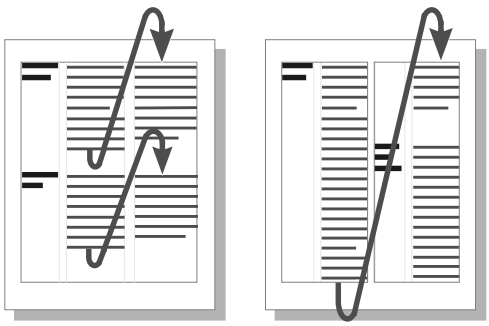
First Baseline Top Edge Last Baseline

3 **Click Apply To Selection.**

If a side-head area has been set up for the text flow, FrameMaker moves the paragraph to the side-head area.

SIDE HEADS IN MULTICOLUMN TEXT FRAMES

When a side head appears in a multicolumn text frame, the preceding text is balanced across the columns. If a page contains several text frames, each text frame contains its own side-head area.



Side heads in a single text frame

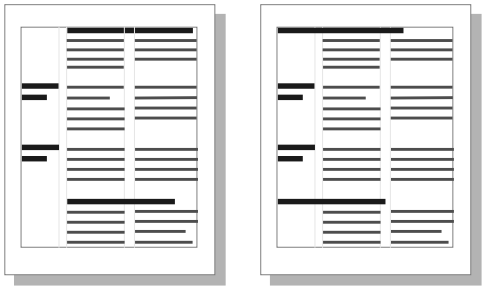
Side heads in separate single-column text frames

DETERMINING THE SPACE ABOVE A SIDE HEAD

The space between the side head and the preceding paragraph is determined by the Space Below setting of the previous paragraph or the Space Above setting of the side head, whichever is greater.

To create a straddle head

Straddle heads span columns in a multicolumn text frame. If the text flow also uses side heads, you can specify whether you want a straddle head to span just the columns of body text or both the columns and the side-head area.



Across columns of body text

Across columns and side-heads

When a heading paragraph straddles columns, the text above the heading is balanced across the columns.

1. **Click in the paragraph that you want to straddle columns.**
2. **In the Pagination properties of the Paragraph Designer, click Across All Columns or Across All Columns and Side Heads.**
3. **Click Apply To Selection.**

To create a run-in head

Because your run-in heads share margins with normal body text, you may want to give them a different font for contrast. You also need to decide how, or whether, to punctuate them.

1. **Click in the paragraph you want to make a run-in head.**

2 **In the Pagination properties of the Paragraph Designer, click Run-In Head and type the punctuation, space, or combination of punctuation and space that you want to use in the Default Punctuation text box.**

For example, all run-in heads in a document can end with a colon (:) followed by an em space, in which case the space is added between the head and the paragraph that follows on the same line. The default punctuation is initially set to a period followed by a space.

This punctuation does not appear in information generated from the run-in heads—for example, in tables of contents or in cross-references.

3 **Click Apply To Selection.**

4 **In the Default Font properties, change the run-in head's font so that it stands out from the surrounding text.**

5 **Click Apply To Selection.**

DETERMINING THE SPACE ABOVE A RUN-IN HEAD

The space between the run-in head and the preceding paragraph is determined by the Space Below setting of the previous paragraph or by the Space Above setting of the run-in, whichever is larger.

TYPING SPECIAL CHARACTERS

All of the special characters that you type in a document by using character combinations—for example, em dashes and bullets—can also be included in the Default Punctuation text box. When you type some character combinations in the text box, FrameMaker displays a backslash (\) followed by one or two characters—not the special character. For a complete list of the special characters you can use, see Chapter 3, "Character Sets," in the *Quick Reference*.

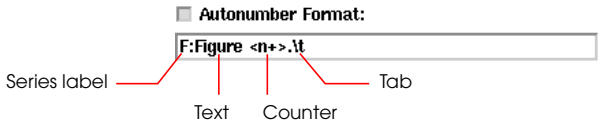
USING A DIFFERENT DEFAULT PUNCTUATION

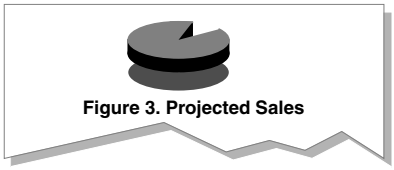
If a particular run-in head in your document needs different ending punctuation from the default, simply type the punctuation you need after the run-in head. FrameMaker ignores the punctuation specified in the Default Punctuation text box but retains any special characters that are part of the default, including em and en spaces.

FORMATTING LISTS

You create numbered and bulleted lists by setting up autonumber formats for paragraphs. An autonumbered paragraph is part of a series such as steps or section headings. As you add autonumbered paragraphs to your document, FrameMaker numbers them appropriately and renumbers existing autonumbered paragraphs if necessary.

You use the Numbering properties of the Paragraph Designer to define an autonumber format. An autonumber format can have a series label, a counter, a tab, and any additional text you need.

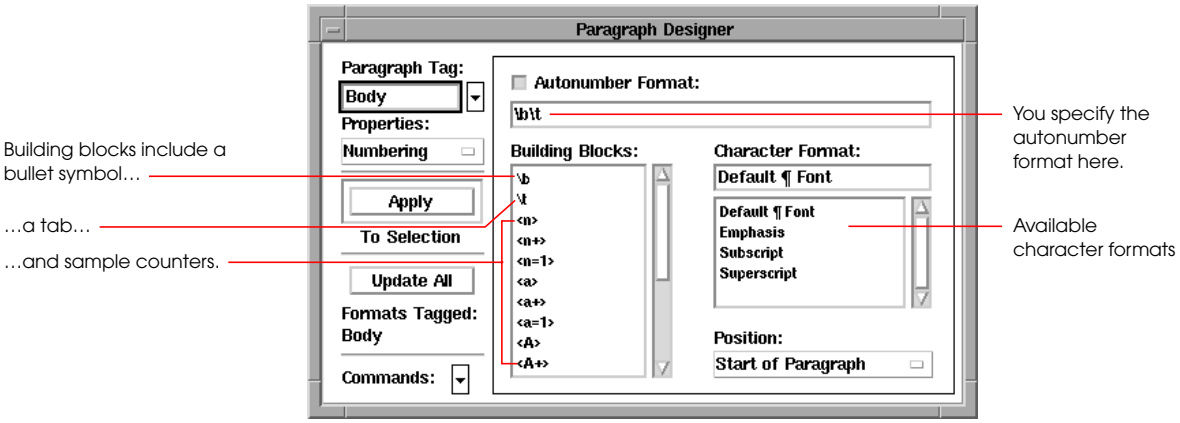




To create a numbered list

The easiest way to use autonumbered lists is to create Paragraph Catalog formats that you can use over and over again. For information on creating paragraph formats, see Chapter 5, "Format Catalogs." In particular, see "Tips on creating formats" on page 5-12.

In the Numbering properties of the Paragraph Designer, you can specify the autonumber format by typing and by selecting building blocks in a scroll list. In addition, you can choose a character format for the autonumber and whether the autonumber should appear at the beginning or end of the paragraph.



For more information on autonumber formats, see "Understanding autonumber formats" on page 4-37. For examples, see "Counters" on page 4-40.

1 **Click in the paragraph that you want to autonumber.**
If you want to autonumber several adjacent paragraphs, select all of the paragraphs.

2 **In the Numbering properties of the Paragraph Designer, type a series label in the Autonumber Format text box.**
You need to use a series label only if you have more than one autonumber series in the current flow. A series label consists of any single printable character followed by a colon (for example, *F:*). If you use a series label, it must appear at the beginning of the format.

3 **Specify the rest of the autonumber format.**
You can type any text, spaces, or tabs (\t) required, and you can select building blocks in the Building Blocks scroll list. When you select a building block, it appears at the insertion point in the Autonumber Format text box. For information on setting up autonumber formats, see "Understanding autonumber formats" on page 4-37. For more information on setting up counters, see "Counters" on page 4-40.

To insert a tab, type or select `\t`.

UNDERSTANDING AUTONUMBER FORMATS

An autonumber format can include a series label, a counter, a tab, and any additional text you need.

Series label A series label identifies different types of autonumber series within the same flow. For example, you might want to automatically number tables, figures, and steps. Each of these is a series, and each series is numbered independently of the others. (Each set of steps would *not* be a different series.)

A paragraph's autonumber is based on the previous numbered paragraph with the same series label in the flow. If you want to base table and figure numbers on section numbers, they must all be in the same series.

Counter A counter is a placeholder that FrameMaker replaces with a number or letter in a sequence. For example, the counter `<n+>` increments the paragraph's number by 1, so if the paragraph is the second in a series, FrameMaker replaces `<n+>` with the number 2. You can use multiple counters in a format. For more information on counters, see "Counters" on page 4-40.

Text, tabs, and other punctuation An autonumber can also include text, bullets, spaces, punctuation, or tabs anywhere in the format.

4 **Select a Character Format for the autonumber in the Character Format scroll list.**
An autonumber format can use only one character format.

If you leave the Character Format text box blank, the autonumber appears in the paragraph's default font. For information on character formats, see "Creating and updating character formats" on page 5-17.

5 **Choose a position for the autonumber from the Position pop-up menu.**
The autonumber can appear at the beginning or end of the paragraph. Autonumbers at the end of paragraphs are commonly used in equation formats.

6 **Click Apply To Selection.**

7 **Set a tab stop position for the paragraph if necessary.**
If you inserted a tab in the autonumber format, you need to define a tab stop for the space between the number and the first word in the paragraph. Insert a tab stop on the ruler. For details, see "To define a tab stop" on page 4-15.

REMOVING AUTONUMBERING

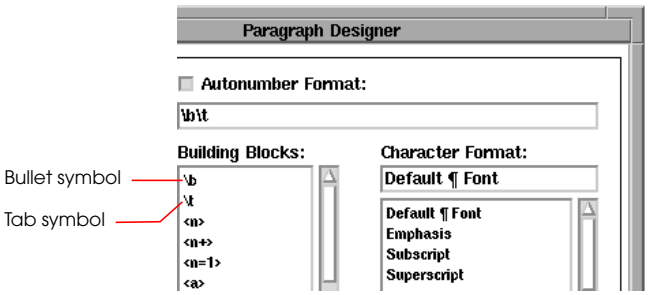
To remove autonumbering from a paragraph format, turn off the Autonumber Format checkbox in the Numbering Properties of the Paragraph Designer, and then click Apply. If you delete the format from the Autonumber Format text box without turning off the checkbox, FrameMaker retains the autonumbering when you click Apply.

To create a bulleted list

You can create a bulleted paragraph by including a bullet symbol in the autonumber format. The advantage of using autonumbering to create bulleted paragraphs (as opposed to simply typing the font's bullet symbol at the beginning of each paragraph) is that you can globally change the bullet symbol. You can choose any symbol as your bullet symbol. For information on using a different bullet symbol in an autonumbered paragraph, see "To use a different bullet symbol," next.

1 **Click in the paragraph that you want to make bulleted.**
If you want to make several adjacent paragraphs bulleted, select all of the paragraphs.

2 **In the Numbering properties of the Paragraph Designer, click the bullet and tab symbols in the Building Blocks scroll list.**



The symbols you click appear in the Autonumber Format text box. You can use spaces rather than a tab if you want to.

3 **Click Apply To Selection.**

4 **Set a tab stop position for the paragraph if necessary.**
If you inserted a tab in the autonumber format, you need to define a tab stop for the space between the bullet and the first word in the bulleted item. Insert a tab stop on the top ruler. For details, see "To define a tab stop" on page 4-15.

REMOVING THE BULLET

To remove a bullet symbol from a paragraph format, turn off the Autonumber Format checkbox in the Numbering Properties of the Paragraph Designer, and then click Apply. If you delete the format from the Autonumber Format text box without turning off the checkbox, FrameMaker retains the bullet when you click Apply.

To use a different bullet symbol

You aren't limited to using the • symbol as the bullet. You can use any character you like. For example, you can use a Zapf Dingbats square ■ as a bullet symbol.

1 **Create a character format with the font that has the bullet symbol you want to use.**
For example, if you want to use 9-point Zapf Dingbats, create a character format using that font. Give the format a descriptive name such as Bullet.

For information on creating character formats, see "Creating and updating character formats" on page 5-17.

2 **In the Numbering properties of the Paragraph Designer, type the character corresponding to the bullet symbol you want in the Autonumber Format text box (rather than select the symbol in the Building Blocks scroll list).**
For example, if you want a Zapf Dingbats square bullet, you type the lowercase letter *N,* which prints as ■ in that font. To find out which character corresponds to the bullet symbol you want, see Chapter 3, "Character Sets," in the *Quick Reference*.

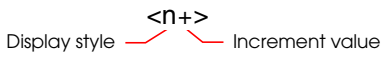
3 **Click the tab symbol in the Building Blocks scroll list.**

4 **Click the bullet character format that you created in the Character Format scroll list.**

5 **Click Apply To Selection.**

COUNTERS

A counter consists of angle brackets (< and >) that surround a display style and an increment value.



To indicate the display style, use a counter with one of these letters.

For this numbering style	Use
Numeric (1, 2, 3, …)	`n`
Lowercase Roman (i, ii, iii, iv, …)	`r`
Uppercase Roman (I, II, III, IV, …)	`R`
Lowercase alphabetic (a, b, c, … aa)	`a`
Uppercase alphabetic (A, B, C, … AA)	`A`

To indicate how an autonumber is incremented, use a counter with one of these increment values.

To	Use
Keep the value the same	`<n>`
Set the value to 1 or to any other number you type after the equal sign	`<n=1>`
Increase the value of the counter by 1	`<n+>`

To	Use
Keep the value the same but don't display	`< >`
Reset to zero (or any other number) but don't display	`< =0>`

Each counter is initially set to zero, but you can specify a different initial value. Thereafter, the counter can maintain its current value, increase by 1, or be reset to a different value. For example, use `<n=1>` to reset numbering back to 1 at the beginning of a new section or a new set of numbered steps.

If you want to keep the value the same without displaying it, you must put a blank space between the angle brackets. If you leave out the blank space, the angle brackets become part of the autonumber format.

MULTIPLE COUNTERS IN AN AUTONUMBER FORMAT

An autonumber format can have more than one counter. For example, autonumbers for a series of section titles might each have two counters.

These counter strings	Would appear as
`<n+>.<n=0>`	1.0
`<n>.<n+>`	1.1
`<n>.<n+>`	1.2
`<n+>.<n=0>`	2.0

The counters in each format are independent of each other. A counter's position in the string determines how it's displayed and incremented. When incrementing a counter, FrameMaker bases its value on the corresponding counter in the previous autonumber paragraph in the same flow.

AUTONUMBER EXAMPLES

The following example demonstrates multiple counters in section titles. The counter before the period increments independently from the counter after the period.

Example	Autonumber formats	Paragraph tags

1.0 Getting started
1.1 Installing the product
1.2 Backing up the files
2.0 Entering data
	`<n+>.<n=0>\t`
	`<n>.<n+>\t`
	`<n>.<n+>\t`
	`<n+>.<n=0>\t`
		Head1
		Head2
		Head2
		Head1

The following example of multiple section heading levels uses as many as three counters in a single format.

Example	Autonumber formats	Paragraph tags

1.0 Getting started
1.1 Installing the software
1.2 Backing up the files
1.2.1 If an error occurs
1.3 Entering data
	`<n+>.<n=0>\t`
	`<n>.<n+>\t`
	`<n>.<n+>\t`
	`<n>.<n>.<n+>\t`
	`<n>.<n+>\t`
		Head1
		Head2
		Head2
		Head3
		Head2

The following example demonstrates outline style autonumber formats.

Example	Autonumber formats	Paragraph tags

I Getting started
A Installing the product
B Backing up the files
II Entering data
A Opening a file
B Saving a file
	`<R+>< =0>\t`
	`< ><A+>\t`
	`< ><A+>\t`
	`<R+>< =0>\t`
	`< ><A+>\t`
	`< ><A+>\t`
		Head1
		Head2
		Head2
		Head1
		Head2
		Head2

The first heading in the second set of alphabetic headings has incremented back to A. It does so because the second counter of the previous format resets the numbering back to zero (without displaying it), so `<A+>` equals A.

The `< >` counter tells FrameMaker to keep the value the same but not to display it. This counter is used because a counter's position in the string determines how it's displayed and incremented. If the `< >` counter were not in that position, FrameMaker would produce this result:

I Getting started
B Installing the product
C Backing up the files
IV Entering data
E Opening a file
F Saving a file

The following example uses text (and a space) as part of the autonumber. It includes a series label and shows how to restart series numbering by reusing the `<n=1>` building block. Restarting numbering has been accomplished by creating a format for the first step and another format for the remaining steps.

Example	Autonumber formats	Paragraph tags
Step 1. Installing the product	`S:Step <n=1>.\t`	Step1
Step 2. Backing up the files	`S:Step <n+>.\t`	StepNext
Step 3. Entering data	`S:Step <n+>.\t`	StepNext
Step 1. Running test sequences	`S:Step <n=1>.\t`	Step1

AUTONUMBERING BASED ON SECTION NUMBERS

Normally, you create a different series for each type of numbering scheme in a flow. For example, headings, figures, and tables would each have a different series label. But suppose you want numbering to be based on section numbers such as the numbering shown in the following table.

Section numbers	Figure numbers	Table numbers
Section 1	Figure 1-1	Table 1-1
1.1	Figure 1-2	Table 1-2
1.1.1		
1.2		
1.2.1		
Section 2	Figure 2-1	Table 2-1
2.1	Figure 2-2	Table 2-2
2.1.1		
2.2		
2.2.1		

If you were to set up a different series each for sections, figures, and tables, FrameMaker wouldn't be able to base the figure and table numbers on the section numbers. To achieve this type of numbering, you must construct autonumber formats in a single series. The following table shows the paragraph formats you could create. It's presented in table form so that you can clearly see each counter's position in the string, which affects how the counter increments.

Paragraph format	Autonumber Format					
SectionTitle	`H:Section`	`<n+>`	`< =0>`	`< =0>`	`< =0>`	`< =0>`
Head1	`H:`	`<n>`	`.<n+>`	`< =0>`	`< >`	`< >`
Head2	`H:`	`<n>`	`.<n>`	`.<n+>`	`< >`	`< >`
FigureTitle	`H:Figure`	`<n>`	`< >`	`< >`	`-<n+>`	`< >`
TableTitle	`H:Table`	`<n>`	`< >`	`< >`	`< >`	`-<n+>`

Whenever a paragraph tagged SectionTitle occurs, the section number increments by 1, and the remaining counter values are reset to zero. The `<n+>` counters in the remaining formats each have their own position in the string. That way, they increment independently.

The `< >` counters keep FrameMaker from resetting values back to zero.

5

FORMAT CATALOGS

Using catalogs for fast, consistent formatting

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5 FORMAT CATALOGS

After you format some text, you can assign the format a name (its *tag*) and store the format in a catalog. When you apply a catalog format to a paragraph or to specific text within a paragraph, FrameMaker updates the paragraph or text to match the catalog format.

Catalogs maintain consistency and speed up formatting

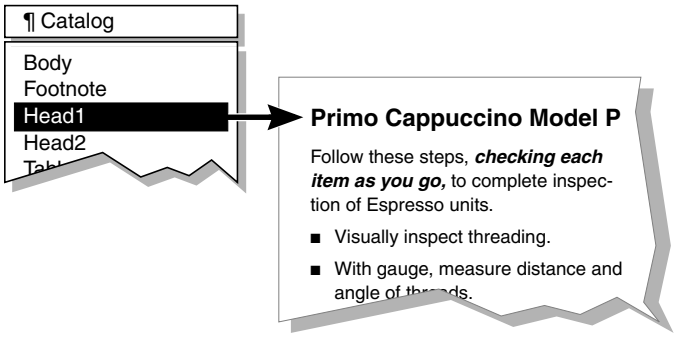
In most documents, you'll want each type of paragraph or text to look the same everywhere it's used. For example, all body paragraphs should have the same indent, default font, and alignment properties. By creating and applying catalog formats, you can maintain complete consistency in a document and in templates you create for formatting other documents.

Using catalog formats also makes the job of formatting go faster. You can quickly maintain and update formats throughout an entire document.

A paragraph format defines the entire paragraph

The formats in the Paragraph Catalog contain the properties for the paragraph as a whole. When you create a paragraph format, you include information about indentation, alignment, the default font, automatic numbering, tab stops, hyphenation, word spacing, and so on.

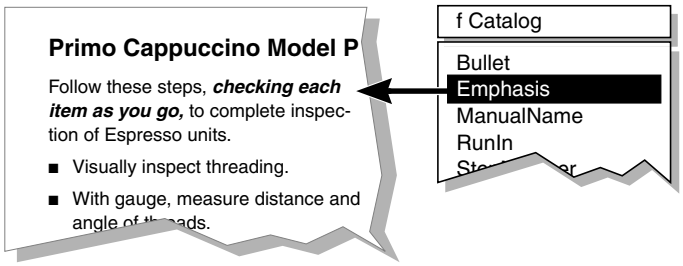
The format Head1 defines a paragraph that is left aligned, 9-point Helvetica bold, with 4 points of space below it.



A character format sets the font properties of specific text

At times, you may want a specific text item—a character, word, or phrase—to stand out from the rest of the text in a paragraph. For example, you may want to italicize book references. For these types of situations, you can use formats from the Character Catalog to change the text's font properties without changing anything else in the paragraph.

The character format Emphasis changes the font of a specific text item to bold italic.



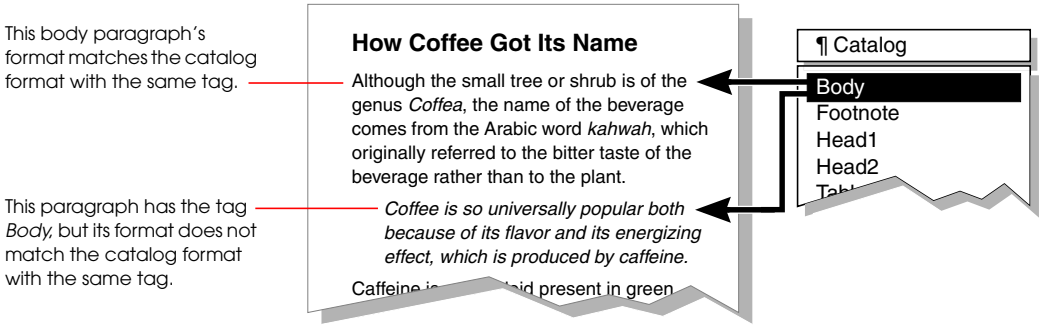
Catalog changes affect all tagged text

A big advantage of using formats from the Paragraph Catalog and Character Catalog is that you can change the properties of a paragraph or selected text item and then update the catalog format and all formats in the document with the same tag (name). In fact, you can choose to update one, several, or all formats in the catalog.

Formats on the page can differ from catalog formats

There may be times when you want to change a particular paragraph or text item so that its format no longer matches the catalog format with the same tag. For example, you may want a particular paragraph to start at the top of a page even though its corresponding catalog format lets it start anywhere. In such a case, you can simply change the

paragraph's format without updating the catalog format, thereby creating a *format override*.



If you follow the instructions for changing text properties in the previous chapter literally, without creating or updating a catalog format, you create overrides of this kind. If you change a catalog format, FrameMaker detects any overrides of that format and gives you a chance to retain them. For example, you may want to retain page break overrides.

Templates and sample files demonstrate a variety of formats

For ideas on the types of formats you may want to create, look at the FrameMaker templates or sample files. If you find a paragraph that has a format similar to the format you want, you can copy its format to your document and add it to your document's catalog. From there, you can make any changes to the format you want.

In this chapter

This chapter tells you how to apply formats from the Paragraph Catalog and Character Catalog, how to create new formats, and how to update the properties of existing formats.

APPLYING FORMATS

All documents have a Paragraph Catalog and a Character Catalog. When you apply a catalog format to text, FrameMaker changes the text to match the catalog format's properties. You can apply a format by choosing it from a catalog or by copying it from another paragraph or text item. You can also specify, as part of a paragraph's format, the format to be used when you press Return to create a new paragraph.

To apply a format from the Paragraph Catalog

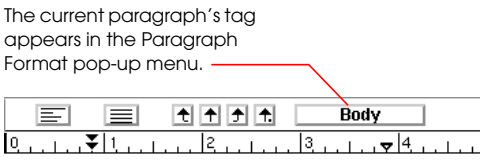
When you apply a format from the Paragraph Catalog to a paragraph, FrameMaker changes the paragraph to match the catalog format's properties. For additional ways to choose a format from the Paragraph Catalog, see "Other ways to choose from catalogs" on page 5-5.

1 **Click in the paragraph to which you want to apply a catalog format.**
If you want to apply a format to several adjacent paragraphs, select all of the paragraphs.

OTHER WAYS TO CHOOSE FROM CATALOGS

You can choose paragraph and character formats from the catalogs in several ways.

Paragraph formats For quick access to Paragraph Catalog formats, you can choose them from the Paragraph Format pop-up menu on the formatting bar.



You can also choose formats from the Format>Paragraphs submenu.

Character formats For quick access to Character Catalog formats, you can choose them from the Format>Characters submenu.

Keyboard shortcuts After selecting the paragraph or text item to which you want to apply a format, press Control-9 to apply a paragraph format or press Control-8 to apply a character format.

To prompt you to type a tag, the Tag area in the status bar at the bottom of the document window is highlighted. It contains either ¶: for paragraph format or *f*: for character format.

Start typing the format's tag. You need to type only a few characters before the name appears in the Tag area. Type lowercase letters to search forward, and type uppercase to search backward. You can also use the up arrow and down arrow keys to scroll through formats. Press Return to apply the format or, if you decide to cancel the operation, click in the document without pressing Return.

2 **Click the Paragraph Catalog button ¶ in the upper-right corner of the document window to display the Paragraph Catalog.**

3 **Click a format in the Paragraph Catalog to apply that format to the paragraph.**
The Tag area on the left side of the status bar shows the paragraph's tag.

The paragraph's tag changes to the tag of the format you click.

To apply a format from the Character Catalog

When you apply a format from the Character Catalog to specific text within a paragraph, FrameMaker changes the text to match the catalog format. Later, if you don't want to use the format on that text anymore, you can change the text back to the paragraph's default font. For information on changing text back to the default font, see "Removing a character format" on page 5-7.

For additional ways to choose a format from the Character Catalog, see "Other ways to choose from catalogs" on page 5-5.

1 **Select the text to which you want to apply a character format.**
Don't select an entire paragraph. If you do, the character format you apply is considered a format override of the paragraph's default font. See "Tagged text and format overrides," next.

If you click in the paragraph without selecting any text, FrameMaker applies the character format you choose to any text you type at the current insertion point.

2 **Click the Character Catalog button f in the upper-right corner of the document window to display the Character Catalog.**

3 **Click a format in the Character Catalog to apply that format to the selected text.**
The Tag area on the left side of the status bar shows the text's character tag.

The text's tag changes to the tag of the format you click.

TAGGED TEXT AND FORMAT OVERRIDES

Text with a character format is *not* considered an override of the paragraph where it resides (unless you selected the entire paragraph). When you update a paragraph format, character formats are not removed from paragraphs that are changed; format overrides are removed. For information on format overrides, see "Overriding a catalog format's properties" on page 5-13.

REMOVING A CHARACTER FORMAT

To remove a character format from text and redisplay the text in the default font of the paragraph, select the text and click Default ¶ Font in the Character Catalog. For example, if you apply the Emphasis format to a word and then decide you don't want it to have this format, select the word and apply Default ¶ Font from the Character Catalog.

To apply a format from a different paragraph or text item

You can apply the paragraph or character format of text to another paragraph or text item. FrameMaker applies the format's tag along with its other properties.

You apply a format in this way by copying it to the FrameMaker Clipboard and pasting it in another location. Because you're using the Clipboard, you can paste the format in a different document as well. If you paste the format in a different document, the format is not automatically added to the appropriate catalog. In the case of a paragraph format, you can add it to the catalog if you want to.

1. **Click in text with the paragraph or character format you want to copy.**
2. **Choose Copy Special>Paragraph Format or choose Copy Special>Character Format from the Edit menu.**
3. **Click where you want to apply the format.**
   If you're copying a character format, select the text to which you want to apply the format.
4. **Choose Paste from the Edit menu.**

ADDING A COPIED PARAGRAPH FORMAT TO A CATALOG

After you copy a format from one document to another, you can store the format in the second document's Paragraph Catalog. For information on storing formats in the catalog, see "To create a paragraph format" on page 5-11.

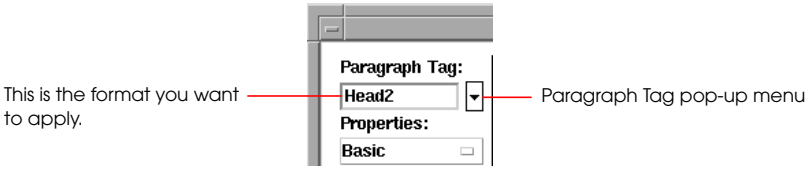
To apply a format to paragraphs or characters with certain tags

You can apply a format to multiple paragraphs or text items in a variety of ways. You can apply a format to all paragraphs or text in the document; to all whose tags occur in a selection; or to all that have a particular tag. For example, you could apply the format Head1 to all paragraphs currently tagged Head2.

1. **If you want to apply a format to paragraphs or text items with several different tags, select consecutive paragraphs or text items that have those tags.**
   If you want to apply the format to all paragraphs or text items, or to paragraphs or text items with one particular tag, you can skip this step.

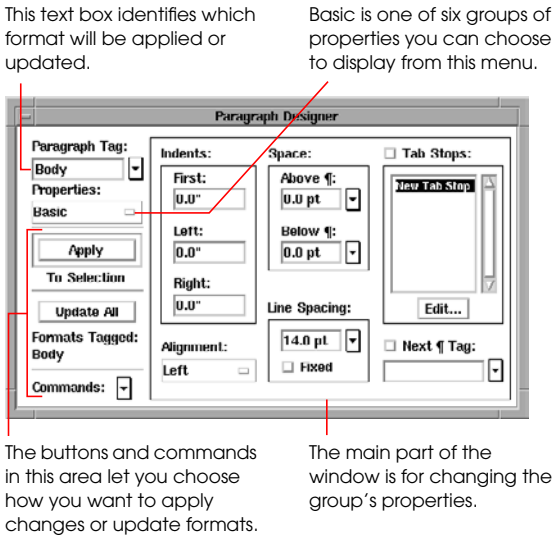
When you select multiple paragraphs or text items, conflicting properties in the Paragraph Designer or Character Designer, including the tag, are set to As Is. For more information on the As Is setting, see "Understanding the As Is setting" on page 5-18.

2 **In the Paragraph Designer or Character Designer, choose the format you want to apply from the Paragraph Tag or the Character Tag pop-up menu.**
The designer window displays the properties of the format you choose, including the tag.



THE PARAGRAPH DESIGNER

The Paragraph Designer includes several areas and commands for creating and changing paragraph formats.



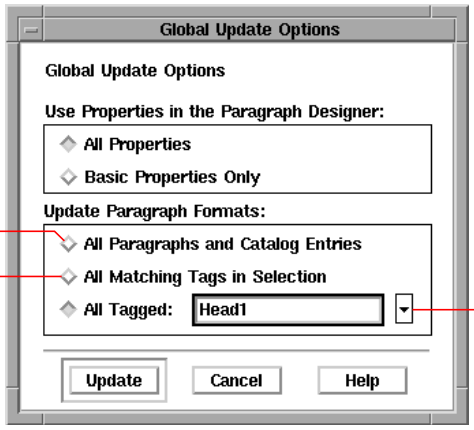
In the commands area, you can *apply* all properties in all property groups (including the tag) to the current paragraph's format. You can also *update* all paragraph formats that have the same tag, including the format stored in the Paragraph Catalog. Additionally, in the Commands pop-up menu, you can choose commands for updating specific properties of selected paragraph formats.

The Paragraph Designer displays property changes you make with the formatting bar. These changes apply only to the current paragraph, as if you had clicked Apply in the Paragraph Designer. If you want to update the catalog format, you must use one of the Update commands.

If you use the Paragraph Designer to change properties, the paragraph doesn't change to reflect the new properties until you apply or update them.

3 **Choose Global Update Options from the Commands pop-up menu.**

4 **Choose the paragraphs or text items you want to retag.**



Click here to retag all paragraphs or text items in the document.

Click here to retag all paragraphs or text items whose tags occur in the selection.

Choose a tag from the pop-up menu to retag all paragraphs or text items currently assigned the tag you choose.

5 **Click All Properties in the Use Properties area if you're retagging paragraphs.**
When you retag text items with the Character Designer, the Global Update Options dialog box does not include this choice because the Character Designer doesn't have property groups.

6 **Click Update.**

To apply a format to the next paragraph

Normally, when you press Return, FrameMaker applies the current paragraph's format to the new paragraph. But you can specify that FrameMaker use a different format when you press Return. For example, you can specify that when you press Return in a heading paragraph, the next paragraph will be a body paragraph.

1 **From the Paragraph Tag pop-up menu in the Paragraph Designer, choose the format that has the Next ¶ Tag property you want to update.**
The format's properties are displayed in the Paragraph Designer.

2 **From the Next ¶ Tag pop-up menu in the Basic properties, choose the tag you want FrameMaker to apply to the next paragraph.**

The format you specify must be in the Paragraph Catalog. If the format isn't in the catalog, FrameMaker ignores this setting.

3 **Click Update All.**

FrameMaker updates the catalog format and all paragraphs in the document with the same tag. The Next ¶ Tag property does not affect any existing next paragraphs. It applies the specified format only to new paragraphs you create by pressing Return.

CREATING AND UPDATING PARAGRAPH FORMATS

Each FrameMaker template and blank paper template already has a Paragraph Catalog with existing formats that you can modify or use as the foundation for creating new ones.

Each type of paragraph in a document should have its own catalog format. For example, there should be separate formats for body paragraphs, numbered steps, and headings. When creating new formats for a document, you start by assigning the default font to a single body paragraph. Then you determine its appearance, placement, and other properties. Once the body paragraph is correctly formatted and catalogued, you can modify its properties to create the other paragraph formats.

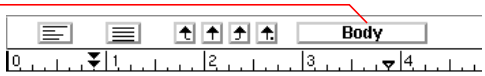
When you update a format, you can choose to update all properties, one group of properties, or several properties within a group. You can also choose which formats you want to update. For a brief overview of using the Paragraph Designer to update formats, see "The Paragraph Designer" on page 5-8.

To create a paragraph format

To create a paragraph format, you can modify the properties of an existing paragraph's format. For example, to create various heading levels, you can start with the first level and then change the font size and style to create the other levels. After you modify an existing paragraph's format, you store the format in the Paragraph Catalog with a different tag.

1. **Click in a paragraph that has a format similar to the one you want to create.**
2. **Modify the paragraph's properties.**
   You can use any of the methods described in Chapter 4, "Formatting Text."
3. **Choose New Format from the Paragraph Format pop-up menu on the formatting bar.**

Paragraph Format pop-up menu



You can also choose New Format from the Commands pop-up menu in the Paragraph Designer.

4. **In the New Format dialog box, type a name for the new format in the Tag text box.**
   For suggestions on naming paragraph formats, see "Tips on creating formats" on page 5-12.
5. **To indicate that the format should be stored in the Paragraph Catalog, turn on Store in Catalog.**
   Normally, you'll want to store a newly created format in the Paragraph Catalog. Formats that are stored in the Paragraph Catalog can be updated or copied to other documents by using the Import>Formats command. If you don't want this format available for use elsewhere, don't store it in the catalog. Formats that aren't stored in the catalog can be applied to other paragraphs only by copying and pasting.
6. **To apply the new format to the current paragraph, turn on Apply to Selection.**
7. **Click Create.**

USING ANOTHER DOCUMENT'S PARAGRAPH CATALOG

If you're using a particular document as a template for other documents, you can copy the Paragraph Catalog from the template to a new document. You do this by using the Import>Formats command. For information on importing formats, see "Importing formats into a document" on page 21-12.

To update a paragraph format

After changing a paragraph's properties, you can update the corresponding catalog format and all paragraphs in the document with the same tag. When you update a catalog format, all properties in all property groups are updated to match the current paragraph.

TIPS ON CREATING FORMATS

You'll find it easier to use and maintain the Paragraph Catalog and Character Catalog if you follow these guidelines for creating formats. For examples of various formats and how they look when applied to paragraphs, look at the catalogs in the FrameMaker templates and sample files.

Standardized tags By standardizing tags, you can easily copy formats between documents. For example, if you use Heading1 for first-level headings in one document, use the same tag for first-level headings in other documents.

Consistent naming conventions Use consistent naming conventions for similar kinds of paragraphs or text items within a paragraph. For example, if you use Heading1 for first-level headings, use Heading2 for second-level headings.

Tags that indicate function Give each format a tag that's easy for you and others to remember, recognize, and type. A tag should indicate the *use,* not the *appearance,* of the format.

For example, use the character tag Emphasis for a format that uses italics for emphasis. Doing so provides more flexibility than having a format named Italic, because you can change your method of emphasis (to bold, for example), and you won't need to change the tag.

Consistent capitalization Tags are case-sensitive: *Body* is not the same as *body.*

Formats for numbered lists To create numbered lists, you can create one format for the first item in the list and a second format for the remaining items in the list. Set the counter to `<n=1>` for the first format and `<n+>` for the second format. For examples of autonumber formats, see "Counters" on page 4-40.

Next paragraph You can specify that one type of paragraph should normally be followed by a paragraph with a different format. For example, in most documents, a heading should always be followed by a body paragraph.

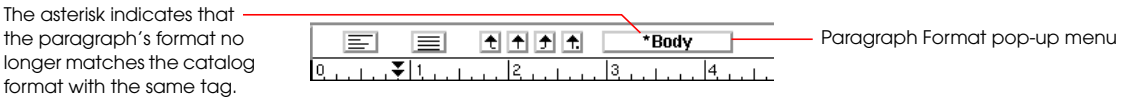
When creating the formats for a numbered list, you can specify that the format for the first item will be automatically followed by the format for the second.

For information on specifying the format FrameMaker uses when you press Return, see "To apply a format to the next paragraph" on page 5-9.

1 **Click in a paragraph that has the format you want to update.**
The paragraph's format may not match the catalog format with the same tag, depending on whether the paragraph contains any format overrides. If you want to start out with the catalog format's properties (without any overrides), choose the format from the Paragraph Tag pop-up menu in the Paragraph Designer, even if the tag you want is already displayed in the Paragraph Tag text box.

2 **Change the paragraph's properties.**
You can use any of the techniques described in Chapter 4, "Formatting Text."

3 **Choose Update All from the Paragraph Format pop-up menu on the formatting bar.**



OVERRIDING A CATALOG FORMAT'S PROPERTIES

When you change the properties of a paragraph or text item, that paragraph's or text's format no longer matches the catalog format with the same tag. If you're formatting quick, one-time-only documents, these format overrides pose no problem. If you're using the catalog formats to maintain consistency in a document, you'll probably want to eliminate the overrides by updating the catalog format with the same tag. (Text that is assigned a character format is *not* considered an override of the paragraph where it resides.)

However, there may be times when you want to retain overrides so that the paragraph's format no longer matches the catalog format with the same tag. For example, you may want a particular paragraph to start at the top of a page even though its corresponding catalog format lets it start anywhere. In such a case, you simply change the paragraph's format without updating the catalog format.

FrameMaker indicates that a paragraph or text item has format overrides by displaying an asterisk (*) next to the tag in the Tag area as well as in the Paragraph Format pop-up menu.

If you later modify the catalog format, you can choose whether you want to retain format overrides when FrameMaker updates all paragraphs in the document with the same tag.

4 **In the Update Paragraph Format dialog box, indicate whether you want to remove manual page breaks or other paragraph format overrides.**
Leave the checkboxes off if you want to keep the overrides. Turn on the checkboxes if you want to remove the overrides.

For information on format overrides, see "Overriding a catalog format's properties" on page 5-13.

5 **Click Update.**

USING THE PARAGRAPH DESIGNER

If you use the Paragraph Designer to modify a paragraph's properties, you can update the catalog format and all paragraphs with the same tag by clicking Update All in the Paragraph Designer.

If FrameMaker detects format overrides in any of the paragraphs being updated, it displays an alert that asks whether you want to retain or remove them. For information on format overrides, see "Overriding a catalog format's properties" on page 5-13.

RESETTING THE PROPERTIES

If you change properties in the Paragraph Designer and then decide you don't want to update them, you can reset the properties to match the current paragraph.

To display the properties of the current paragraph, choose Reset Window from Selection from the Commands pop-up menu in the Paragraph Designer.

To update other paragraph formats with a property group

Paragraph properties are divided into six groups that are displayed separately in the Paragraph Designer. You can use any group of properties from one paragraph format to update other formats. For example, if you want to change the default font properties for an entire document, you can change them for one format and apply the changes to the remaining formats in the catalog without changing any other properties.

You can update part of a group of properties as well as an entire group. For instructions, see "To update other paragraph formats with one or two properties" on page 5-16.

1 **Click in a paragraph or select consecutive paragraphs.**
Click in a paragraph if you want to update one or all paragraph formats in the document with a property group from that paragraph. The Paragraph Designer displays the properties of the paragraph, including its tag.

Select consecutive paragraphs if you want to update more than one, but not all, paragraph formats. For example, you can select items in an autonumbered list to change a property group for the various formats represented there. When you select multiple paragraphs, conflicting properties in the Paragraph Designer, including the tag, are set to As Is. For more information on the As Is setting, see "Understanding the As Is setting" on page 5-18.

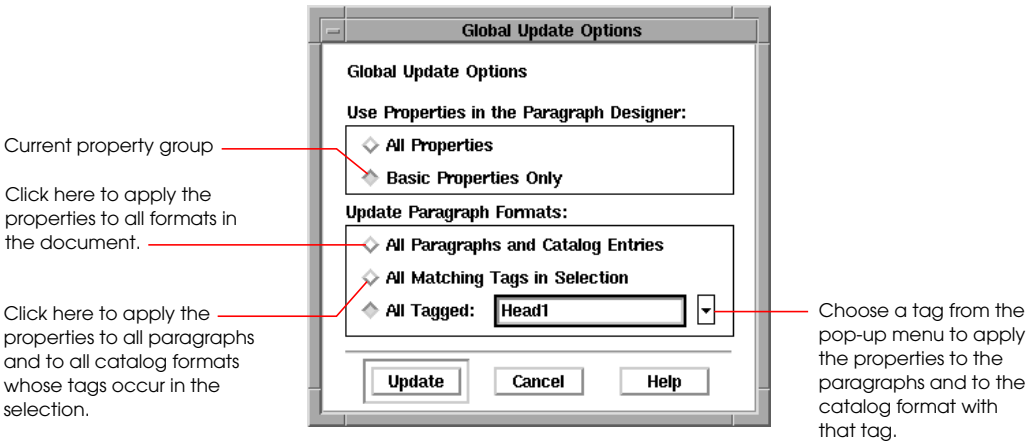
2 **In the Paragraph Designer, delete the tag from the Paragraph Tag text box if the text box isn't empty.**
Deleting the tag from the text box keeps FrameMaker from changing the tags of the formats you update.

3 **From the Properties pop-up menu, choose the property group you want to apply.**

4 **Make any changes necessary to set up the properties the way you want them.**
For example, select a different building block to define an autonumber format.

5 **Choose Global Update Options from the Commands pop-up menu.**

6 **Choose the formats to which you want FrameMaker to apply the properties.**



7 **Click the current property group in the Use Properties area.**

8 **Click Update.**
FrameMaker applies the properties to the Paragraph Catalog formats you specified and to all paragraphs in the document with the same tags.

If FrameMaker detects format overrides in any of the paragraphs being updated, it displays an alert that asks whether you want to retain or remove them. For information on format overrides, see "Overriding a catalog format's properties" on page 5-13.

DISPLAYING ANOTHER FORMAT'S PROPERTIES

After deleting the tag from the Paragraph Tag text box, you can display the properties of any catalog format without displaying the format's tag. To do this, hold down the Shift key when you choose the format from the Paragraph Tag pop-up menu. You can then update a different catalog format with those properties.

To update other paragraph formats with one or two properties

At times, you may want to update one or two properties of one or more paragraph formats without changing any other properties. For example, you may want to change some or all formats from justified to left aligned. Rather than update each format separately, you can update them all at once.

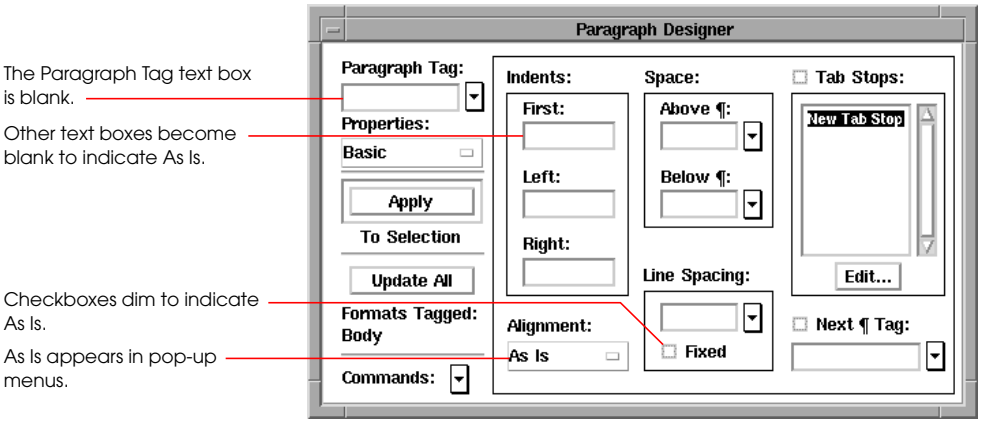
1 **If you want to update more than one, but not all, paragraph formats, select consecutive paragraphs that have the formats you want to change.**

If you want to update all paragraph formats or just one, you can skip this step.

2 **In the Paragraph Designer, display the group of properties from which you want to select one or two properties to apply.**

3 **From the Commands pop-up menu, choose Set Window to As Is.**

Settings in all property groups in the Paragraph Designer change to indicate that their status is As Is. FrameMaker won't change properties set to As Is when it updates the other formats. For example, the Paragraph Tag text box is blank so that updating other formats won't change their tags.

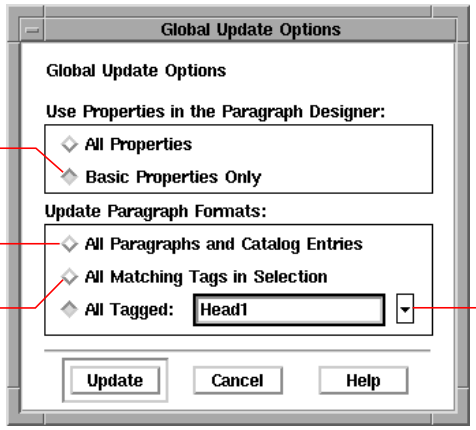


For more information on setting properties to As Is, see "Understanding the As Is setting" on page 5-18.

4 **Change only the properties you want to update, leaving the rest set to As Is.**

5 **Choose Global Update Options from the Commands pop-up menu.**

6 **Choose the formats to which you want to apply the properties.**



7 **Click the current property group in the Use Properties area.**

8 **Click Update.**
FrameMaker applies the properties to the Paragraph Catalog formats you specified and to all paragraphs in the document with the same tags.

If FrameMaker detects format overrides in any of the paragraphs being updated, it displays an alert that asks whether you want to retain or remove them. For information on format overrides, see "Overriding a catalog format's properties" on page 5-13.

CREATING AND UPDATING CHARACTER FORMATS

Each FrameMaker template and blank paper template already has a Character Catalog with existing formats that you can modify or add to. You should set up a format for each type of text item used in the document. For example, you can have character formats for boldface product names, italicized book titles, and so on.

When defining the properties of a character format, you use the Character Designer. For details, see Chapter 4, "Formatting Text." The Character Designer has the same areas and commands as the Paragraph Designer, so you use it exactly the same way. With the Character Designer, you can change the

font properties of a text item—the same font properties used in the Paragraph Designer to update entire paragraphs.

For information on how the Character Designer works, read about how the Paragraph Designer works in "The Paragraph Designer" on page 5-8.

To create a new character format

Normally, applying a character format changes only one or two properties of the selected text. For example, you may have a character format that changes the selected text to italic without changing the font family or size. When creating a character format, you specify the properties you want and set the remaining properties to As Is.

When you create a new character format, FrameMaker stores the format in the Character Catalog and applies it to the selected text.

1 **Select some text.**

UNDERSTANDING THE AS IS SETTING

The As Is setting in the Paragraph Designer, Character Designer, and Table Designer has three purposes. When properties are set to As Is in a designer window, text boxes are empty, checkboxes are dim, and As Is appears in pop-up menus.

When selecting items with different properties If you select multiple paragraphs, text items, or tables that have different values for a property, the designer window displays As Is for that property.

For example, if you select two paragraphs, one centered and the other left aligned, the Alignment pop-up menu displays As Is.

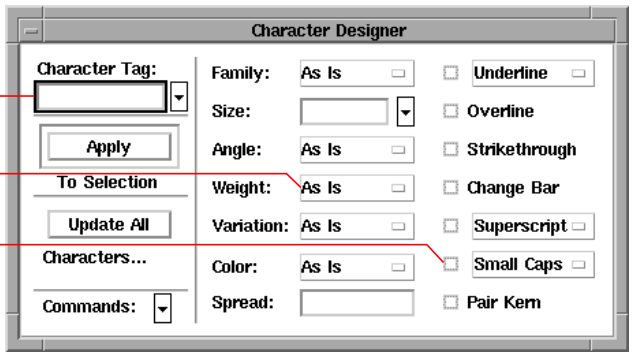
When changing several properties If you want to change some, but not all, of the properties, you can turn the properties you don't want to change to As Is. When FrameMaker applies properties, it doesn't change properties set to As Is.

For example, if you want to change all headings from centered to left aligned, but you want to leave the rest of their properties intact, you can set all properties to As Is, change only the alignment property, and then update all heading formats. FrameMaker changes only the alignment property of those formats. The As Is setting is not actually stored as part of the format.

When creating a character format When you create a character format, you use As Is to specify the properties that FrameMaker won't change when you apply the format to specific text within a paragraph. In this case, the As Is property is stored as part of the character format.

For example, you can create a character format named Emphasis that changes selected text to italics while leaving the font family and size as it is. By turning on As Is for these other settings, you tell FrameMaker to leave them as they are when it applies the format to text.

2 **In the Character Designer, choose Set Window to As Is from the Commands pop-up menu.**
All property settings in the Character Designer change to indicate that their status is As Is.



For more information on the As Is setting, see "Understanding the As Is setting" on page 5-18.

3 **Change only the properties you want to include in the character format, leaving the rest set to As Is.**

4 **Choose New Format from the Commands pop-up menu.**

5 **In the New Format dialog box, type a name for the new format in the Tag text box.**
For suggestions on naming character formats, see "Tips on creating formats" on page 5-12.

6 **To indicate that the format should be stored in the Character Catalog, turn on Store in Catalog.**
Normally, you'll want to store a newly created format in the Character Catalog. Formats that are stored in the Character Catalog can be updated or copied to other documents by using the Import>Formats command. If you don't want the format copied to other documents by the Import>Formats command, don't store it in the catalog. Formats that aren't stored in the catalog can be applied to other text items only by copying and pasting.

7 **To apply the new format to the current text item, turn on Apply to Selection.**

8 **Click Create.**

USING ANOTHER DOCUMENT'S CHARACTER CATALOG

If you're using a particular document as a template for other documents, you can copy the Character Catalog from the template to a new document. You do this by using the Import>Formats command. For information on importing formats, see "Importing formats into a document" on page 21-12.

To update a character format

When you change the properties of text with a character format, you can update the Character Catalog format and all formats in the document with the same tag.

1. **In the Character Designer, choose the format you want to change from the Character Tag pop-up menu.**
   When you choose the format from the pop-up menu, the properties of the Character Catalog format, including the As Is settings, are displayed.

   Make sure you perform this step even if it means choosing the same tag as the one currently displayed. If you don't, the properties of the current text are displayed in the Character Designer, and those properties won't show the As Is settings of the Character Catalog format with the same tag.
2. **Change the desired properties.**
3. **Click Update All.**
   If FrameMaker detects format overrides in any of the text being updated, it displays an alert that asks whether you want to retain or remove them. For information on format overrides, see "Overriding a catalog format's properties" on page 5-13.

RESETTING THE PROPERTIES

If you change properties in the Character Designer and then decide you don't want to update them, you can reset the properties to match the current text.

To display the properties of the current text, choose Reset Window from Selection from the Commands pop-up menu in the Character Designer.

To redisplay the As Is settings of the Character Catalog format, choose the catalog format from the Character Tag pop-up menu.

To update properties of other character formats

At times, you may want to update one or two properties of one or more character formats without changing any other properties. For example, you may want to add a color to all character formats. Rather than update each format separately, you can update them all at once.

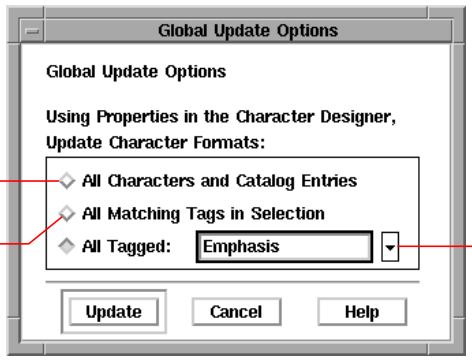
1 **If you want to update more than one, but not all, character formats, select text that includes the formats you want to change.**
If you want to update all character formats or just one, you can skip this step.

2 **In the Character Designer, choose Set Window to As Is from the Commands pop-up menu.**
Properties in the Character Designer change to indicate that their status is As Is. When it updates the other formats, FrameMaker won't change properties set to As Is. For example, the Character Tag text box is blank so that updating other formats won't change their tags. For information on the As Is setting, see "Understanding the As Is setting" on page 5-18.

3 **Change only the properties you want to update, leaving the rest set to As Is.**

4 **Choose Global Update Options from the Commands pop-up menu.**

5 **Choose the formats to which you want to apply the properties.**



Click here to apply the properties to all characters in the document.

Click here to apply the properties to all characters and the catalog formats whose tags occur in the selection.

Choose a tag from the pop-up menu to apply the properties to the characters and catalog format with that tag.

6 **Click Update.**
FrameMaker applies the properties to the Character Catalog formats you specified and to all character formats in the document with the same tags.

If FrameMaker detects format overrides in any of the formats being updated, it displays an alert that asks whether you want to retain or remove them. For information on format overrides, see "Overriding a catalog format's properties" on page 5-13.

UPDATING ALL CHARACTERS

If you choose the All Characters and Catalog Entries option, FrameMaker updates all characters in the document, including characters in text lines. It also updates the default font properties of all paragraph formats and the properties of all character formats.

RENAMING AND DELETING FORMATS

As you design the paragraph and character formats needed for a document, you may need to rename a format or delete a format altogether.

To rename a catalog format

You may need to rename a format if, for example, your naming conventions change, or if you want to import a catalog from a template and don't want a format to be overwritten.

1. **In the Paragraph Designer or Character Designer, choose the tag you want to change.**
   In the Paragraph Designer, choose from the Paragraph Tag pop-up menu; in the Character Designer, choose from the Character Tag pop-up menu.

   Make sure you perform this step even if it means choosing the same tag as the one currently displayed. Choosing a tag from the pop-up menu ensures that the properties of the catalog format are displayed.
2. **Type a new name in the Paragraph Tag or Character Tag text box and click Update All.**
   Because the tag in the text box differs from the tag under the Update All button, FrameMaker asks whether you want to rename the format.
3. **Click OK to rename the format.**

To delete a format from a catalog

You may need to delete a format if, for example, you imported a catalog from a template and an old format is no longer needed. Deleting a format from a catalog does not affect any paragraphs or characters that have the same tag—the paragraphs or characters simply have a tag that isn't in the catalog.

1. **Display the Paragraph Catalog or Character Catalog and click Delete.**
2. **In the Delete Formats from Catalog dialog box, select the format in the scroll list and click Delete.**
   You can delete additional formats if you want to.
3. **Click Done.**
   The formats are not actually deleted from the catalog until you click Done.

6

TABLES

Inserting and editing tables

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6 TABLES

A table organizes related information by placing it in cells arranged in rows and columns. FrameMaker tables are already formatted with cells that you can fill in.

Standard types of rows

A table can have heading, body, and footing rows as well as a title.

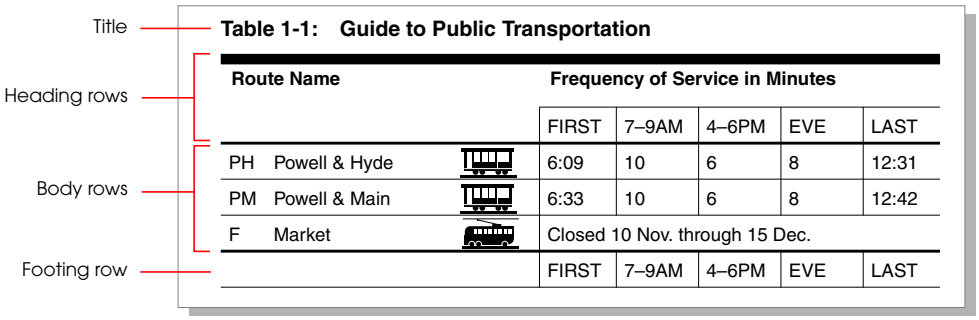


Table 1-1: Guide to Public Transportation

Route Name			Frequency of Service in Minutes				
			FIRST	7–9AM	4–6PM	EVE	LAST
PH	Powell & Hyde		6:09	10	6	8	12:31
PM	Powell & Main		6:33	10	6	8	12:42
F	Market		Closed 10 Nov. through 15 Dec.				
			FIRST	7–9AM	4–6PM	EVE	LAST

Footing rows are less common than heading rows, although they can be useful for repeating column headings at the bottom of a table or for explaining symbols used in the table.

Text, graphics—even other tables

You can type and format text in a table cell just as you do in other parts of a document. You can apply paragraph and character formats, insert variables and cross-references, draw or import graphics, or even insert another table.

As you add text and graphics to a cell, FrameMaker automatically increases the cell's height to accommodate its contents.

You start with an empty table or ordinary text

Creating a FrameMaker table usually involves inserting an empty table and filling in the contents of cells. The features of the empty table are determined by its format.

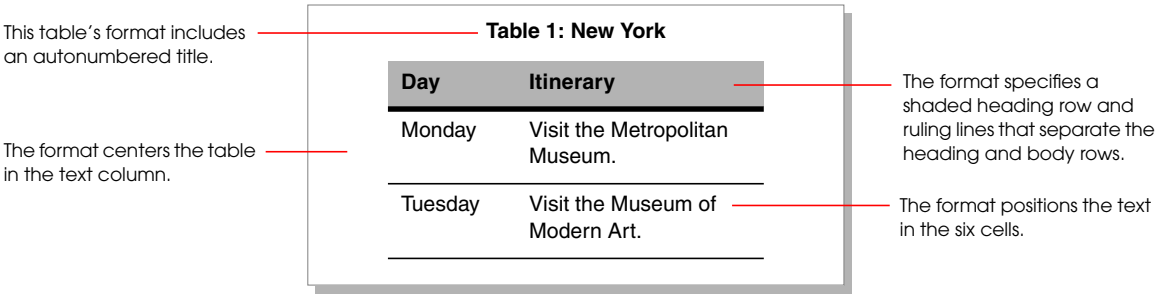


Table formats are stored in the Table Catalog, which functions just like the Paragraph Catalog. You can add formats to the Table Catalog, update catalog formats, and apply new formats to existing tables.

You can also convert existing text to a table. If the text is in another file, you can import and convert it in one step.

You can change the format as you work

When you insert a table, you can change the number of rows and columns its format calls for. As you work in the table, you can add, delete, rearrange, or resize rows and columns. For tables with special requirements, you can rotate headings, combine adjoining cells, and make other customizations.

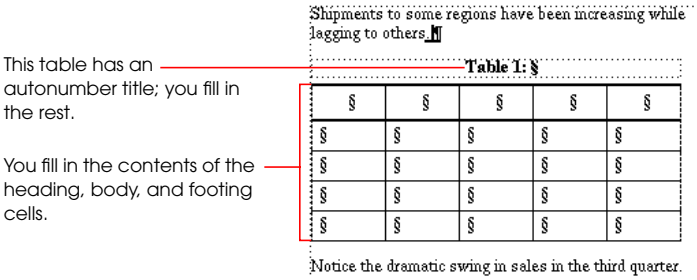
In this chapter

This chapter shows you how to insert tables, how to fill them in with text and graphics, and how to convert text to tables. It also shows you how to rearrange and resize rows and columns and how to rotate tables and table cells.

Rearranging and resizing rows and columns are changes you can make to the defaults of a table's format. Chapter 7, "Table Formats," describes the more refined format changes you can make with the Table Designer. It shows you how to apply format changes to existing tables and how to store new and updated table formats in the Table Catalog. Chapter 7 also describes a number of special table customizations.

INSERTING AND MANIPULATING TABLES

With FrameMaker, you can insert a new, empty table and fill in its contents. The table's initial format is based on the format you choose from the Table Catalog.



If you've modified the initial format of an existing table and want to use its format for additional tables, you can duplicate the existing table and then edit the new table's contents.

After you've inserted a table, you can move it to another location, rotate it, or delete it. You can select individual cells, rows, or columns or the entire table.

To insert a new, empty table

When you insert a new, empty table, you select a format in a scroll list in the dialog box. This scroll list displays the formats in the Table Catalog. A table format includes the table's position in the text frame, its cell margins, its ruling and shading, and whether it has a title. A table format also has default settings for the number of body, heading, and footing rows; the number and width of columns; and paragraph formats. You can specify a different number of rows and columns as you insert a table, or you can change any of its properties after you insert it.

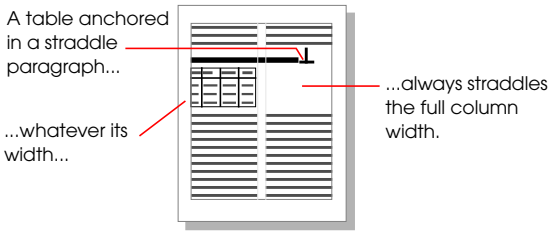
Just as it does when creating an anchored frame, FrameMaker anchors a new table where you click in text. Similarly, tables that straddle columns derive some of their layout properties from the text to which they are anchored.

1 **Click in the line of text to which you want to anchor the table.**
You can't insert a table in a footnote or in another table. For information on inserting a table in text when the text is in a multicolumn layout, see "Tables that straddle" on page 6-5. In certain cases, text will run around the inserted table. For details, see "Running text around a table" on page 6-6.

TABLES THAT STRADDLE

A table in a multicolumn text frame can straddle columns, and its position may be affected by straddle paragraphs.

Anchored in a straddle paragraph A table anchored in a multicolumn text frame straddles columns when its anchor symbol is in a straddle paragraph.



Wider than a column A table that extends into a second column of the body area straddles all columns in the body area. A table that extends into the side-head area straddles the side-head area as well.

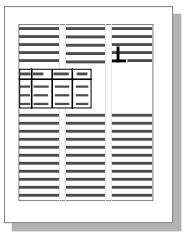


Table straddles all columns.

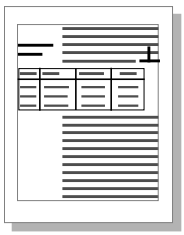
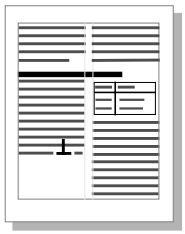


Table straddles side-head area and columns.

Anchored below a straddle paragraph If the anchor symbol for a top-of-column table appears below a paragraph that straddles columns, the table appears in the next column but just below the straddle paragraph instead of at the top of the column.

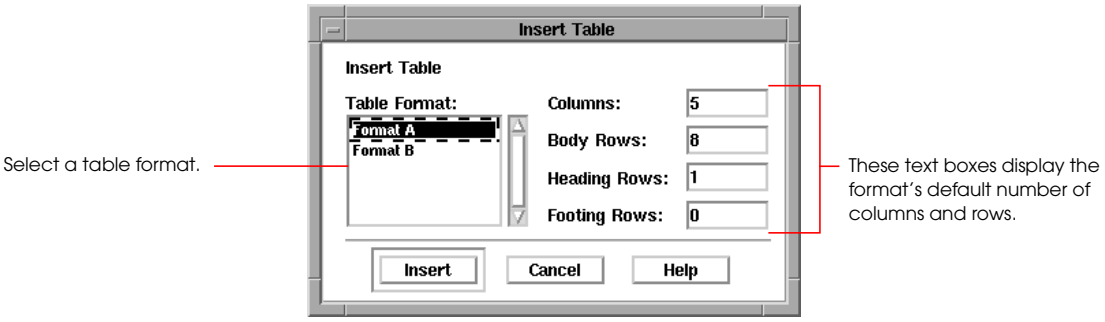

A top-of-column table anchored below a straddle.

If you resized the table in the example so that it was wider than the column plus the gutter, the table would move to the top of the next page and straddle all columns there.

Defined as floating If a straddle table is defined as floating, it can "jump over" straddle paragraphs that come after the table's anchor. For more information, see "To control where a table begins" on page 7-30 and "Anchored frames in multicolumn layouts" on page 15-9.

2 **Choose Insert Table from the Table menu.**

3 **Select a format for the table.**



RUNNING TEXT AROUND A TABLE

Text does not run around a table that is anchored directly in a column of text. You can, however, run text around a table that is in an anchored frame or in a text frame disconnected from the main flow.

Table in an anchored graphic frame To run text around a table in an anchored frame, create an anchored frame positioned as Run into Paragraph and then insert a text frame in the anchored frame to hold the table. You can align the anchored frame on the left or right side of the column, or on the side closer to or farther from the binding in a double-sided layout. For more information, see "To run text around an anchored frame" on page 15-13.

Table in a frame anchored as Run into Paragraph with left alignment

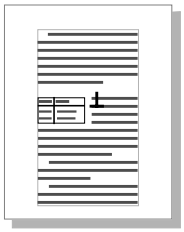
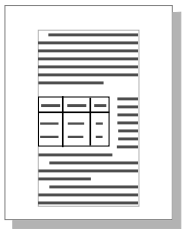


Table in a disconnected frame To run text around a table that is not anchored to text but instead remains in one place on a page as text changes, draw a text frame directly on a page and place the table in it. This sort of text frame is not connected to the main flow. For more information, see "To add a text frame" on page 13-26. To adjust the text runaround, select the text frame and choose Runaround Properties from the Graphics menu. For details, see "To run text around a graphic" on page 13-30.

Table in a frame not connected to the main flow



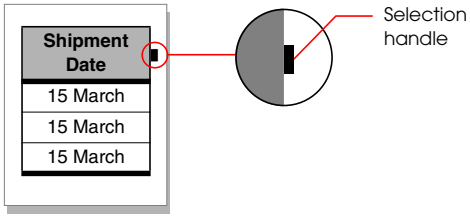
The table formats available are template-dependent. In a new, blank document, FrameMaker provides two table formats—Format A and Format B.

4 **If necessary, type a different number of rows or columns in the Columns and Rows text boxes.**

5 **Click Insert.**

To select in a table

Many of the procedures for working in a table require that you first select the cells, rows, or columns, or the entire table on which you want to work.



When a cell rather than just its contents is selected, a selection handle is visible.

- **To select a single cell, drag across the cell's border and back into the cell.**
- **To select multiple cells, drag across all the cells you want to select.**
- **To select entire rows or columns, drag across the rows or columns you want to select.**
  You can select a column quickly by dragging from a heading cell into the first body cell.
- **To select the entire table, select a cell in the table and choose Select All of Table from the Edit menu.**
  You can select the table quickly by dragging across the heading row and then downward into the body rows.
- **To extend a selection, Shift-click the last cell you want to include in the selection.**

To duplicate a table

After setting up a table exactly the way you want it, you can duplicate it elsewhere in the same document or in another document. This way, you can use the table as the foundation for additional tables. For example, you can set up a table with rotated headings or headings that straddle cells and then duplicate the table wherever you want similar tables. Perhaps you also created some custom ruling or shading for the table.

When you duplicate a table, its format and contents are copied. You can edit the text of the new table or delete its contents and start again. You can also change any of its formatting.

1. **Select the table you want to duplicate.**
2. **Choose Copy from the Edit menu.**
3. **Click in the line of text below which you want to anchor the new table.**
   You can't insert a table in a footnote.
4. **Choose Paste from the Edit menu.**

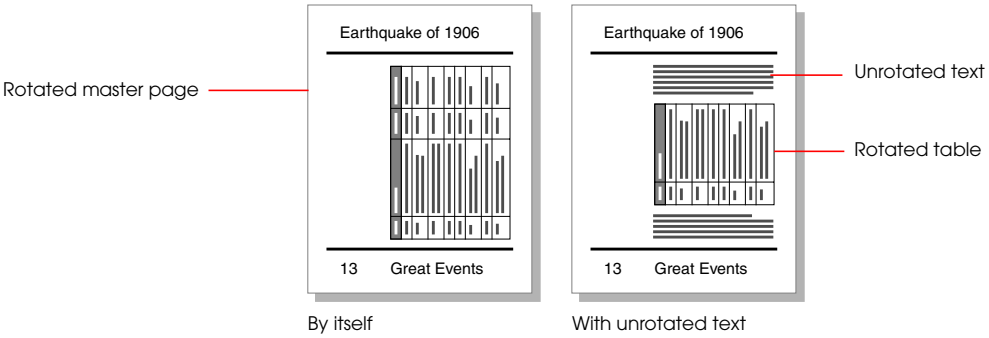
To move a table

You can move a table to a new location in the same document or in another document.

1. **Select the table you want to move.**
2. **Choose Cut from the Edit menu.**
   FrameMaker displays an alert that asks whether you want to leave the cells empty or remove them from the table.
3. **Click Remove Cells from Table and click Cut.**
   FrameMaker removes the entire table and places it on the FrameMaker Clipboard.
4. **Click in the line of text to which you want to anchor the table.**
   You can't insert a table in a footnote.
5. **Choose Paste from the Edit menu.**

To rotate a table

You can include a table with a different orientation from the document's. The rotated table can be on a page by itself or in a page of unrotated text. For example, you may want to include a landscape table in a portrait document.



- **To create a rotated table on a page by itself, create a rotated master page and apply it to the body page where the table appears.**
  For information on creating a rotated master page, see "To create a rotated master page" on page 19-18. For information on applying a master page, see "To assign a different master page to body pages" on page 19-7. If document editing causes the table to move to a different page, you'll need to reapply master pages.

- **To insert a rotated table in a page of unrotated text, use a text frame in an anchored frame.**
  First create an anchored frame and draw a text frame in it. Insert the table in the text frame and then rotate the text frame counterclockwise. You may need to adjust the size of the text frame or the anchored frame to view the entire table. For information on drawing a text frame, see "To add a text frame" on page 13-26.

  If you want to edit the table, unrotate the text frame and then rotate it back when you're finished. For information on rotating a text frame, see "To rotate an object" on page 14-14.

To delete a table

You can delete a table from a document if you don't need it any longer. When you delete a table, it isn't placed on the FrameMaker Clipboard for future pasting as it is when you cut it (choose Cut from the Edit menu).

1. **Select the table you want to delete.**
2. **Press Delete.**
   FrameMaker displays an alert that asks whether you want to leave the cells empty or remove them from the table.
3. **Click Remove Cells from Table and click Clear.**
   FrameMaker deletes the entire table.

FILLING IN TABLES

Each cell in a table has its own column of text. You can type text in cells, and you can insert anchored frames for holding graphics or other tables. Special variables let you specify continuation text in the titles or heading rows of multipage tables. You can also copy, cut, and paste the contents of cells just as you do text and graphics in any other part of a FrameMaker document.

As you type text or when you insert an anchored frame in a cell, FrameMaker expands the cell's height as needed.

To enter text in a table

In addition to being able to type normal text in a table, you can also insert cross-references, footnotes, variables, and markers.

You format text in a table cell just as you format paragraphs in a regular column of text. For example, you can apply paragraph or character formats to table cell text. For more information on paragraph formatting in a table, see "Default paragraph formats" and "Setting paragraph indents and tab stops," next.

- **To place the insertion point in a table cell, click in the cell.**

- **To select the contents of an adjacent cell, use one of the following key combinations.**

To select the contents of	Use
Next cell	Tab
Previous cell	Shift-Tab
Cell below	Meta-n
Cell above	Meta-p

- **To insert a tab in a table cell, press Esc Tab.**

DEFAULT PARAGRAPH FORMATS

Each new table has a default paragraph format for its title and for the heading, footing, and body cells for each column. The default paragraph formats are determined by the table format. You can assign a different format to any paragraph in any cell, and you can modify the format of any paragraph.

For information on how FrameMaker determines the default paragraph formats when you store a table format in the catalog, see "Table properties" on page 7-4.

SETTING PARAGRAPH INDENTS AND TAB STOPS

The area in a cell that can be filled with text is like a single-column text frame on a page. The cell margins are the space outside that area, like the margins of a page. Paragraph indents and tab stops in a cell are relative to the edge of the area, not to the edge of the cell. For information on setting cell margins, see "Positioning and autonumbering text within cells" on page 7-31.

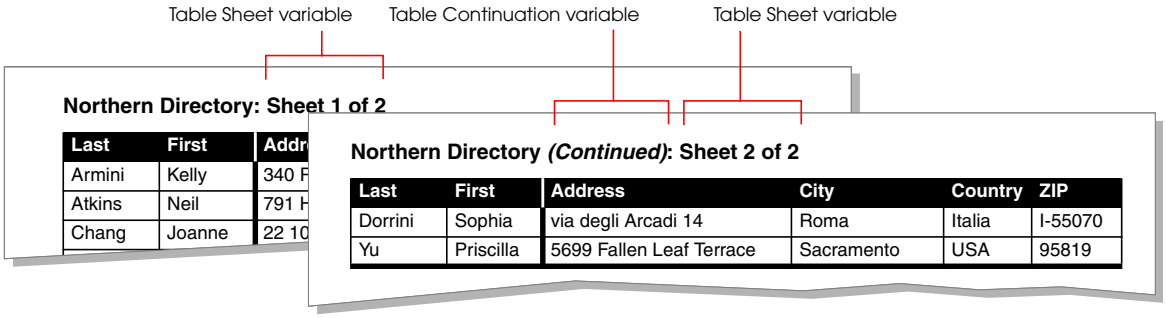
USING TABLE FOOTNOTES

When you insert footnotes in a table, the footnote text appears directly underneath the table. For information on using table footnotes, see "To insert a footnote" on page 11-4.

To set up multipage tables

If a table spans more than one page and has a title, heading rows, or footing rows, FrameMaker repeats the rows on each page of the table. You can edit the contents of these rows on the first page only.

In a multipage table, you may want to display special text in the title or heading rows—for example, the text *(Continued)*. FrameMaker provides two system variables to include special text: Table Continuation and Table Sheet.



The Table Continuation variable displays continuation text, and the Table Sheet variable displays page-count information.

1. **On the first page of the table, click in the title or heading where you want to insert the variable.**
2. **Choose Variable from the Special menu.**
3. **In the Variable dialog box, select one of the table variables.**

System variable	Default definition
Table Continuation	`(Continued)`
Table Sheet	`(Sheet <$tblsheetnum> of <$tblsheetcount>)`

The Table Continuation variable begins with a space. On the first page of a table, this variable displays a nonbreaking space (␣). On subsequent pages, it displays the text in its definition.

The Table Sheet variable displays the current and total number of pages that the table spans. If the table doesn't break across pages, it displays a nonbreaking space. If the table spans more than one page, the variable displays its full definition—for example, *(Sheet 2 of 4)*.

4. **Click Insert.**

EDITING THE DEFAULT DEFINITIONS

You can change the default definitions of the table variables. For example, you may want the Table Sheet variable to display *Page 2 of 4* with no parentheses. Or you may want to assign a different character format to a variable. For information on editing variable definitions, see "To change the definition of a system variable" on page 12-13.

To place a graphic in a cell

You draw or import graphics in anchored frames placed inside cells. The steps shown here provide general instructions on how to insert a graphic that's centered in a cell. You can adapt the instructions to position the anchored frame differently or to insert a graphic in a cell that also contains text.

1. **Click in an empty paragraph in the cell where you want to place a graphic.**

2. **Use the Paragraph Designer to position the paragraph in the cell.**
   For example, in the Basic properties of the Paragraph Designer, specify the alignment as Centered to center the paragraph horizontally. In the Table Cell properties, specify the cell's vertical alignment as Middle.

   For information on using the Paragraph Designer to change a paragraph's properties and to create and modify paragraph formats, see Chapter 4, "Formatting Text," and Chapter 5, "Format Catalogs."

3. **In the Basic properties of the Paragraph Designer, turn off Fixed in the Line Spacing area.**
   Doing this allows the size of the anchored frame you create to affect the paragraph's line spacing, which in turn affects the height of the cell.

4. **Create an anchored frame, anchored at the insertion point.**
   Choose Anchored Frame from the Special menu and choose At Insertion Point from the Anchoring Position pop-up menu. Then specify the size of the anchored frame and click New Frame. For more information on creating anchored frames, see Chapter 15, "Anchoring Graphics."

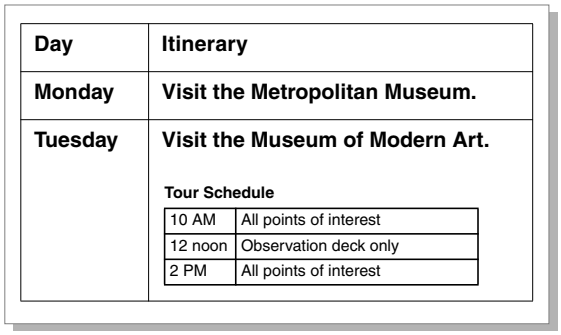
5. **If the anchored frame is wider than the cell, resize the column to accommodate the frame.**
   For information on resizing columns, see "To resize a column with the mouse" on page 6-19.

6. **Place the graphic in the frame and resize the frame as appropriate.**

7. **Use the Align command on the Graphics menu to center the graphic in the frame.**
   In the Align dialog box, click T/B Centers and L/R Centers. For information on using the Align command, see "To align objects" on page 14-10.

To insert a table in a cell

Occasionally, you may need to insert a table in a cell.



Before you can insert a table in a cell, you need to create an anchored frame in the cell and draw a text frame in the anchored frame. Then you can insert a table in the text frame. After you insert the table, you can format it just as you would any other table.

1 **Click in the cell in which you want to insert a table.**

2 **Create an anchored frame anchored below the current line.**
Choose Anchored Frame from the Special menu and choose Below Current Line from the Anchoring Position pop-up menu. Next, choose centered alignment and specify the size of the anchored frame. Try to set the width and height of the frame to be slightly larger than the width and height of the table you want to insert. You can always resize the frame later. Finally, click New Frame.

For more information on creating anchored frames, see Chapter 15, "Anchoring Graphics."

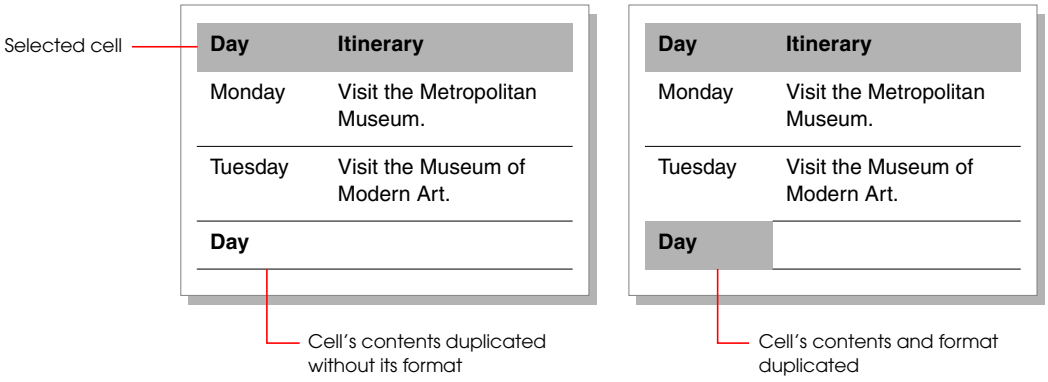
3 **If the anchored frame is wider than the cell, resize the column to accommodate the frame.**
For information on resizing columns, see "To resize a column with the mouse" on page 6-19.

4 **Draw a text frame in the anchored frame.**
Use the Text Frame tool on the Tools palette. For information on drawing a text frame, see "To add a text frame" on page 13-26.

5 **Click in the text frame and insert a table.**
Adjust the table so it fits within the text frame, or adjust the anchored frame and text frame to accommodate the table.

To duplicate a cell's contents

You can duplicate a cell's contents in other cells in the same table or in a different table. You can duplicate just the cell's contents or both its contents and format (such as the custom ruling and shading).



- **To duplicate a cell's contents without duplicating the cell's format, select the contents and copy and paste it to another cell.**
  Make sure the selection handle is not visible when you select the cell's contents.
- **To duplicate both a cell's contents and format, select the entire cell and copy and paste it to another cell.**
  Select the entire cell by dragging across the border; the selection handle should be visible when you select the cell. You can select multiple cells to copy. Pasting a cell's format automatically overwrites any contents of the cell in which you're pasting it.

To delete a cell's contents

You can delete a cell's contents without deleting the cell itself. This leaves an empty cell that you can refill.

1. **Select the cell that has the contents you want to delete.**
   You can select multiple cells.
2. **Press Delete.**
   FrameMaker deletes the contents of the selected cells unless you selected an entire row or column. In that case, FrameMaker displays an alert that asks whether you want to leave the cells empty or remove them from the table.
3. **If FrameMaker displays the alert, click Leave Cells Empty and click Clear.**

REARRANGING ROWS AND COLUMNS

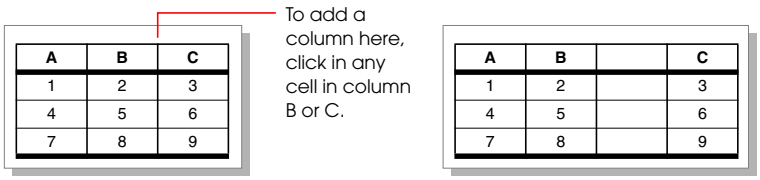
As you work in a table, you may find that the rows or columns aren't exactly as you want them. For example, you may have too many rows or too few columns. You can easily add and delete rows and columns. If you need to move a row or column, you can simply cut and paste it to a new position. You can also split a table into two tables or combine two tables into one.

To add an empty row or column

You can add a new empty row or column, and you can duplicate one or more existing rows or columns. You can add heading, body, and footing rows.

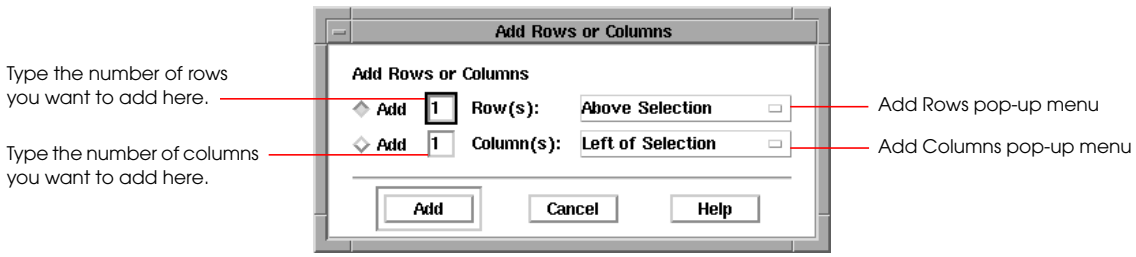
When adding rows or columns to a table, you specify how many you want to add and where you want to insert them. The cells in the new rows or columns get their paragraph formats from the row or column containing the cell you indicate. For example, you can click in a cell and add three rows. The cells in all three rows will have the same paragraph formats as the cells in the row in which you clicked.

1 **Click in a cell adjacent to where you want to add the rows or columns.**



2 **Choose Add Rows or Columns from the Table menu.**

3 **Specify the number of rows or columns you want to add.**



4 **Choose where you want to insert the rows or columns from the Add Rows or the Add Columns pop-up menu.**
If you're adding rows, you can insert them above or below the indicated cell or in the heading or footing areas.

If you're adding columns, you can insert them to the left or right of the indicated cell.

5 **Click Add.**

ADDING A ROW QUICKLY

To quickly add a row below the current row, press Control-Return. FrameMaker adds a row with the same format as the previous row.

To duplicate a row or column

You can duplicate rows and columns by copying the ones you want to duplicate and pasting the copies in new positions. If you duplicate a row or column, its contents are also copied.

1 **Select the rows or columns you want to duplicate.**

2 **Choose Copy from the Edit menu.**
FrameMaker puts the copied rows or columns on the FrameMaker Clipboard.

3 **Click in a row or column next to where you want to insert the copied rows or columns.**

4 **Choose Paste from the Edit menu.**
FrameMaker displays either the Paste Rows or Paste Columns dialog box.

5 **Specify where you want to insert the rows or columns and click Paste.**
If you're pasting rows, you can insert them above or below the current row, or you can replace the current row. If you're pasting columns, you can insert them to the left or right of the current column, or you can replace the current column.

To move a row or column

You can rearrange rows and columns by cutting the ones you want to move and pasting them in new positions. If you move a row or column, its contents are moved with it.

1 **Select the rows or columns you want to move.**
You have to select whole rows or whole columns.

2 **Choose Cut from the Edit menu.**

3 **In the Cut Table Cells dialog box, click Remove Cells from Table and click Cut.**
FrameMaker puts the copied rows or columns on the FrameMaker Clipboard.

4 **Click in a row or column adjacent to where you want to insert the cut rows or columns.**

5 **Choose Paste from the Edit menu.**
FrameMaker displays either the Paste Rows or Paste Columns dialog box.

6 **In the Paste Rows or Paste Columns dialog box, specify where you want to insert the rows or columns and click Paste.**
If you're pasting rows, you can insert them above or below the current row, or you can replace the current row. If you're pasting columns, you can insert them to the left or right of the current column, or you can replace the current column.

REPLACING ROWS OR COLUMNS

When you attempt to replace the current rows or columns with the cells on the FrameMaker Clipboard, FrameMaker replaces them exactly only if the number of rows or columns on the Clipboard is equal to the number of selected rows or columns. If the number on the Clipboard is greater than the number you select to replace, FrameMaker pastes as many rows or columns as will fit. If the number on the Clipboard is less than the number you select to replace, FrameMaker continues to paste until it fills the rows or columns you selected to replace.

To delete a row or column

When you delete a row or column, FrameMaker displays an alert that asks whether you want to delete just the contents of the selected cells or both the contents and the cells.

1 **Select the rows or columns you want to delete.**
Make sure you select entire rows or columns. If you don't, FrameMaker deletes the contents of the selected cells without prompting you for a decision.

2 **Press Delete.**
FrameMaker displays an alert that asks whether you want to leave the cells empty or remove them from the table.

3 **Click Remove Cells from Table and click Clear.**

To split or combine tables

You can split a table into two smaller tables, and you can combine rows or columns from two tables into one table. You split and combine tables by moving rows or columns. For details on how to cut and paste rows and columns, see "To move a row or column" on page 6-17.

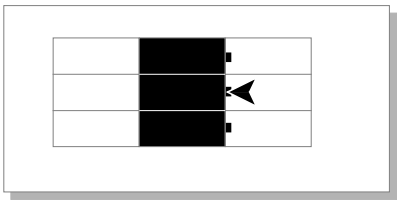
- **To split a table, cut the rows or columns you want to make into a new table and paste them in a text frame.**
  FrameMaker anchors the new table wherever you click. The new table's format matches the format of the table from which you cut the rows or columns.
- **To combine rows or columns from two tables, cut the rows or columns from one table and paste them into another table.**
  If you cut and paste rows, the two tables must have the same number of columns. If you cut and paste columns, the tables must have the same number of rows.

RESIZING ROWS AND COLUMNS AND ROTATING CELLS

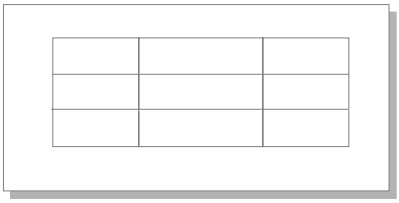
As you work in a table, FrameMaker automatically adjusts the height of a row based on the contents of the tallest cell. Beyond these automatic adjustments, you can specify different sizes for rows and columns. For example, you can increase or decrease the width of a column, increase or decrease the height of a row, or make all rows and columns the same size. In addition to this basic cell resizing, you can straddle cells with one larger cell, and you can rotate cells.

To resize a column with the mouse

The easiest way to change the width of a column is to select it and drag a handle until the column is the right size.



You can drag a handle…



…to resize a column.

You can resize a column without affecting the width of any other columns. Doing this increases or decreases the width of the entire table. Alternatively,

you can move the border between two columns so one column grows wider, the other narrower, and the entire table remains the same width.

There are additional, more precise ways to change the width of a column. For details, see "To specify specific column width options" on page 6-20.

- **To change a column's width without changing the width of any other columns in the table, select a cell in the column and drag the selection handle.**
  As you drag, the column's width appears in the status bar, and the table grows to accommodate the new width.
- **To move the border between two columns, select a cell in the column to the left of the border and Shift-drag.**
  The overall width of the table doesn't change.

RESIZING MULTIPLE COLUMNS

To change the width of more than one column at a time, select cells in the columns you want to change and drag a handle. FrameMaker resizes the selected columns to fit the new width while keeping their proportions the same.

ALIGNING THE WIDTH WITH THE SNAP GRID

To align the column border with the snap grid, turn on Snap on the Graphics menu before you change the width.

To specify specific column width options

You can resize columns in a number of specialized ways. For example, you can make all columns in a table the same width, or you can scale all columns to fit within a specific width.

1. **Select cells in the columns you want to resize.**
2. **Choose Resize Columns from the Table menu.**
3. **In the Resize Selected Columns dialog box, specify how you want to resize the columns and click Resize.**
   For information on the available options, see "Resize column options" on page 6-21.

MAKING ALL COLUMNS THE SAME WIDTH

To make all columns in a table the same width, select the entire table before choosing the Resize Columns command. In the Resize Columns dialog box, click To Equal Widths Totalling and leave the value in the text box unchanged. (The current value is the total width of the table.)

MAKING A TABLE WIDER THAN A COLUMN

If you resize a table so that it extends into a second column, it will straddle the columns of text. If the layout has side heads, such a table can extend into the side-head area as well. For more information, see "Tables that straddle" on page 6-5.

To duplicate a column's width

You can copy and paste a column's width in order to duplicate it in the same table or in a different table.

1. **Select one or more cells in the column that has the width you want to copy.**
2. **Choose Copy Special>Table Column Width from the Edit menu.**

RESIZE COLUMN OPTIONS

The option you choose in the Resize Selected Columns dialog box depends on the column width you want to achieve.

Width to achieve	Text box action	Explanation
A specific width	In the To Width text box, type the width.	By default, the text box contains the value of the leftmost selected column.
A percentage of the original widths	In the By Scaling text box, type the percentage.	100% leaves the columns unchanged; 50% halves the widths; and 200% doubles the widths.
The same width as another column in the table	In the To Width of Column Number text box, type the number of the column that has the width you want to copy.	Columns are numbered from left to right. By default, FrameMaker displays the number of the leftmost selected column.
Equal widths within a specified total width	In the To Equal Widths Totalling text box, type the width to be divided equally among the selected columns.	By default, FrameMaker displays the total width of the selected columns.
The width you specify while still keeping the column proportions the same	In the By Scaling to Widths Totalling text box, type the total width.	By default, FrameMaker displays the width of the text column containing the column.
The width of the widest paragraph (as if there were no line wrapping) or frame in the selected cells	In the Maximum Width text box, type the maximum width for columns.	Use this setting to eliminate line wrapping in a column or to make the columns just wide enough to contain the headings.

3 **Select one or more cells in the column that has the width you want to change and choose Paste from the Edit menu.**

To increase the height of a row

FrameMaker automatically adjusts the height of a row based on the cell's contents. You can further increase the height of a row—for example, to create extra white space above and below vertically centered text. You can also make all rows in a table the same height.

1 **Click in the row that has the height you want to increase.**

2 **Choose Row Format from the Table menu.**

3 **In the Row Format dialog box, type the row height in the Minimum text box and click Set.**

MAKING ALL ROWS THE SAME HEIGHT

You can make all rows the same height by determining the height of the tallest row in a table and then specifying its height as the minimum height for all rows.

To determine the height of the tallest row, hold Control-Shift while drawing a selection border around the row. FrameMaker displays the height in the status bar. Then select the entire table and specify this value for the minimum height in the Row Format dialog box.

To straddle cells

You can combine cells horizontally into a single cell that straddles several columns, or you can combine cells vertically into a single cell that straddles several rows. In a straddle cell, text and graphics flow across cell borders as if there were a single cell.

This cell straddles six columns.

This cell straddles two rows.

	Composition of Brown Rice	Composition of Other Rice					
		White Rice		Enriched White Rice		Enriched Converted Rice	
Calcium	32.0 mg	24.0 mg	75%	24.0 mg	75%	50.0 mg	190%
Iron	1.6 mg	0.8 mg	50%	2.9 mg	180%	2.9 mg	180%

If you straddle cells that have contents, FrameMaker merges the contents, creating separate paragraphs for each of the merged cells. You can also unstraddle cells.

1 **Select the cells you want to straddle.**
You can straddle only cells that are in the same type of row—heading, body, or footing.

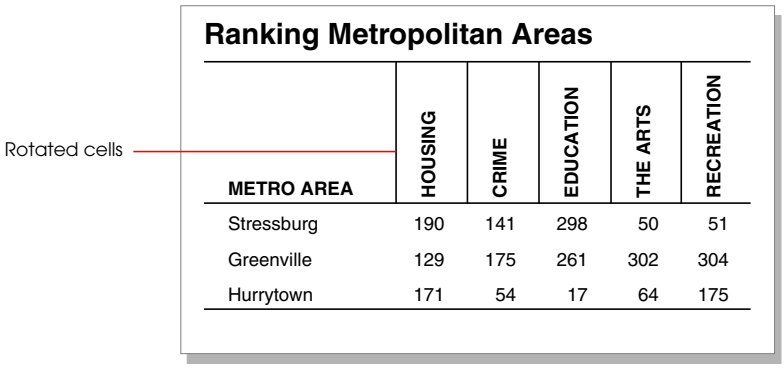
2 **Choose Straddle from the Table menu.**

UNSTRADDLING CELLS

To replace a straddle cell with the original cells, select it and choose Unstraddle from the Table menu. FrameMaker puts the contents of the straddle cell in the upper-left new cell, not back in the original cells. You can replace several straddle cells at a time.

To rotate a cell

Although you can rotate any cell in a table, heading cells are the ones most commonly rotated.



Ranking Metropolitan Areas

METRO AREA	HOUSING	CRIME	EDUCATION	THE ARTS	RECREATION
Stressburg	190	141	298	50	51
Greenville	129	175	261	302	304
Hurrytown	171	54	17	64	175

You can type in a rotated cell just as you do in any other cell. As you type in a rotated cell, the cell height increases and the text doesn't wrap. You can limit the height of rotated cells so that text will wrap when it reaches the limit.

1 **Select the cells you want to rotate.**

2 **Choose Rotate from the Graphics menu.**

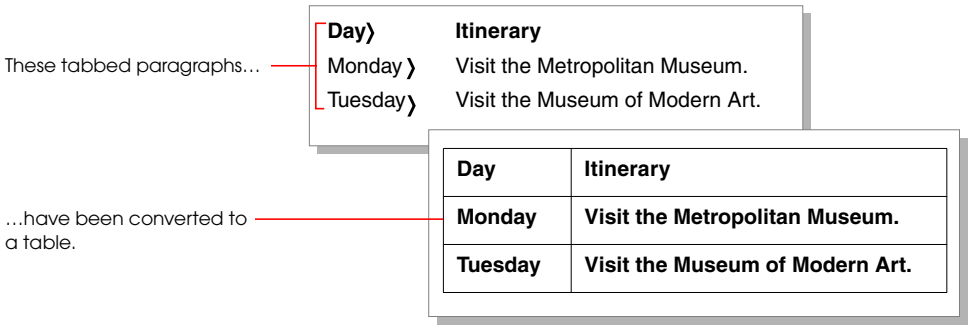
3 **In the Rotate Table Cells dialog box, click the orientation to which you want to rotate the cells and click Rotate.**

LIMITING THE HEIGHT OF A ROTATED CELL

If a rotated cell becomes too tall, you can set the maximum height for the row rather than force a line break. FrameMaker wraps text to the next line when it reaches the limit. For details on specifying row height, see "To increase the height of a row" on page 6-22.

CONVERTING TEXT TO A TABLE

You can convert paragraphs of text—including text you import from another application—to a table. For example, you may have created a table by using tabbed text and you now want to convert it to a true table.



Conversely, you may find that information you thought would work best in a table actually works better as regular text. In such a case, you can convert the table to regular text.

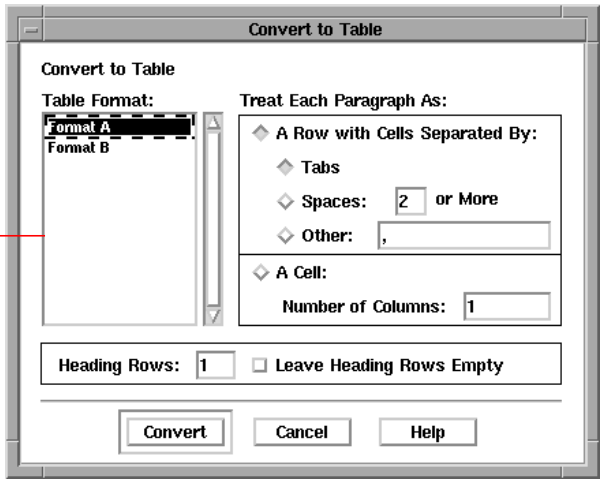
After converting text to a table, examine it to make sure everything is where it should be. A misplaced tab or extra return in the text can result in an inaccurate table.

To convert existing text to a table

When converting text to a table, you specify whether FrameMaker should turn each paragraph into a row or into an individual cell. If you turn paragraphs into rows, the paragraphs must contain some sort of character that indicates where FrameMaker should separate them into cells. A commonly used character is a tab.

FrameMaker bases the widths of columns in the new table on the table format you specify. You can change the column widths, as well as any other table formatting, after FrameMaker creates the table.

1. **Select the text you want to convert.**
2. **Choose Convert to Table from the Table menu.**
3. **Select a format for the table.**



Select a table format.

4 **Specify how you want to convert paragraphs.**

To convert this type of text	Do this
Paragraphs with tab characters separating information you want placed in separate cells	Click Tabs.
Paragraphs with spaces separating information you want placed in separate cells	Click Spaces. Then type the number of spaces below which FrameMaker should not create a separate cell.
Paragraphs with other characters separating information you want placed in separate cells	Click Other. Then type a list of characters, any one of which FrameMaker can use to separate information into cells.
Paragraphs (such as those in a bulleted list) that you want placed in separate cells	Click A Cell. Then type the number of columns you want in the table.

5 **In the Heading Rows text box, type the number of paragraphs in the selection that are headings.**

If the paragraphs you're converting don't include a heading, turn on Leave Heading Rows Empty. You can fill in the headings after converting the text.

6 **Click Convert.**

The table is anchored to the end of the paragraph immediately preceding the selected text.

To convert an imported file to a table

You can import a text file and then convert it to a FrameMaker table. To do this you need to convert the entire file, not just a portion. For example, you can import a tabular text file you saved from a spreadsheet and then convert it to a table.

1 **Click in the line of text below which you want to insert the table.**

You can't import a table into a footnote or into another table.

2 **Import the file.**

The file you import from must be a text file, not another FrameMaker file. You can import by reference or by copy. For information, see "Editing tables imported by reference," next. For information on importing files in general, see "Importing text" on page 3-12.

3 **In the Import Text File dialog box, click Convert to Table and click Import.**

FrameMaker displays the Convert to Table dialog box.

4 **Select a format for the table and specify how you want to convert paragraphs.**
For information on the settings in the Convert to Table dialog box, see "To convert existing text to a table" starting on page 6-25.

5 **Click Convert.**

EDITING TABLES IMPORTED BY REFERENCE

When you import a text file by reference and convert it to a table, the resulting table is a text inset. This means you can't edit the contents of the table from within FrameMaker, and you can't format the text beyond the formatting defined for the table format you used. You can, however, edit the original text file and then update the table in FrameMaker by selecting the table, choosing Text Inset Properties from the Edit menu, and then clicking Update Now.

You can also update the table along with other text insets by choosing Update References from the Edit menu.

MERGING A TEXT FILE INTO AN EXISTING TABLE

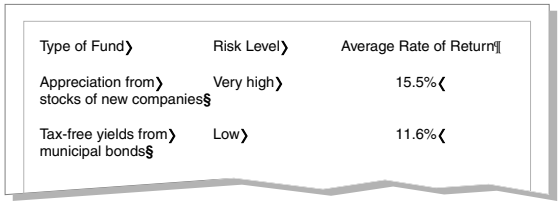
If you have a text file that you want to merge into an existing table, first import the text file (by copying) and then convert it to its own table. Finally, merge this table into an existing table. For information on merging tables, see "To split or combine tables" on page 6-19.

To edit a table after conversion

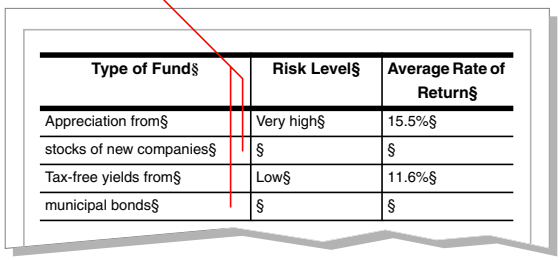
After converting text to a table, you might have to edit the table. If you imported the text by reference, you edit the text in the original text file and update the text inset. For details, see "Editing tables imported by reference" on page 6-27.

If you imported the text by copying, you can edit the table after conversion. For example, when you convert tabular text that contains forced returns, FrameMaker treats each return as the end of a paragraph. This causes text that should be together in one cell to be split into two or more cells.

The tabbed text contains forced returns.



After conversion, text that should be together appears in separate cells.



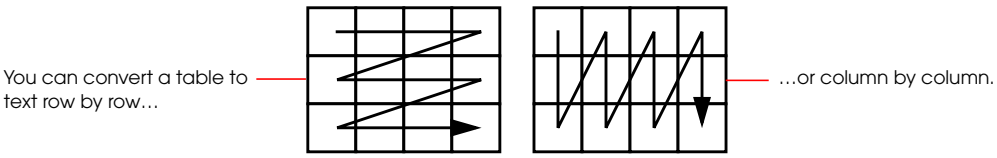
Type of Fund§	Risk Level§	Average Rate of Return§
Appreciation from§	Very high§	15.5%§
stocks of new companies§	§	§
Tax-free yields from§	Low§	11.6%§
municipal bonds§	§	§

In addition, because FrameMaker adds a column for each tab, extra columns can occur if the converted text had extra tabs.

- **To combine text that is split across two or more cells, cut and paste the text from the lower cells into the upper cell and delete the extra rows.**
  As a shortcut, you can choose Straddle from the Table menu and then choose Unstraddle. This leaves empty cells that you can then delete.
- **To delete extra columns, cut and paste the cells into the correct locations and delete the extra columns.**

To convert a table to text

You may want to convert a table to text—for example, if you need to copy a FrameMaker table into an application that doesn't recognize tables. When you convert a table to text, FrameMaker turns each cell into a separate paragraph.



1. **Click in the table you want to convert to text.**
2. **Choose Convert to Paragraphs from the Table menu.**
3. **In the Convert to Paragraphs dialog box, click Row by Row or Column by Column and click Convert.**

CONVERTING A TABULAR TEXT INSET TO TEXT

To convert a table whose text has been imported by reference to editable paragraphs, you break the link to the text file it came from. To do this, select the inset, choose Text Inset Properties from the Edit menu, and then click Convert to Text.

7

TABLE FORMATS

Working with table formats and customizing tables

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7 TABLE FORMATS

Creating and storing table formats is similar to creating and storing paragraph formats. You can store a table's format in a catalog. You can apply a different format to an existing table, and FrameMaker will update the table's format to match the catalog format.

Table formats define the appearance of tables

When you insert a new table, you choose a format in the Table Catalog. The catalog format determines the defaults of the table—the number of heading, footing, and body rows; the number and width of columns; and the paragraph formats for heading rows, footing rows, body cells, and the title, if there is one.

In addition, the catalog format determines the position of the table and of its title, cell margins, ruling, shading, and other properties.

You create formats with the Table Designer

You can examine and change most of a table format's properties by using the Table Designer, a window like the Paragraph Designer and Character Designer.

You use the Table Designer to change the table's position and cell margins, ruling, and shading.

Table 2-1: Northern Area Directory

Last	First	Address	City	State	ZIP
Armini	Kelly	340 Red St. Apt. 10-A	Saratoga	CA	98055
Atkins	Brian	340 Haven St.	Redwood City	CA	94063
Chang	Joanne	22 10th St.	Mt. View	CA	98500

The Table Designer also gives you access to the Table Catalog. Catalog formats store the properties you set with the Table Designer. They also store default properties, such as the number of rows and the width of columns, that you set in other ways.

Custom settings apply special effects

All properties of a table format are general ones. For example, a table format can establish a shading percentage for columns or rows but not for specific cells. If you want to shade a specific cell for a special effect, you can use a custom setting. You can also customize ruling, cell margins and vertical alignment, page breaks, and row formatting.

Phone List

Last Name	First Name	Dept. Num.	Extension
Arthur	Lee	123	4434
Bates	Susan	234	4312
Brown	Bob	345	4456
Davis	William	567	4598

Before customizing

Phone List

Last Name	First Name	Dept. Num.	Extension
Arthur	Lee	123	4434
Bates	Susan	234	4312
Brown	Bob	345	4456
Davis	William	567	4598

Ruling and shading have been customized.

If you update the format of a table that has custom settings, or if you apply a new catalog format, the custom settings are retained.

Catalog changes affect properties set in the Table Designer

When you apply a different catalog format to an existing table, the catalog format's Table Designer settings apply to the table, removing any format overrides. The table retains its number of rows, width of columns, and other format properties not set in the Table Designer, along with any custom settings.

When you modify the properties of a table and then update the corresponding catalog format, you choose whether to retain Table Designer overrides in other tables with the same tag. Only the catalog format reflects changes to properties not set in the Table Designer.

In this chapter

This chapter shows you how to use the Table Designer to apply, create, and modify table formats. It also shows you how to customize tables. Chapter 6, "Tables," shows you how to set other table properties and to create custom straddle cells and rotated cells.

WORKING WITH TABLE FORMATS

Table catalog formats determine the position and initial appearance of tables you insert. When you create a new format, you can add it to the catalog. For information on how the Table Catalog stores formats, see "Table properties" on page 7-4.

You can change the position or appearance of an existing table by applying a different format or by changing the definition of its current format. You can change the format of an individual table and apply the changes to that table only or to the corresponding catalog format and all existing tables with the same tag. Occasionally, you may need to make the same change to all tables in a document. For example, you may want to make all tables left aligned instead of centered.

TABLE PROPERTIES

Three types of settings affect the appearance of a table—format properties set in the Table Designer, default format properties not set in the Table Designer, and custom settings. The Table Designer properties and the default properties are stored in the Table Catalog; however, only those properties set in the Table Designer are updated when you apply a new or modified table format to an existing table.

The following table spells out the types of properties stored in the Table Catalog and the types that are updated when you apply a different format to an existing table. More information on the types of properties follows the table.

Table properties	Stored?	Updated?
Format properties set in the Table Designer	Yes	Yes
Default properties not set in the Table Designer	Yes	No
Custom settings	No	No

Table Designer properties The Table Designer sets three groups of table format properties—Basic, Ruling, and Shading.

Default properties The defaults of table format properties not set in the Table Designer are stored in the Table Catalog.

- Number of heading, footing, and body rows
- Number and widths of columns
- Paragraph format of the first paragraph in the title (if there is one)
- Paragraph format of the topmost paragraph in the heading, body, and footing cell of each column

Custom settings Several custom settings affect the appearance of individual tables.

- Cell rotation and straddling
- Custom ruling and shading
- Custom cell heights
- Custom cell margins and vertical alignment
- Custom page breaks

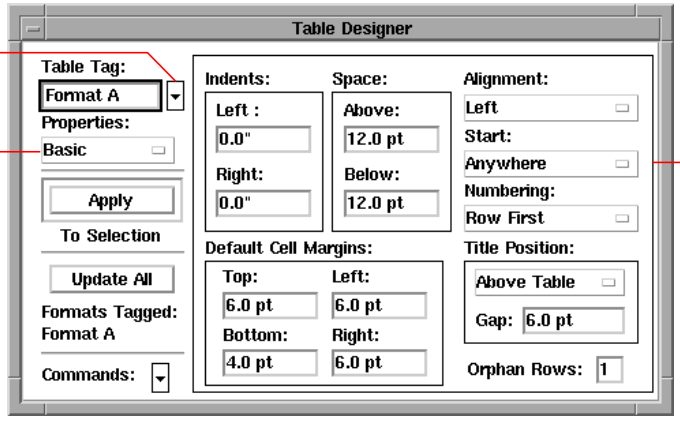
You can also change the formats of tables in a text inset (text imported by reference) as long as it doesn't use formats from the source document. For details, see "Formatting an imported text flow" on page 3-16.

To use the Table Designer

You use the Table Designer to create and change table formats just as you use the Paragraph Designer to create and change paragraph formats.

You can choose a format tag from the Table Tag pop-up menu.

You can choose a group of properties from the Properties pop-up menu.



You can change properties here.

In the left side of the Table Designer, you choose a table format and property group and specify how you want to apply properties. In the right side of the Table Designer, you change the table's properties. As you change properties in the Table Designer, the table's appearance doesn't change until you apply or update the properties.

- **To display the Table Designer, choose Table Designer from the Table menu.**
- **To display a different property group, choose the group from the Properties pop-up menu.**
  You can choose from Basic, Ruling, and Shading properties. Apply changes or update the catalog before choosing a different property group. If you don't, FrameMaker will prompt you to do so.
- **To apply property changes, click Apply To Selection or Update All.**
  If you click Apply To Selection, FrameMaker applies all properties in all groups to the current table without updating the Table Catalog format. Doing this creates a format override for that table.

  If you click Update All, FrameMaker updates the corresponding catalog format and all tables in the document with the same tag. Properties set in the Table Designer, as well as default properties not set in the Table Designer are

updated. If FrameMaker detects format overrides in any of the tables being updated, it will ask whether you want to remove the overrides.

- **To reset properties after making some changes in the Table Designer, choose Reset Window from Selection from the Commands pop-up menu.**
  This changes the properties to match the current table. You can reset the properties only if you haven't yet applied the changes or updated the catalog format.

TABLE FORMAT OVERRIDES

For general information on format overrides, see "Overriding a catalog format's properties" on page 5-13, which describes overrides to paragraph and character formats (the same principles apply to table format overrides). With tables, only those properties set in the Table Designer can be overridden. Custom settings and changes to default properties are not considered format overrides.

To display a catalog format's properties

When you click in a table, its properties are displayed in the Table Designer. Those properties may not match the properties of the catalog format with the same tag, depending on whether the table contains any format overrides.

- **To display a catalog format's properties in the Table Designer, choose the format from the Table Tag pop-up menu even if its tag is already displayed in the Table Tag text box.**

To apply a different format to an existing table

You choose a format from the Table Catalog when you insert a new table. You can apply a different format at any time.

When you apply a different format to an existing table, FrameMaker changes only those properties set with the Table Designer. It won't change the default properties not set in the Table Designer or the custom settings.

(Cell Heading)	(Cell Heading)
(Cell Body)	(Cell Body)
(Cell Body)	(Cell Body)
(Cell Body)	(Cell Body)

Table 1:

When a format from the Table Catalog is applied to…

Table 1: Harvest by Seasons

	Grain	Fruit	
	Corn	Apples	Oranges
WINTER	0.00	325.15	0.00
SPRING	0.00	0.00	561.64

…an existing table with different default properties and custom settings…

	Grain	Fruit	
	Corn	Apples	Oranges
WINTER	0.00	325.15	0.00
SPRING	0.00	0.00	561.64

Table 1: Harvest by Seasons

…the default and custom properties are retained.

For information on Table Designer, default, and custom properties, see "Table properties" on page 7-4.

1 **Click in the table to which you want to apply a new format.**

2 **In the Table Designer, choose the format you want to apply from the Table Tag pop-up menu.**
The menu contains the formats in the Table Catalog.

3 **Click Apply To Selection.**

To apply a format to tables with certain tags

You can apply a format to multiple tables in a variety of ways. You can apply a format to all tables in the document; to all whose tags occur in a selection; or to all that have a particular tag. For example, you could apply Format B to all tables currently tagged Format A.

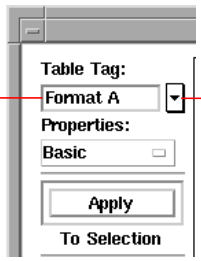
When you apply a different format to a table, FrameMaker overwrites only those properties set with the Table Designer. It won't overwrite the default properties not set in the Table Designer or the custom settings.

1 **Click in a table or select consecutive tables.**
If you want to apply a format to one or all tables in the document, click in any table.

If you want to apply a format to more than one, but not all, tables in the document, select consecutive tables. Select the tables you want to retag. (To select multiple tables, you must select their anchor symbols.) In the Table Designer, conflicting properties, including the tag, are set to As Is. For more information on the As Is setting, see "Understanding the As Is setting" on page 5-18.

2 **In the Table Designer, choose the format you want to apply from the Table Tag pop-up menu.**
The menu contains the formats in the Table Catalog.

When you choose a format, the Table Designer displays the properties of the format you choose, including the tag.

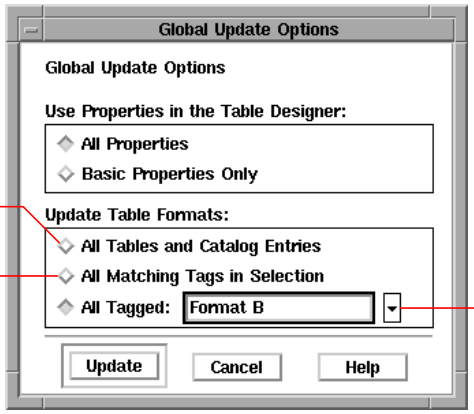


This is the format you want to apply.

Table Tag pop-up menu

3 **Choose Global Update Options from the Commands pop-up menu.**

4 **Choose the tables you want to retag.**



Click here to retag all tables in the document.

Click here to retag the tables in the selection and all tables with the same tags as these tables.

Choose a tag from the pop-up menu to retag all tables currently assigned the tag you choose.

5 **Click All Properties in the Use Properties area and click Update.**

CREATING AND UPDATING TABLE FORMATS

Each FrameMaker template and blank paper template already has a Table Catalog set up with predefined formats. If the existing table formats aren't appropriate for your needs, you can modify their properties or use them as the foundation for creating new formats. You create a new table format by changing the properties of an existing table and adding the format to the Table Catalog with a different tag.

When you update a table format, you can choose to update all properties, one group of properties, or several properties within a group. You can also choose which formats you want to update.

As you add more formats to the Table Catalog, you'll need to maintain the catalog. For example, you can rename a format if you're using it for a different type of table than originally planned, or you can delete a format that you no longer need.

To create a table format

If no existing table formats are appropriate for your table, you can create a new format. After you modify the properties of an existing table, you store the format in the Table Catalog with a different tag.

This procedure shows the general steps for adding a new format to the Table Catalog. Instructions for changing specific table properties are described in other sections of this chapter and in Chapter 6, "Tables."

1 **Click in a table that has a format similar to the one you want to create.**
Actually, you can click in any table. However, the more similar the format is to the format you're defining, the fewer changes you'll have to make.

2 **Set up the rows and columns.**
If necessary, add or delete body, heading, and footing rows and adjust the number of columns and their widths. For instructions, see Chapter 6, "Tables."

TIPS ON NAMING FORMATS

You'll find it easier to use and maintain the Table Catalog if you follow these guidelines for naming formats. For examples of various formats and how they look when applied to tables, look at the catalogs in the FrameMaker templates and sample files.

Standardized tags By standardizing tags, you can copy formats between documents. For example, if you use PriceList for a tag in one document, use the same tag for similar tables in other documents.

Tags that indicate function Give each format a tag that's easy for you and others to remember, recognize, and type. A tag should indicate the *use,* and not the *appearance,* of the table.

For example, you could use the tag PartsList for a table that contains a list of parts in two columns. Such a name is more flexible than one named 2ColumnTable; if you change the table to include a third column, you won't have to change the tag.

Consistent capitalization Tags are case-sensitive: *PartsList* is not the same as *partslist*.

3 **Use the Table Designer to modify other table properties.**
Table Designer modifications are described in other sections of this chapter. You can change the Basic, Ruling, or Shading properties. As you change properties in the Table Designer, the table's appearance doesn't change until you apply the properties.

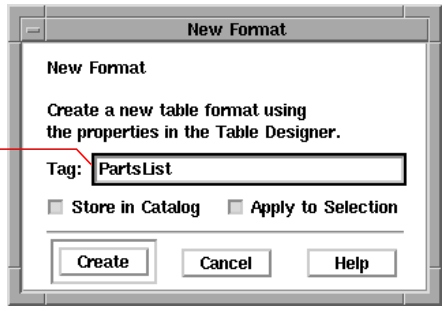
After you make changes, click Apply To Selection.

4 **Use the Paragraph Designer to create paragraph formats for the text within the table.**
You may want to define paragraph formats for the following parts of the table: the title, heading cells, body cells, and footing cells. For information on creating paragraph formats, see Chapter 5, "Format Catalogs."

5 **When the table looks the way you want, choose New Format from the Commands pop-up menu in the Table Designer.**

6 **Type a name for the new format in the Tag text box.**

Type the tag name here.



For suggestions on naming table formats, see "Tips on naming formats" on page 7-9.

7 **To indicate that the format should be stored in the Table Catalog, turn on Store in Catalog.**
Normally, you'll want to store a newly created format in the Table Catalog. If you don't want the format overwritten or copied to another document by the Import>Formats command, don't store the format in the catalog.

8 **To apply the new format to the current table, turn on Apply to Selection.**

9 **Click Create.**

USING ANOTHER DOCUMENT'S TABLE CATALOG

If you're using a particular document as a template for other documents, you can copy the Table Catalog from the template to a new document. You do this by using the Import>Formats command. For information on importing formats, see "Importing formats into a document" on page 21-12.

To update a table format

After changing a table's properties, you can update the corresponding catalog format to match the table. The properties applied to the catalog format include those set in the Table Designer and the defaults not set in the Table Designer—for example, the default paragraph formats. In addition, properties set in the Table Designer are applied to existing tables in the document with the same tag. Default properties that aren't changed in the Table Designer are not applied to existing tables.

1. **Click in a table that has the format you want to update.**
   The table's format may not match the catalog format with the same tag depending on whether the table contains any format overrides. If you want to start out with the catalog format's properties (without any overrides), choose the format tag from the Table Tag pop-up menu in the Table Designer, even if the tag you want is already displayed in the Table Tag text box.
2. **Change the table's properties.**
   You can use the Table Designer to change the Basic, Ruling, or Shading properties. You can also change default properties. For details on changing default properties, see the methods described in this chapter and in Chapter 6, "Tables." For a list of default properties you can change, see "Table properties" on page 7-4.
3. **Click Update All.**
   If FrameMaker detects format overrides in any of the tables being updated, it displays an alert that asks whether you want to retain or remove them. For general information on format overrides, see "Overriding a catalog format's properties" on page 5-13, which describes overrides to paragraph and character formats (the same principles apply to table format overrides).

TABLES IN TEXT INSETS

If a table is in a text inset (text imported by reference) that uses the source document's formats, you must update the table's format in the source document. For details, see "Formatting an imported text flow" on page 3-16.

To update other table formats with a property group

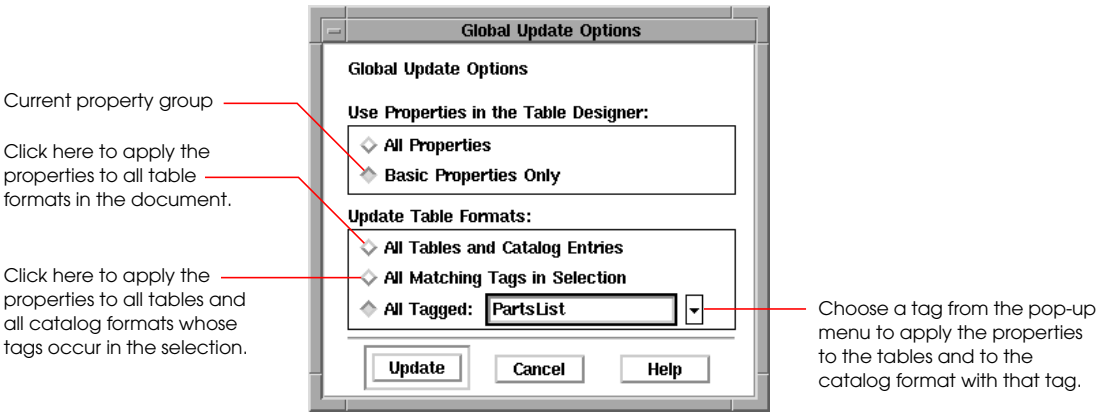
You can use a group of properties from one table format to update other formats. For example, if you want to change the default ruling properties of all tables in a document, you can change them for one format and apply the changes to the remaining formats in the catalog without changing any other properties.

These instructions apply to whole groups of properties. For instructions on changing one or two properties in a group, see "To update other table formats with one or two properties" on page 7-14.

1. **Click in a table or select consecutive tables.**
   If you want to update one or all table formats in the document with a property group from a table, click in that table. The Table Designer displays the properties of the table, including its tag.

   If you want to update more than one, but not all, of the table formats, select consecutive tables. Select the tables that have the formats you want to update. (To select multiple tables, you must select their anchor symbols.) In the Table Designer, conflicting properties, including the tag, are set to As Is. For more information on the As Is setting, see "Understanding the As Is setting" on page 5-18.
2. **From the Properties pop-up menu, choose the property group you want to update.**
3. **In the Table Designer, delete the tag from the Table Tag text box if the text box isn't empty.**
   Deleting the tag from the text box keeps FrameMaker from changing the tags of the formats you update.
4. **Change the properties as necessary.**
5. **Choose Global Update Options from the Commands pop-up menu.**

6 **Choose the table formats to which you want FrameMaker to apply the properties.**



7 **Click the current property group in the Use Properties area and click Update.**
FrameMaker applies the properties to the Table Catalog formats you specified and to all existing tables in the document with the same tags.

If FrameMaker detects format overrides in any of the tables being updated, it displays an alert that asks whether you want to retain or remove them. For general information on format overrides, see "Overriding a catalog format's properties" on page 5-13, which describes overrides to paragraph and character formats (the same principles apply to table format overrides).

DISPLAYING ANOTHER FORMAT'S PROPERTIES

After deleting the tag from the Table Tag text box, you can display the properties of any catalog format without displaying the format's tag. To do this, hold down the Shift key when you choose the format from the Table Tag pop-up menu. You can then update a different catalog format with those properties.

To update other table formats with one or two properties

You can update one or two properties of one or more table formats without changing any other properties. For example, you can change some or all table formats from centered to left aligned. Rather than update each format separately, you can update them all at once.

1 **Click in a table or select consecutive tables.**

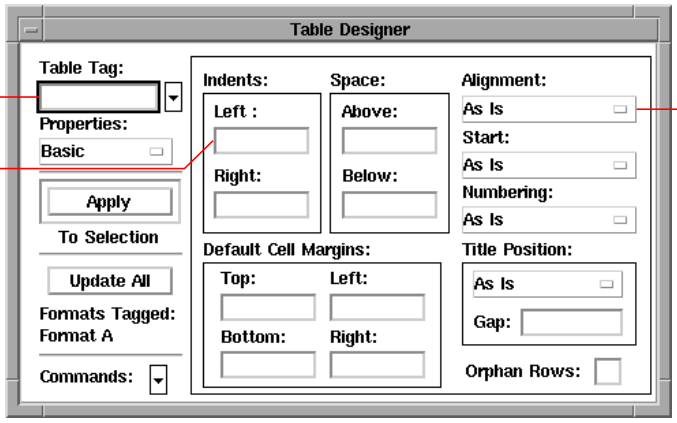
If you want to update one or all table formats in the document, click in any table.

If you want to update more than one, but not all, of the table formats, select consecutive tables. Select the tables that have the formats you want to update. (To select multiple tables, you must select their anchor symbols.) In the Table Designer, conflicting properties, including the tag, are set to As Is. For more information on the As Is setting, see "Understanding the As Is setting" on page 5-18.

2 **In the Table Designer, display the group of properties from which you want to select one or two properties to apply.**

3 **From the Commands pop-up menu, choose Set Window to As Is.**

Settings in all property groups in the Table Designer change to indicate that their status is As Is. FrameMaker won't change properties set to As Is when it updates the other formats. For example, the Table Tag text box is blank so that updating other formats won't change their tags.

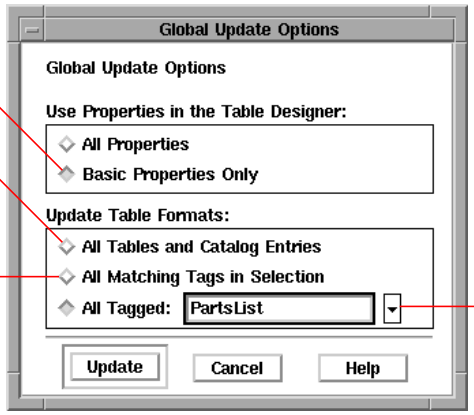


For more information on setting properties to As Is, see "Understanding the As Is setting" on page 5-18.

4 **Change only the properties you want to apply, leaving the rest set to As Is.**

5 **Choose Global Update Options from the Commands pop-up menu.**

6 **Choose the table formats to which you want FrameMaker to apply the properties.**



Current property group

Click here to apply the properties to all table formats in the document.

Click here to apply the properties to the tables in the selection and all tables with the same tags.

Choose a tag from the pop-up menu to apply the properties to the catalog format with that tag.

7 **Click the current property group in the Use Properties area.**

8 **Click Update.**
FrameMaker applies the properties to the Table Catalog formats you specified and to all tables in the document with the same tags.

If FrameMaker detects format overrides in any of the tables being updated, it displays an alert that asks whether you want to retain or remove them. For general information on format overrides, see "Overriding a catalog format's properties" on page 5-13, which describes overrides to paragraph and character formats (the same principles apply to table format overrides).

To rename a catalog format

You may need to rename a table format if, for example, your naming conventions change, or if you want to copy an entire catalog from a template and don't want a particular format to be overwritten.

1 **Click in a table that has the format you want to rename.**

2 **In the Table Designer, choose the tag you want to change from the Table Tag pop-up menu.**
Make sure you perform this step even though it means choosing the same tag as the one currently displayed. Choosing a tag from the pop-up menu ensures that the properties of the catalog format are displayed.

3 **Type a new name in the Table Tag text box and click Update All.**
Because the tag in the Table Tag text box differs from the tag under the Update All button, FrameMaker asks whether you want to rename the format.

4 **Click OK to rename the format.**

To delete a format from the Table Catalog

You may need to delete a table format if, for example, you copied a Table Catalog from a template and an old format is no longer necessary. Deleting a format from the catalog does not affect any tables that have the same tag—the tables simply have a tag that isn't in the catalog.

1 **In the Table Designer, choose Delete Format from the Commands pop-up menu.**

2 **In the Delete Formats from Catalog dialog box, select the format in the scroll list and click Delete.**
You can delete additional formats if you want to.

3 **Click Done when you've finished deleting formats.**
The formats are not actually deleted from the catalog until you click Done.

ADDING AND REMOVING TABLE TITLES

A table title appears in its own text frame above or below a table and is repeated on all pages of a multipage table. You can format a table title just as you would any other paragraph in a document. For example, you can center the title, set its default font, and include an autonumber format.

	Corn	Apples	Oranges
Winter	0.00	325.15	0.00
Spring	0.00	0.00	561.64
Summer	560.85	0.00	0.00
Fall	0.00	0.00	0.00

Harvest by Seasons

Centered title below the table

Table 2: Harvest by Seasons

	Corn	Apples	Oranges
Winter	0.00	325.15	0.00
Spring	0.00	0.00	561.64
Summer	560.85	0.00	0.00
Fall	0.00	0.00	0.00

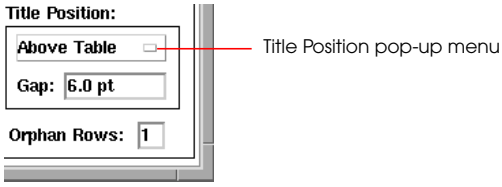
Left-aligned, autonumbered title above the table

You use the Table Designer to add a title to a table. When you add a table format to the Table Catalog, FrameMaker stores the title properties set in the Table Designer as part of the catalog format. It also stores the title's paragraph format. If you apply this catalog format to an existing table, only the Table Designer properties, not the existing title's paragraph format, are changed.

To set up a table title

When you set up a title for a table, you specify whether you want to display the title above or below the table and how big a gap you want between the title and the table. FrameMaker adds an empty text frame for the title, and you fill in the text.

1. **Click in the table to which you want to add a title.**
2. **In the Basic properties of the Table Designer, choose Above Table or Below Table from the Title Position pop-up menu.**



3. **In the Gap text box, specify the amount of space between the table and the title.**
4. **Apply the changes.**

For information on applying properties, see "To use the Table Designer" on page 7-5.

DISPLAYING A TITLE ON THE FIRST PAGE ONLY

You can have a title displayed only on the first page of a multipage table by setting up a body text paragraph as the title and then inserting an untitled table below the paragraph. In the paragraph's format, make sure you turn on the Keep With Next setting in the Pagination properties of the Paragraph Designer. Doing this prevents the title from becoming separated from the table.

USING TABLE VARIABLES IN TITLES

In a multipage table, you can use two system variables to include special text on subsequent pages—for example, the text *(Continued)*. The Table Continuation variable displays continuation text, and the Table Sheet variable displays page-count information. For information on using the special table variables, see "To set up multipage tables" on page 6-12.

To remove a table title

You remove a title from a table by changing the table format.

1. **Click in the table that has the title you want to remove.**
2. **In the Basic properties of the Table Designer, choose No Title from the Title Position pop-up menu.**

3 **Apply the changes.**
For information on applying properties, see "To use the Table Designer" on page 7-5.

USING RULING AND SHADING

You can create tables that are visually appealing and easy to read by using ruling and shading. For example, you can use ruling around the outside edges of a table and shading only in the heading cells. Or you may want to use ruling to separate all cells in a table and use shading for every other body row.

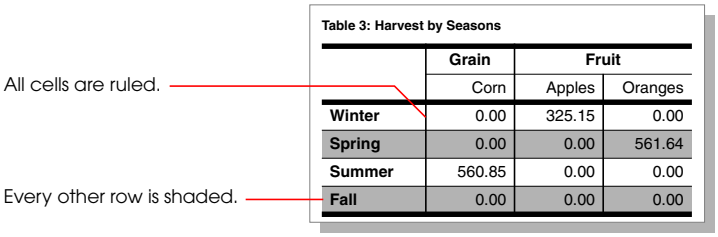


Table 3: Harvest by Seasons

	Grain	Fruit	
	Corn	Apples	Oranges
Winter	0.00	325.15	0.00
Spring	0.00	0.00	561.64
Summer	560.85	0.00	0.00
Fall	0.00	0.00	0.00

When formatting a table, you can create the regular ruling and regular shading for the table. The regular ruling and shading affect entire rows and columns and they are part of the format that is stored in the Table Catalog.

You can also set up custom ruling and shading for a table. Custom ruling and shading aren't limited to entire rows or columns and aren't stored as part of the Table Catalog format. If you customize the ruling or shading of a table and later apply a different format to the table, the customized ruling or shading is not overwritten by the new format.

Each document contains predefined ruling styles that you can use in tables. FrameMaker provides six ruling styles, ranging from very thin to thick and including a double ruling. You can edit these ruling styles or create additional ones.

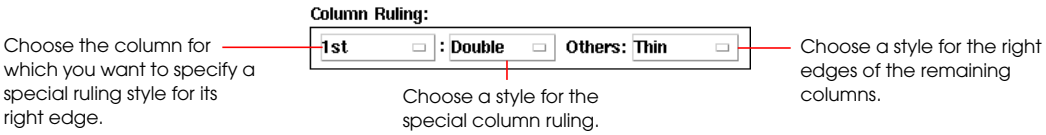
To set up regular ruling

You can specify ruling for columns, body rows, heading and footing rows, and outside edges of a table. For example, you can use thick ruling beneath the heading row and thin ruling between every other body row.

For examples of the ruling patterns you can create for rows and columns, see "Regular ruling" on page 7-19.

1 **Click in the table in which you want to specify regular ruling.**

2 In the Ruling properties of the Table Designer, set up the column ruling styles.

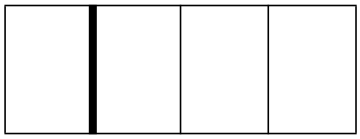


If you want to use the same style for all ruling between columns, choose it from both pop-up menus. If you don't want to have ruling between columns, choose None. The same applies for setting up body row ruling styles in the next step.

REGULAR RULING

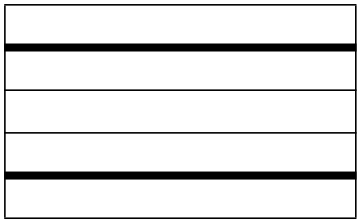
You can set up the regular ruling for columns, body rows, heading and footing rows, and the outside edges of a table.

Columns You can choose a ruling style for the right edge of a specific column and a different style for the right edges of all other columns.

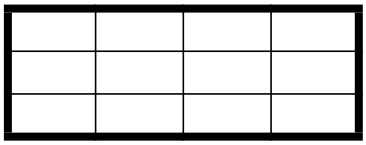


Body rows You can choose a ruling style to use periodically between body rows and a different style for the remaining rows.

Heading and footing rows You can choose a ruling style to separate heading and footing rows from body rows and a different style to appear between heading and footing rows (if there's more than one of each).

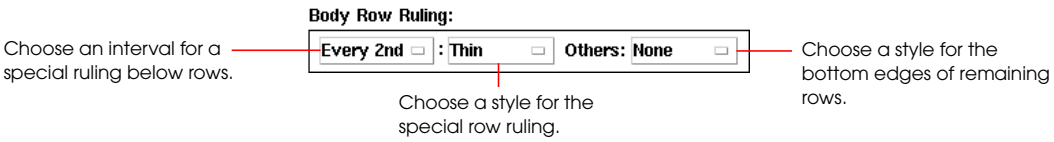


Outside edges You can choose a ruling style for the outside edges of a table.

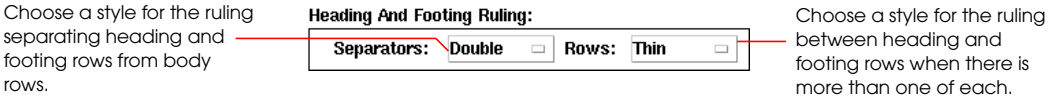


You can specify that the bottom ruling should appear only on the last page of a multipage table.

3 Set up the body row ruling styles.

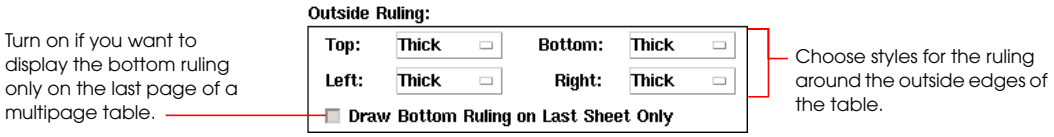


4 Set up the heading and footing row ruling styles.



If you don't want to have ruling between heading and footing rows, choose None. The same applies for setting up the outside-edge ruling styles in the next step.

5 Set up the outside-edge ruling styles.



6 Apply the changes.

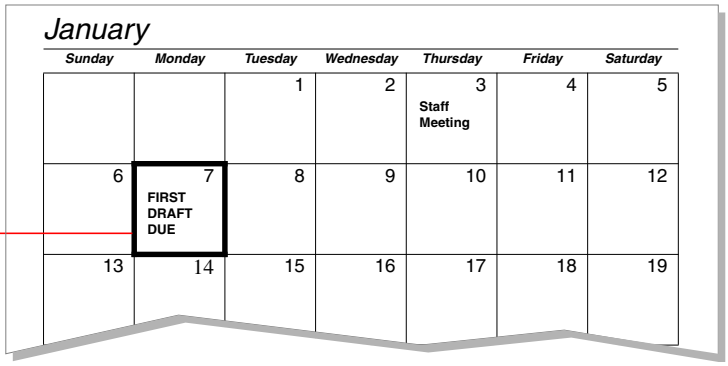
For information on applying properties, see "To use the Table Designer" on page 7-5.

CUSTOM RULING

If you change the regular ruling of a table containing custom ruling, the custom ruling is retained. Wherever the two settings are in conflict, the custom settings prevail. Custom ruling can be changed only with the Custom Ruling and Shading dialog box. For information on custom ruling, see "To customize ruling," next, and "To remove custom ruling or shading" on page 7-28.

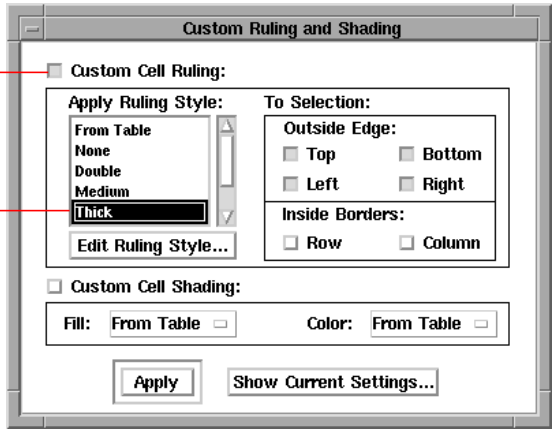
To customize ruling

You can customize the ruling for individual cells, rows, or columns to draw attention to specific areas of a table.



A table's custom ruling is not stored as part of the format when you use the table to create a new catalog format. When you apply a different format to a table with custom ruling, the custom ruling is not overwritten by the new format's regular ruling.

1. **Select the cells, rows, or columns for which you want to customize ruling.**
2. **Choose Custom Ruling & Shading from the Table menu.**
3. **Choose a custom ruling style.**



The scroll list shows the document's predefined ruling styles. For information on modifying and creating ruling styles, see "To create or edit a ruling style" on page 7-22.

4 **In the To Selection area, specify which parts of the current selection you want to change.**
The Inside Borders settings apply only if you've selected more than one cell. Turn on Row to apply the ruling style to the horizontal borders in the selection's interior. Turn on Column to apply the ruling style to the vertical borders.

5 **To keep from changing any shading, turn off Custom Cell Shading.**

6 **Click Apply.**

HOW CONFLICTING RULING TAKES PRECEDENCE

Custom ruling always takes precedence over regular ruling. For example, if a table's regular ruling for a row is a thick line, and if you apply a thin custom ruling to a cell in that row, the thin ruling appears.

If you apply conflicting custom ruling to adjacent cells, thicker lines take precedence over thinner ones; double-line ruling lines take precedence over single ruling lines.

To create or edit a ruling style

If the predefined ruling styles aren't appropriate for your needs, you can create additional styles as well as editing or deleting existing ones. The total number of styles allowed is 22. If you edit a ruling style, the change applies to both regular and custom ruling that uses that style.

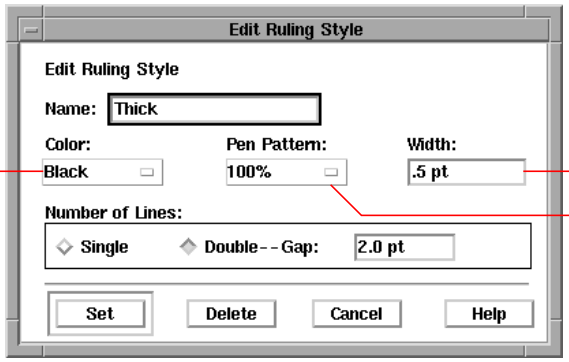
While you work with ruling styles, you may want to zoom to 200 or 400 percent. Doing this allows you to see slight differences in line thickness that you can't see at 100 percent.

1 **Choose Custom Ruling & Shading from the Table menu.**

2 **In the Custom Ruling and Shading dialog box, select an existing style in the Apply Ruling Style scroll list.**
Select the ruling style you want to edit or, if you're creating a new style, select one similar to the style you want to create.

3 **Click Edit Ruling Style.**

4 **Type the width and choose a color and pen pattern for the style.**



The colors listed are those that have been defined in the document.

The width can be between 0.015 and 360 points.

The percentages correspond to the gray boxes in the Pen area of the Tools palette.

5 **Click Single or Double to specify if the style should be single- or double-lined.**
If you click Double, specify the space separating the lines in the Gap text box. The gap can be between 0.015 and 360 points.

6 **If you're creating a new style, type a different name in the Name text box and click Set.**

DELETING A RULING STYLE

To delete a ruling style, select it in the Custom Ruling and Shading dialog box and click Edit Ruling Style. In the Edit Ruling Style dialog box, click Delete.

If the style was used as part of a table's regular ruling, FrameMaker changes those occurrences to use no ruling. If the style was used as a custom ruling in a table, FrameMaker removes the custom ruling and restores the table's regular ruling.

To set up regular shading

You can specify a shading percentage for heading and footing rows and two percentages for body rows or columns. By specifying two percentages for rows or columns, you can create tables with a shading pattern. For example, you can fill the heading row and every other body row with different shades.

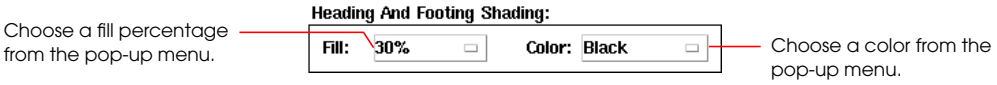
You can fill the heading row…

Anne ($)	Marie (Fr)	Patrick ($)	John (£)	Wendy ($)
150	1500	300	14	500
400	2200	100	27	475
225	2000	225	20	625
300	950	300	18	450

…and every other body row with different shades.

1 **Click in the table in which you want to specify regular shading.**

2 **In the Shading properties of the Table Designer, choose the heading and footing row shading from the pop-up menus.**



If you don't want to have shading in the heading and footing rows, choose None from the Fill pop-up menu.

3 **In the Body Shading area, choose whether you want to shade rows or columns from the Shade By pop-up menu.**

4 **Specify the first part of the shading pattern for body rows or columns.**

If you want the same shading percentage for all rows or columns rather than a pattern, type the same number in the First and Next text boxes.

5 **Specify the second part of the shading pattern.**
Type the number of rows or columns for the second part of the pattern in the Next text box. Choose a color and a percentage from the pop-up menus.

6 **Apply the changes.**
For information on applying properties, see "To use the Table Designer" on page 7-5.

SHADING BOTH ROWS AND COLUMNS

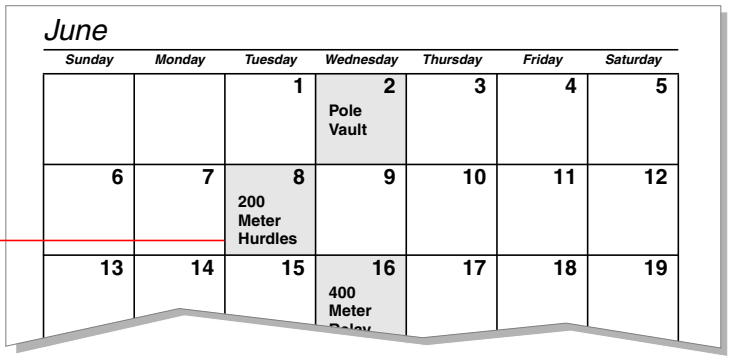
You can't shade both rows and columns in one table by using the Table Designer alone. You can, however, achieve the effect by using custom shading along with the regular shading.

CUSTOM SHADING

If you change the regular shading of a table containing custom shading, the custom shading is retained. Wherever the two settings are in conflict, the custom settings prevail. Custom shading can be changed only with the Custom Ruling and Shading dialog box. For information on custom shading, see "To customize shading," next, and "To remove custom ruling or shading" on page 7-28.

To customize shading

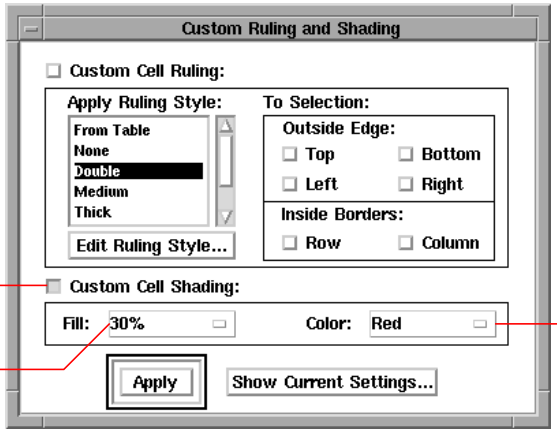
As with ruling, you can customize the shading for individual cells, rows, or columns to draw attention to specific areas of a table.



A table's custom shading is not stored as part of the format when you use the table to create a new catalog format. When you apply a different format to a table with custom shading, the custom shading is not overwritten by the new format's regular shading.

1. **Select the cells, rows, or columns for which you want to customize shading.**
2. **Choose Custom Ruling & Shading from the Table menu.**

3 **Specify a fill percentage and color for the shading.**



The percentages in the pop-up menu correspond to the gray patterns in the Fill area of the Tools palette.

4 **To keep from changing any ruling styles, turn off Custom Cell Ruling.**

5 **Click Apply.**

HOW CONFLICTING SHADING TAKES PRECEDENCE

Custom shading always takes precedence over regular shading. For example, if a table's regular shading for a row is a light gray, and if you apply a darker custom gray to a cell in that row, the darker shading appears.

To display a cell's ruling and shading settings

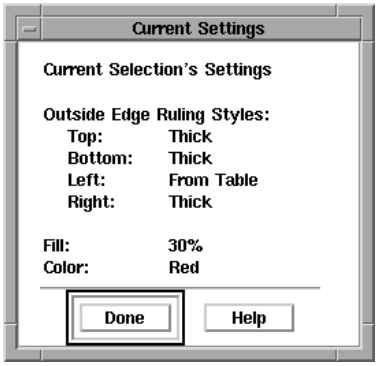
Because regular and custom ruling and shading work together, sometimes it's difficult to look at a table and tell which is which. FrameMaker can show the ruling and shading settings for one or more cells in a table and indicate if the settings are regular or custom.

1 **Select the cells, rows, or columns that have the ruling and shading properties you want to see.**

2 **Choose Custom Ruling & Shading from the Table menu.**

The dialog box displays the most recent settings applied to a table, not the properties of the current selection.

3 **In the Custom Ruling and Shading dialog box, click Show Current Settings.**
FrameMaker displays the Current Selection's Settings dialog box.



If this appears	Then the selected cells use
Mixed	More than one ruling style, fill, or color
From Table	The regular ruling or shading set in the Table Designer
A ruling style, fill, or color	The indicated custom ruling style, fill, or color

4 **Click Done.**

To remove regular ruling or shading from specific cells

If you don't want any ruling or shading for specific cells, rows, or columns in a table, you can customize those areas by turning off the regular ruling or shading. Because doing this creates a custom setting, it takes precedence over any regular setting that may be applied to the table later. If you want to display the ruling or shading again, you'll need to remove the custom setting. For details, see "To remove custom ruling or shading," next.

1 **Select the cells, rows, or columns that have the regular ruling or shading you want to remove.**

2 **Choose Custom Ruling & Shading from the Table menu.**

3 **In the Custom Ruling and Shading dialog box, select None in the Apply Ruling Style scroll list or choose None from the Fill pop-up menu.**
If you're removing ruling, make sure Custom Cell Ruling is turned on. If you're removing shading, make sure Custom Cell Shading is turned on.

4 **If you're turning off ruling, specify which parts of the current selection you want to change in the To Selection area.**

5 **Click Apply.**

To remove custom ruling or shading

When you remove custom ruling or shading, FrameMaker restores the table's regular ruling or shading.

1 **Select the cells, rows, or columns that have the custom ruling or shading you want to remove.**

2 **Choose Custom Ruling & Shading from the Table menu.**

3 **In the Custom Ruling and Shading dialog box, select From Table in the Apply Ruling Style scroll list or choose From Table from the Fill pop-up menu.**
If you're removing ruling, make sure Custom Cell Ruling is turned on. If you're removing shading, make sure Custom Cell Shading is turned on.

4 **If you're turning off ruling, specify which parts of the current selection you want to change in the To Selection area.**

5 **Click Apply.**

POSITIONING TABLES

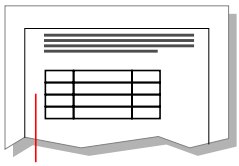
When formatting a table, you need to decide how to position it within the text column. Positioning a table is similar to positioning text; you specify such things as the space above and below, indents, and alignment.

You can also specify whether a table should start at the top of a column or page. If you let a table start wherever there's room and it continues on to another page, the number of orphan rows you specify—the minimum number of rows that can appear alone at the beginning or end of a text column—can affect the positioning of the table.

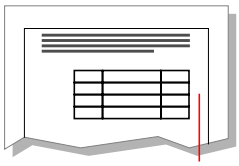
You use the Table Designer to position a table. When you add a format to the Table Catalog, FrameMaker stores the positioning properties set in the Table Designer as part of the catalog format. If you apply a catalog format to existing tables, their positioning properties are changed to match the catalog format.

To indent a table

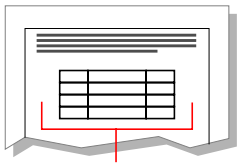
When you specify the indents of a paragraph, the left and right indents determine the overall width of the paragraph. Table indents work differently. The left and right indents you specify for a table determine where the table's edge is positioned horizontally when it's left aligned, centered, or right aligned.



A left-aligned table is positioned at the left indent.



A right-aligned table is positioned at the right indent.



A centered table is centered between the left and right indents.

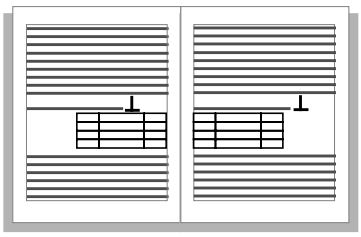
1 **Click in the table that has the indent you want to change.**

2 **In the Basic properties of the Table Designer, type values for the left and right indents.**
The indent you specify is the distance from the edge of the text column to the edge of the table.

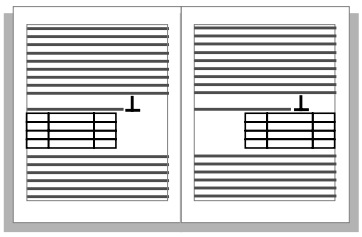
3 **Apply the changes.**
For information on applying properties, see "To use the Table Designer" on page 7-5.

To align a table

The alignment of a table determines where the table appears horizontally within its left and right indents.



Side Closer to Binding alignment



Side Farther from Binding alignment

1 **Click in the table you want to align.**

2 **In the Basic properties of the Table Designer, choose Left, Center, Right, Side Closer to Binding, or Side Farther from Binding from the Alignment pop-up menu.**

3 **Apply the change.**
For information on applying properties, see "To use the Table Designer" on page 7-5.

To specify the space above and below a table

You can specify the space above and below a table just as you control the space above and below a paragraph.

1 **Click in the table that has the spacing you want to set.**

2 **In the Basic properties of the Table Designer, type spacing values in the Above and Below text boxes.**

3 **Apply the changes.**
For information on applying properties, see "To use the Table Designer" on page 7-5.

THE SPACE BETWEEN BODY TEXT AND A TABLE

When you specify the space above and below a table, FrameMaker determines the space between the table and the preceding paragraph by choosing either the paragraph's space below or the table's space above, whichever is larger. Similarly, the space between the table and the following paragraph is either the table's space below or the paragraph's space above, whichever is larger.

When the table is at the top of a column, FrameMaker ignores the Above setting. When the table is at the bottom of a column, FrameMaker ignores the Below setting.

To control where a table begins

You can specify where a table appears in relation to its anchor symbol. Normally, a table appears under the line of text containing the anchor symbol. However, you can force FrameMaker to start a table at the top of a page or column. You can also let the table float. Floating allows FrameMaker to move the table to the first text column that can hold it without also moving the line of text containing the table's anchor symbol. If the table moves to the next text column, text fills the white space below the line containing the anchor symbol.

1 **Click in the table that has the placement you want to specify.**

2 **In the Basic properties of the Table Designer, choose the placement from the Start pop-up menu.**

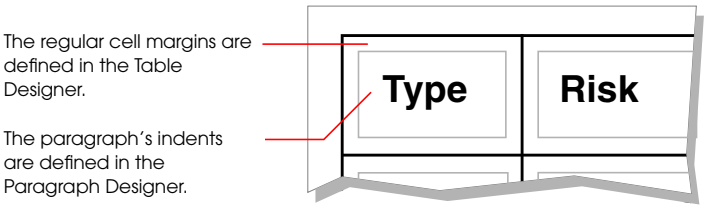
3 **Apply the change.**
For information on applying properties, see "To use the Table Designer" on page 7-5.

ORPHAN ROWS AFFECT FLOATING

Floating moves the table to the next column only when the minimum number of orphan rows allowed won't fit at the bottom of the current column. For information on specifying the allowable number of orphan rows, see "To set the minimum number of rows on a page" on page 7-36.

POSITIONING AND AUTONUMBERING TEXT WITHIN CELLS

You can specify the position of text within the cells of a table. A cell margin is the distance between the cell edge and the cell text frame. For example, a cell's margin can be 8 points from the left edge and 6 points from the top. The indent properties of a paragraph in a cell are measured from the cell margins.



When formatting a table, you can set the regular cell margins. The regular cell margins affect all cells in the table and are part of the format that is stored in the Table Catalog.

You can customize the margins for individual table cells by changing them in the paragraph format of the first paragraph in the cell (if there's more than one paragraph). Because they're part of a paragraph format, custom cell margins aren't normally stored as part of the Table Catalog format. When you customize cell margins in a table and later apply a different format to the table, the custom cell margins aren't overwritten by the new format's regular margins.

When specifying custom cell margins, you can also customize the vertical alignment of text in the cell. Text in a cell can be top aligned, middle aligned, or bottom aligned.

You can also determine how the numbering of autonumber paragraphs will proceed in a table. Autonumbering can proceed across rows or down columns, whichever you specify. This property also directs the numbering of footnotes in a table.

To set up regular cell margins

FrameMaker uses the regular cell margins for all cells in the table. You specify the top, bottom, left, and right margins.

1. **Click in the table in which you want to specify regular cell margins.**
2. **In the Basic properties of the Table Designer, type the distances for the top, bottom, left, and right margins in the Default Cell Margins area.**
3. **Apply the changes.**

For information on applying properties, see "To use the Table Designer" on page 7-5.

CENTERING TEXT VERTICALLY

If you want to center text vertically, make the top margin slightly larger than the bottom margin. For example, you could make the top margin 5 points and the bottom margin 3 points.

CUSTOM MARGINS ARE RETAINED

If you change the regular cell margins of a table containing custom cell margins, the custom margins are retained. Wherever the settings are in conflict, the custom settings prevail. Custom cell margins can be changed only with the Paragraph Designer. For information on changing custom cell margins, see "To customize cell margins," next.

To customize cell margins

Occasionally, cells in a table need margins that are different from the regular margins. For example, the heading cells may have top margins that are different from other cells in the table.

Custom top margin is 10 points.

Regular top margins are 4 points.

Day	Itinerary
Monday	Visit the Metropolitan Museum.
Tuesday	Visit the Empire State Building from 8:00 AM until 9:00 AM. Visit the Museum of Modern Art from 10:00 AM until 3:00 PM.

You can specify custom cell margins for individual cells. When you customize cell margins in a table and later apply a different format to the table, the custom cell margins are not overwritten by the new format's regular margins.

Under certain conditions, custom cell margins can become part of a table format's default properties that are stored in the catalog. For details, see "Catalog format defaults" on page 7-34.

1 **Click in the first paragraph of the cell that has margins you want to customize.**

2 **Choose Paragraphs>Designer from the Format menu.**

3 **In the Table Cell properties of the Paragraph Designer, specify the top, bottom, left, or right margins, whichever ones you want to customize.**

For	Choose
A margin relative to the regular cell margin	From Table Format, Plus
A margin relative to the edge of the cell	Custom

For tips on which setting to choose, see "Specifying a type of margin," next.

4 **Apply the changes.**

If you want to apply the changes to the current paragraph only, click Apply To Selection. This creates a format override for that paragraph. For information on format overrides, see "Overriding a catalog format's properties" on page 5-13.

If you want to apply the changes to the Paragraph Catalog format and to all paragraphs in the document with the same tag, click Update All. If FrameMaker detects format overrides in any of the table paragraphs being updated, it displays an alert that asks whether you want to retain or remove them.

SPECIFYING A TYPE OF MARGIN

You should use the From Table Format, Plus setting if you want the cell margins to change when new regular margins are applied in the Table Designer. For example, you can reduce the margins in all cells at once (including cells with customized margins) by specifying smaller regular margins in the Table Designer.

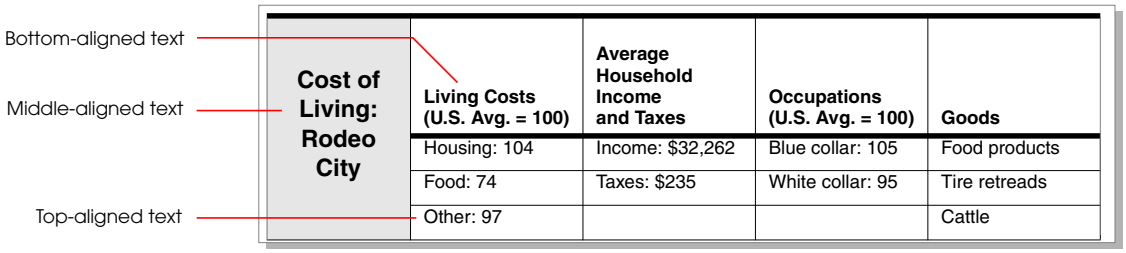
You should use the Custom setting, on the other hand, if you don't want the cell's margins to change when new regular margins are applied.

CATALOG FORMAT DEFAULTS

Because they're part of a paragraph format, custom cell margins and alignment aren't normally stored as part of the Table Catalog format. However, FrameMaker does store the paragraph formats of the first title paragraph and the topmost paragraph in the heading, body, and footing rows of each column. If you customize the cell margins or alignment of any of these paragraphs and then store the table format in the catalog, future tables that use that format will have the custom settings as their defaults.

To customize vertical alignment of text

Formats in the Table Catalog include paragraph formats for text in table cells, and those paragraph formats include vertical alignment. The vertical alignment determines where FrameMaker places the text within a cell's margins—at the top, in the middle, or at the bottom.



You can specify custom vertical alignment for individual cells. When you customize vertical alignment in a table and later apply a different format to the table, the custom vertical alignment settings are not overwritten by the new format's default alignment settings.

Under certain conditions, custom vertical alignment can become part of a table format's default properties that are applied to new tables. For details, see "Catalog format defaults" on page 7-34.

1. **Click in the first paragraph of the cell that has text alignment you want to customize.**
2. **Choose Paragraphs>Designer from the Format menu.**
3. **In the Table Cells properties of the Paragraph Designer, choose Top, Middle, or Bottom from the Cell Vertical Alignment pop-up menu.**
4. **Apply the change.**
   If you want to apply the change to the current paragraph only, click Apply To Selection. This creates a format override for that paragraph. For information on format overrides, see "Overriding a catalog format's properties" on page 5-13.

If you want to apply the change to the Paragraph Catalog format and to all paragraphs in the document with the same tag, click Update All. If FrameMaker detects format overrides in any of the table paragraphs being updated, it displays an alert that asks whether you want to retain or remove them.

To specify the direction of autonumbering in a table

You number paragraphs in a table just as you number them in other places in a document—by specifying an autonumber format in the Numbering properties of the Paragraph Designer. For information on specifying an autonumber format, see "Formatting lists" on page 4-36.

Autonumbering in a table can proceed across rows or down columns, whichever you specify. You specify the direction of autonumbering in a table by setting a property in the Table Designer.

1. Blue	2. Yellow
3. Green	4. Black
5. Red	6. White

Numbering across rows

1. Blue	4. Yellow
2. Green	5. Black
3. Red	6. White

Numbering down columns

This property also sets the direction of autonumbering of footnotes in a table.

1. **Click in the table in which you want to specify the autonumbering direction.**
2. **In the Basic properties of the Table Designer, choose Row First or Column First from the Numbering pop-up menu.**
3. **Apply the change.**
   For information on applying properties, see "To use the Table Designer" on page 7-5.

CONTROLLING PAGE BREAKS IN MULTIPAGE TABLES

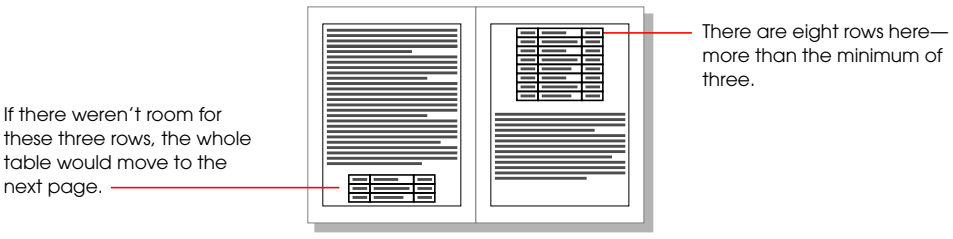
If FrameMaker can't fit all the rows of a table in a text column, it moves some of the rows to the next page or column. You can control how FrameMaker breaks the table between pages or columns. For example, you can set the minimum number of rows that can appear on a page or column, or you can ensure that two rows always appear together on the same page or column. You can also force a break at any point in a table.

The minimum number of rows is a regular table format property—one that you specify in the Table Designer, store in the catalog format, and update. Keeping two rows together or forcing a break are custom settings. When you apply a different format to the table, these settings are not overwritten. When you use the table to create a new catalog format, these settings don't become part of the format.

If a table runs across multiple pages, you can use variables to indicate that the parts on subsequent pages are continuations or to display page numbering information. For information on using these special table variables, see "To set up multipage tables" on page 6-12.

To set the minimum number of rows on a page

If a table won't fit on a single page or column, FrameMaker decides where to break it based on the number of orphan rows allowed for the table. The orphan row property determines the minimum number of body rows that must be kept together on a page or column. For example, you can specify *3* for the orphan row property to ensure that at least three body rows appear on each page or column the table spans.



You can also set up this property so that the table never breaks across pages or columns.

1. **Click in the table in which you want to change orphan rows.**
2. **In the Basic properties of the Table Designer, type the number of rows in the Orphan Rows text box.**
   The number can be between 1 and 255.
3. **Apply the change.**
   For information on applying properties, see "To use the Table Designer" on page 7-5.

PREVENTING A TABLE FROM BREAKING

If you don't ever want a table to break across pages, specify a large orphan setting such as 99.

To keep rows together

Occasionally, you may have rows in a table that should always be kept together on a page. You can specify that a particular row should always stay with the previous or next row. FrameMaker won't separate the two rows when it breaks the table across pages.

Next Row and Previous Row are custom settings. When you apply a different format to the table, these settings are not overwritten. When you use the table to create a new catalog format, the settings don't become part of the format.

1. **Select the row you want to keep together with the next or previous row.**
2. **Choose Row Format from the Table menu.**
3. **In the Keep With area of the Row Format dialog box, turn on Next Row or Previous Row and click Set.**

To break a table at a specific place

Just as you can have FrameMaker always place a table or paragraph at the top of a page or column, you can do the same with a specific row in a table. Later, you can remove the page break if you want to.

The choices for page breaks are custom settings. When you apply a different format to the table, these settings are not overwritten. When you use the table to create a new catalog format, the settings don't become part of the format.

1. **Select the row you want to force to the top of the next column or page.**
2. **Choose Row Format from the Table menu.**
3. **In the Row Format dialog box, choose Top of Column or one of the Top of Page options from the Start Row pop-up menu and click Set.**

REMOVING A CUSTOM PAGE BREAK

If you no longer want to force a row to the top of the next column or page, select the row. In the Row Format dialog box, choose Anywhere from the Start Row pop-up menu.

8

SEARCHING

Finding and changing items in a document

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8 SEARCHING

In FrameMaker, you can search for items such as character formats, tags, and anchored frames as well as for text. You can replace what you find with something comparable—one tag for another—or with something completely different.

The Find/Change window is always at hand

You search a document by specifying the item you're searching for in the Find/Change window. The Find/Change window can stay open as you work, so you can search for an item, do something else, search for another occurrence of the item, and so on.

Wildcards broaden the search

You can customize the search by considering case, matching whole words only, or using wildcards. Wildcards let you broaden your search to any character or sequence of characters. For example, typing `*aker` finds *maker* and any other word ending in *aker;* `[a-s]aker` finds *baker* and *maker* but not *shaker* and *taker.*

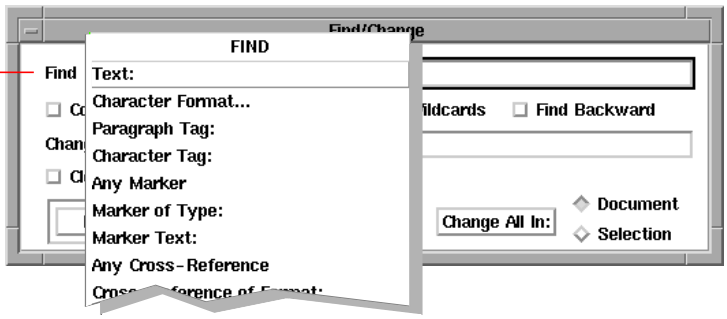
You can search for items other than text

The item you search for can be specific text, text with a certain character format, or any occurrence of a particular format. The item can also be a marker, a cross-reference, a text inset, or a variable. Practically speaking, you can search for text and anything that uses or

affects text, and you can define the item you search for as broadly or as narrowly as your purposes dictate.

You choose the type of item to find from a pop-up menu.

The pop-up menu lists several other items.



You can also quickly find the graphics in a document by searching for anchored frames.

Replacement choices give you precise control

Once you find an item, you can replace it, continue your search for more occurrences of it, or replace the item and search for a different item. If you want to replace all occurrences, you can make the replacement automatically.

Your control over the kinds of replacement available is as precise as your control over searches. You can replace text with other text, one paragraph tag with another, one type of cross-reference with another, and so on. But you can also search for one kind of item and replace it with another kind. For example, you can search for a word and replace it with an illustration.

You can even clone the case of the text being replaced, so that *tea* is replaced with *coffee* and *Tea* with *Coffee*.

In this chapter

This chapter shows you how to search a document for a variety of items and replace items in a variety of ways. It provides a list of wildcards you can use for text searches on page 8-8 and a list of special characters you can search for on page 8-9. Searchable items other than text are listed on page 8-5.

SEARCHING A DOCUMENT

FrameMaker can search for a number of items in a document. Besides searching for text, it can also search for items such as tables, markers, cross-references, and paragraphs with a certain tag. When FrameMaker finds an item, you can replace the item or continue searching for other occurrences of the item.

You use a standard search procedure for most items, but some items require additional steps. For example, when searching for conditional text, you need to ensure that the condition tag is showing and then tell FrameMaker which condition tags to search for. For information on the standard search procedure, see "To search for any item," next. Special search procedures start on page 8-7.

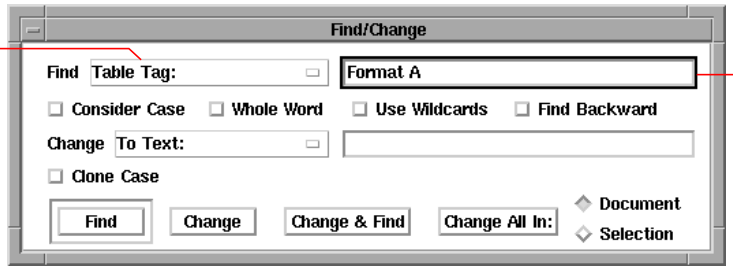
To search for any item

You need to tell FrameMaker what item to search for. Do you want to find a word? A paragraph with a particular tag?

By default, FrameMaker begins searching at the insertion point and continues through the document. It searches only pages of the type the insertion point is on—for example, only body pages or only master pages. When FrameMaker reaches the end of the document, it continues the search at the beginning. After searching the main flow, it searches the other text frames and text lines. Because FrameMaker searches flow-by-flow rather than page-by-page, it may appear to jump around within the document while searching.

If FrameMaker finds the item, you can change the item or continue searching for its next occurrence.

1. **Click in the document where you want to begin the search.**
2. **Choose Find/Change from the Edit menu.**
3. **Choose the item you want to find from the Find pop-up menu.**



If you choose Character Format or Conditional Text from the Find pop-up menu, FrameMaker displays a dialog box in which you enter additional information. For a complete list of all the items you can search for, see "What you can search for" on page 8-5.

WHAT YOU CAN SEARCH FOR

You can search for any type of item listed on the Find pop-up menu in the Find/Change window. The items on the list are described below.

Text The text you type in the Find text box.

Character Format Text with the formatting you specify in the Find Character Format dialog box.

Paragraph Tag A paragraph with the tag you type in the Find text box.

Character Tag Text with the character tag you type in the Find text box.

Any Marker Any marker regardless of its type.

Marker of Type A marker of the kind you type in the Find text box.

Marker Text A marker that contains the text you type in the Find text box.

Any Cross-Reference Any cross-reference regardless of its format.

Cross-Reference of Format A cross-reference with the format you type in the Find text box.

Unresolved Cross-Reference A cross-reference that FrameMaker is unable to update. If FrameMaker finds one, it displays the marker text of the unresolved cross-reference in the Find text box. For more information, see "To resolve a cross-reference when a marker is deleted" on page 10-21.

Any Text Inset Any text imported by reference.

Unresolved Text Inset Any text inset that FrameMaker is unable to update from its source.

Any Variable A user or system variable. FrameMaker can find the variables only on the type of page currently displayed.

Variable of Name A user or system variable with the name you type in the Find text box. Search body and master pages separately to find all variables.

Anchored Frame Any anchored frame. You can find graphics by searching for anchored frames.

Footnote Any footnote. FrameMaker selects the footnote reference and the text of the footnote.

Any Table Any table regardless of its tag.

Table Tag A table with the tag you type in the Find text box.

Conditional Text Conditional text with the condition tag settings you indicate in the Find Conditional Text dialog box.

Automatic Hyphen A word that FrameMaker has automatically hyphenated. FrameMaker bases automatic hyphenation on the dictionaries.

Text & Character Formats on Clipboard Text that matches the contents of the FrameMaker Clipboard. FrameMaker matches text, capitalization, and character formatting.

4 **If your choice requires it, type the item in the Find text box.**

When you choose Text, Paragraph Tag, Character Tag, Marker of Type, Marker Text, Cross-Reference of Format, Variable of Name, or Table Tag from the Find pop-up menu, type the particular item you want to find in the text box.

Anytime you type text in the Find text box, you can customize the search by turning on Consider Case, Use Wildcards, or Whole Word. For more information, see "To customize a search" on page 8-7.

5 **Click Find.**

If FrameMaker finds an exact match for what you specified in the Find window, it displays the page that contains the item and selects the item. You can click Find again to search for the next occurrence.

You can also search for the next occurrence by choosing a command—Find Next—from the Edit menu. For information on changing an item, see "To change any item" on page 8-15.

REVERSING THE SEARCH DIRECTION

By default, FrameMaker searches toward the end of a document. You can reverse the direction by turning on Find Backward.

IF FRAMEMAKER CAN'T FIND THE ITEM

If FrameMaker doesn't find the item even though you're pretty sure it's there, check the Find/Change window. Did you spell the text in the Find text box correctly? Did you include too many or too few spaces? Are the appropriate checkboxes on or off? If you're searching for an item on a body page, is the insertion point on a body page?

CANCELING A SEARCH

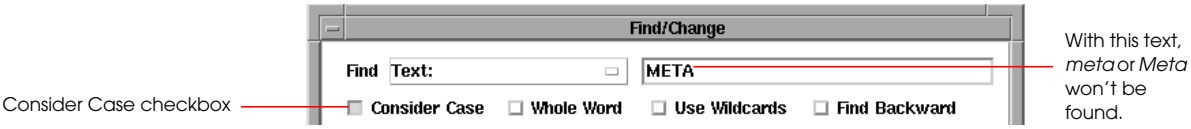
You can cancel a search at any time. While FrameMaker is searching, point in the document window and press Control-c.

To customize a search

You can search for exactly what you type in the Find text box—the exact word with the exact capitalization. Alternatively, you can search for a variant of what you type—any sequence of characters that contains the characters you type, with any pattern of capitalization. For example, you could find the paragraph tags 1Heading, 2Heading, and Heading3 by typing `head`.

You can broaden the search even further with wildcards. For example, you could find the paragraph Heading3 and all tags beginning with an *h* by typing `h*`. For a complete list of wildcards, see "Wildcards" on page 8-8.

- **To find an item with specific capitalization, type text with the capitalization you want to find in the Find text box and turn on Consider Case.**



- **To ignore capitalization when searching, turn off Consider Case.**
  In this case, it doesn't matter what capitalization you use for the text in the Find text box. If you type `main` in the Find text box and turn off Consider Case, FrameMaker finds any capitalization—for example, *main, Main,* and *MAIN*.

- **To match only a complete word, type the word in the Find text box and turn on Whole Word.**
  If you type `phone` in the Find text box and turn on Whole Word, FrameMaker won't find *telephone*.

- **To find a set of characters that may be part of a longer word or part of more than one word, turn off Whole Word.**
  If you type `old` in the Find text box, FrameMaker finds words such as *bold* and *oldest* as well as *old*. If you type `San F`, FrameMaker finds both *San Francisco* and *San Fernando*.

- **To find an item by using wildcards, type the text and wildcards in the Find text box and turn on Use Wildcards.**
  If you type `Number[1-9]` in the Find text box, FrameMaker finds all occurrences of the word *Number* followed by any number between 1 and 9.

SEARCHING FOR A WILDCARD

FrameMaker uses ordinary characters such as * and *?* as wildcards. When Use Wildcards is turned off, you can find these characters just as you would any other characters. But when Use Wildcards is on, you need to put a backslash (\) before each wildcard character to find the character. For example, with Use Wildcards on, you type `\*` to find an asterisk.

To search for text

Normally, when searching for text, you search for words. However, you can search for any text including single characters, phrases, and special characters such as tabs and em spaces that aren't on your keyboard.

- **To find text, choose Text from the Find pop-up menu, type the text in the Find text box, and click Find.**

  You can search for text that looks exactly like what you type in the Find text box or that is a variation of what you type. For information, see "To customize a search" on page 8-7.

WILDCARDS

You can type the following wildcards in the Find text box.

To find	Type	For example
Zero or more characters, excluding spaces and punctuation	`*`	`f*t` finds words such as *feet, foster,* and *different.*
One or more spaces and punctuation characters	|	`*any|` finds words such as *any., many?,* and *Tiffany,* but not *anything.*
Any single character, excluding spaces and punctuation	`?`	`m??e` finds four-letter words that begin with *m* and end with *e*—for example, *mate* and *mile.*
Any one of the characters in the brackets	`[ab]`	`[rml]ate` finds *rate, mate, late,* and also words such as *berate, isolate,* and *material.*
Any one character not in the brackets	`[^ab]`	`[^rml]ate` finds *fate, gate,* and *date,* but not *rate, mate,* or *late.*
Any one character in a range	`[a-f]`	`[a-f]iction` finds *dictionary* and *fiction,* but not *friction.* (For information on how FrameMaker orders characters, see Chapter 3, "Character Sets," in the *Quick Reference*.)
The beginning of a line	`^`	
The end of a line	`$`	

- **To find a character that doesn't appear on your keyboard, type a special character combination in the Find text box.**
  For a list of special characters and the character combinations that represent them, see "Special characters" on page 8-9.
- **To find a backslash (\), type two backslashes (\\) in the Find text box.**
  Because a backslash usually indicates a special character, you need to type an extra backslash for any backslash you want to find.

FINDING TEXT THAT INCLUDES SPACES

When you type text that includes spaces in the Find text box, FrameMaker searches for the text with the same number of spaces in the same places. You can find special spaces such as em spaces and thin spaces as well as regular spaces.

SPECIAL CHARACTERS

The special characters include spaces, hyphens, positions (such as the start of a word), and symbols (such as the tab symbol and the end-of-paragraph symbol).

Special character	Character combination
Tab	`\t`
Forced return	`\r`
End-of-paragraph	`\p` (lowercase)
Start-of-paragraph	`\P` (uppercase)
Nonbreaking space	`\` (space)
Thin space	`\i` or `\st`
En space	`\N` or `\sn`
Em space	`\M` or `\sm`
Numeric space	`\#` or `\s#`
Discretionary hyphen	`\-` (hyphen)
Nonbreaking hyphen	Meta-hyphen
Suppress hyphenation	`\_` (underscore)
End-of-flow symbol	`\f`
Start-of-word	`\<`
End-of-word	`\>`

You indicate a nonbreaking space by typing a backslash and pressing the space bar. You indicate a regular space by pressing the space bar or typing `\s`.

You can use most of the special characters for replacement purposes—for example, replacing a tab symbol with two em spaces. You cannot use these three special characters for replacement purposes: end-of-flow, start-of-word, and end-of-word characters.

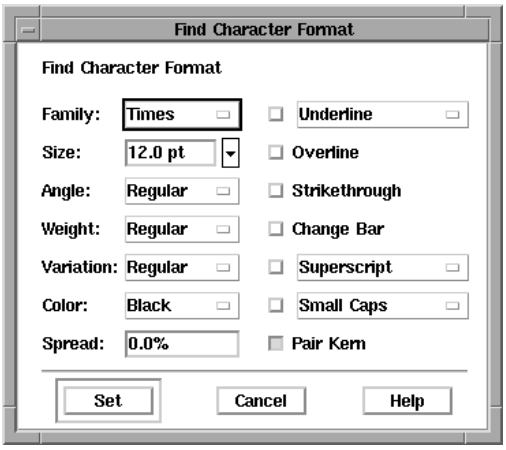
For additional special characters that you can search for and replace, see Chapter 3, "Character Sets," in the *Quick Reference*.

To search for a character format

You can search for any character format. For example, you can search for any text in italics. Or you can search for text with several character format properties—for example, 12-point Helvetica bold text with a change bar.

You can also search for a particular word or phrase with particular character formatting. For information, see "To search for text with a particular character format" on page 8-11.

1. **Click in text with a character format similar to (or the same as) the character format you want to search for.**
2. **In the Find/Change window, choose Character Format from the Find pop-up menu.**
3. **Make sure that the settings in the Find Character Format dialog box represent the character format of the current text by pressing Shift-F9 or Control-Shift-F8.**



4 **If necessary, change the settings to the character format you want to find.**

To search for the format of the current text, leave the properties as they are. To search for text with some of the properties of this format specified and some overlooked, change the settings of the properties you want to overlook to As Is. You change a setting to As Is by clicking a checkbox until it is dim, choosing As Is from a pop-up menu, selecting As Is in a scroll list, or deleting the text in a text box. For example, if you don't care what color is assigned to the text, choose As Is from the Color pop-up menu.

To search for text with a completely different format, change the properties to match that format.

5 **Click Set.**

6 **In the Find/Change window, click Find.**

RESETTING THE FORMAT

After making some changes in the dialog box, you can reset the dialog box to match the format of the current text. To do so, press Shift-F9 or Control-Shift-F8.

FINDING A FEW CHARACTER FORMATTING PROPERTIES

To find text with only a few character formatting properties, press Shift-F8 to specify all properties as As Is. Then specify only the properties you want to find. For example, to find any text that is italic, specify all properties as As Is and then choose Italic from the Angle pop-up menu.

To search for text with a particular character format

You can search for text with a specific character format and capitalization—for example, the word *London* in 10-point italic text. With these specifications, FrameMaker won't find *London* if it's a different size, isn't italic, or is capitalized differently.

1 **Copy the text with the character format you want to find to the FrameMaker Clipboard.**

You can copy as much text to the Clipboard as you like. However, when searching for text by using the contents of the Clipboard, FrameMaker uses only the first 126 characters on the Clipboard.

2 **Choose Text & Character Formats on Clipboard from the Find pop-up menu.**
Don't type the word in the Find text box. For general search instructions, see "To search for any item" on page 8-4.

3 **Click Find.**

To search for a marker

FrameMaker uses markers for cross-references, indexing, conditional text, and other purposes. It can find any type of marker or just the marker type you specify.

FrameMaker can also find particular markers with certain text even when the marker text isn't visible in the document. For example, you might search for an index marker with specific text in order to edit the marker text.

1 **In the Find/Change window, choose a marker item from the Find pop-up menu.**
To find all markers in the document, choose Any Marker. To find one specific type of marker, choose Marker of Type. To find a marker with specific text, choose Marker Text.

2 **Unless you're searching for any marker, fill in the Find text box.**
If you're searching for a specific type of marker, type the marker name.

If you're searching for specific marker text, type the text. You may want to keep the Marker window visible so that you can see the text of the selected marker in the Marker window. Also, if you want to edit the marker text, you need to edit it in the Marker window, not the Find/Change window. To display the Marker window, choose Marker from the Special menu.

3 **Click Find.**

To search for conditional text

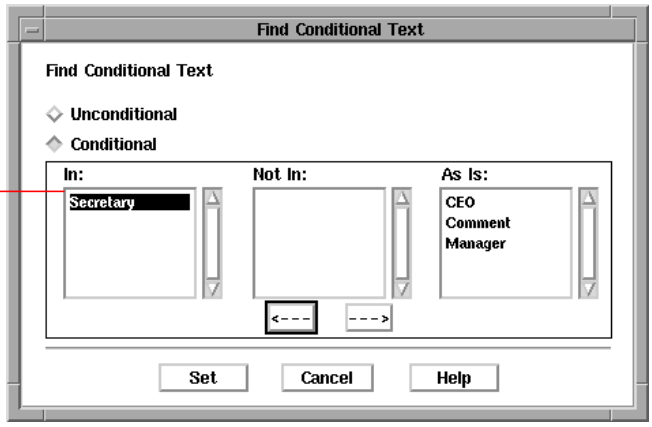
You can search for visible text that uses a specific condition tag. When FrameMaker finds visible conditional text, it selects all adjacent text that uses the same condition tag.

1 **Display the conditional text you want to find.**
If the conditional text isn't showing, choose Conditional Text from the Special menu and show the text with the condition tag. For information on showing conditional text, see "To change the view of a conditional document" on page 26-16.

2 **In the Find/Change window, choose Conditional Text from the Find pop-up menu.**

3 **Move the condition tags of the text you want to find to the In list.**

FrameMaker will search for any text with the tag *Secretary*.



Use the arrow buttons to move the condition tags. For example, to search for text with the Secretary condition tag, select the Secretary tag in the As Is scroll list and click the left arrow button twice.

To find conditional text that doesn't have a particular condition tag, move the tag to the Not In scroll list. For example, to find all text that doesn't have the CEO condition tag, move CEO to the Not In scroll list, and move Secretary, Manager, and Comments to the As Is scroll list.

To find all conditional text, move all tags to the As Is scroll list.

4 **Click Set.**

5 **In the Find/Change window, click Find.**

To use the Find/Change command from the keyboard

You can search for items without using the mouse. You use keyboard shortcuts to open the Set Find/Change Parameter dialog box (which requires fewer keystrokes than the Find/Change dialog box), move the insertion point between the different areas of the dialog box, and start a search. These keyboard shortcuts are useful when you want to create a macro that finds and changes items without using the mouse gestures.

1. **Point in a document window and press Esc f i s.**
   The Set Find/Change Parameters dialog box appears.
2. **Fill in the dialog box just as you would the Find/Change window and press Return.**
   Use keyboard shortcuts to move from setting to setting and to choose items from pop-up menus. For a complete list of keyboard shortcuts, see Chapter 2, "Keyboard Shortcuts," in the *Quick Reference*.
3. **Press Esc f i n to start the search.**

CHANGING ITEMS YOU FIND

After FrameMaker finds an item, you can change it in various ways. Generally, you find text and replace it with other text, but you can also change the character format of the found item. You can also apply the contents of the Clipboard to the item; for example, you can copy a variable to the Clipboard and replace a word with the variable.

When changing items in a document, you change each occurrence of the item as FrameMaker finds it or have FrameMaker automatically make the change throughout the document. If FrameMaker makes the change automatically, you don't get a chance to approve each change, however.

To change any item

After FrameMaker finds an item, you can change it to text, change its character format, or apply the contents of the Clipboard to the item.

1. **Find an item.**
   For information on finding an item, see "Searching a document" on page 8-4.
2. **In the Find/Change window, choose an option from the Change pop-up menu and provide text or a character format.**
   If you choose To Text, type the text in the Change text box. If you choose Character Format, FrameMaker displays a dialog box in which you identify a character format. If you choose By Pasting, select the item you want to paste and copy it to the FrameMaker Clipboard.
3. **Click Change.**
   To continue searching for the item, click Change & Find. FrameMaker changes the item and then searches for the next occurrence. For information on changing all occurrences of an item, see "To make changes automatically" on page 8-18.

   When you click Change or Change & Find without any text selected in the document, FrameMaker inserts or applies the replacement item at the insertion point.

DELETING WHAT FRAMEMAKER FINDS

To delete an item that FrameMaker finds, choose To Text from the Change pop-up menu, leave the Change text box blank, and click Change.

To replace an item with text

You can replace anything that FrameMaker finds with text. For example, you can replace a marker with a phrase as well as replace a word with another word. If the capitalization is important, you can have FrameMaker capitalize the replacement text with the same capitalization as the original text.

- **To replace an item with text, choose To Text from the Change pop-up menu, type the text in the Change text box, and click Change.**
  Type the replacement text exactly as you want to display it in the document. FrameMaker changes the item.

- **To change text to a special character, type the character combination in the Change text box.**
  You can use tabs, em spaces, and other characters that aren't on your keyboard by typing special character combinations. For information on these characters, see "Special characters" on page 8-9.
- **To give replacement text the same capitalization as the text being replaced, turn on Clone Case.**
  For example, if you turn on Clone Case and type `tea` in the Find text box and `coffee` in the Change text box, FrameMaker replaces *Tea* with *Coffee* and *tea* with *coffee*. This setting is useful when the text you're replacing isn't always capitalized.
- **To include a backslash (\) in replacement text, type two backslashes (\\) in the Change text box.**
  Because a backslash usually indicates a special character, you need to include an extra backslash for any backslash you want to change.

CHANGING MARKER TEXT

You can't change marker text by using the Find/Change window. If FrameMaker finds a marker with text, and if you type different text in the Change text box and click Change, FrameMaker replaces the marker—not the marker text—with the text in the Change text box. To change marker text, use the Marker window.

To change the character format

You can change the character format of any item that FrameMaker finds. For example, you can search for the name of a product and change the text to italic small caps. Or you can search for all text with a particular character format and change it to a different character format.

1. **In the Find/Change window, specify the item you want to find.**
2. **Click in the document.**
   If you're changing several character formatting properties, click in text that has a character format similar to the one you want to apply to the found text. If you're changing one or two character formatting properties, click in any text.

3 **Choose To Character Format from the Change pop-up menu.**

4 **In the Change to Character Format dialog box, change the settings to the character format you want to apply and click Set.**

To prevent FrameMaker from applying a property to found text, specify the property as As Is. (Do this by dimming a checkbox, choosing As Is from a scroll list, or deleting text in a text box.) If you're changing a few character format properties, specify all the properties as As Is and then specify the properties you want to change. Specify all properties as As Is by pressing Shift-F8.

To display the character formatting of the current text in the dialog box, press Shift-F9 or Control-Shift-F8.

5 **In the Find/Change window, click Find and then click Change.**

To change by pasting from the Clipboard

You can replace anything that FrameMaker finds with the contents of the Clipboard. For example, you can replace a word with a graphic in an anchored frame. Or, if you use the Copy Special>Paragraph Format command to put a paragraph format on the Clipboard, you can apply the format to the current paragraph.

1 **Copy something to the Clipboard.**

Copy an item by selecting it and then choosing Copy from the Edit menu. You can copy a variable, an anchored frame, or any other item in a document.

To copy a paragraph format, a character format, condition tag settings, or a table column width to the Clipboard, use the appropriate Copy Special command on the Edit menu.

2 **In the Find/Change window, specify the item you want to find.**

3 **Choose By Pasting from the Change pop-up menu.**

4 **Click Find and then click Change.**

FrameMaker finds the first occurrence of the item. You can continue searching for the item or change it by clicking one of the change buttons.

To make changes automatically

Occasionally, you may want to change all occurrences of an item automatically. For example, you may want to replace all occurrences of an old product name with a new name.

When you change all occurrences, FrameMaker may make changes you didn't intend—for example, changing occurrences of a word when it is part of a longer word. Also, you can't undo the changes FrameMaker automatically corrects. For these reasons, consider first saving your document and then manually changing several occurrences of the item. When you're confident that FrameMaker is replacing only the item you want, go ahead and have FrameMaker change all occurrences automatically.

1. **In the Find/Change window, specify the item to find and the item to replace it with.**
2. **If you're changing text, turn on Whole Word.**
   This limits the search to the text you type in the Find text box. This way, if you're changing *tea* to *coffee,* FrameMaker won't replace *teamwork* with *coffeemwork*.
3. **Turn on Document or Selection.**
   To change the text in the entire document, turn on Document. To change text in a range, select the text in the document and turn on Selection.
4. **Click Change All In.**

9

SPELLING AND WORD CHOICE

Using the Spelling Checker, dictionaries, and Thesaurus

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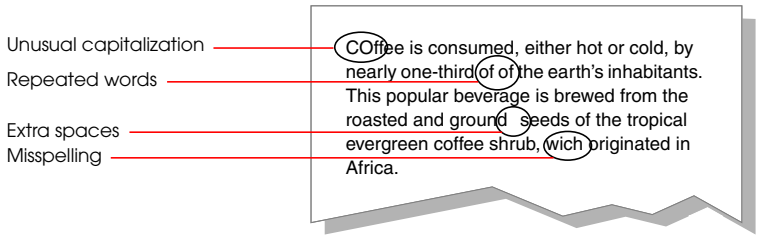
9 SPELLING AND WORD CHOICE

When you run the Spelling Checker, FrameMaker uses a basic dictionary and several custom dictionaries to check text for spelling errors and common typing mistakes. The FrameMaker Thesaurus lists synonyms, antonyms, and related words for the words you look up.

Typing errors and misspellings

The FrameMaker Spelling Checker helps with your typing as well as your spelling. When you check spelling, you can also check for repeated words, unusual hyphenation or capitalization, straight quotation marks (when curved are called for), and extra spaces.



When the Spelling Checker finds a questionable word, it suggests the most likely correction along with some other possibilities. You can select a correction, type your own correction, or leave the word as is.

You can make the check go faster

Before you select a correction, you can choose to correct all future occurrences of the error automatically. If you leave a word as is, you can also choose not to change future occurrences. And you can choose to overlook particular types of words or expressions—for example, acronyms such as WYSIWYG or expressions that contain punctuation such as the pathname `/bin`.

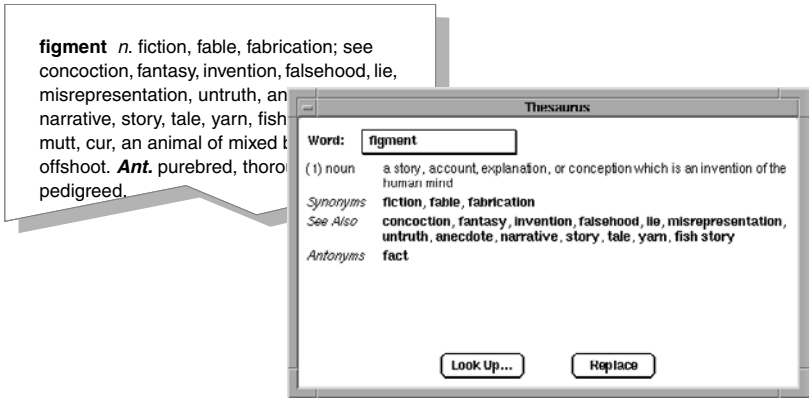
Custom dictionaries help you work more productively

The Spelling Checker works on this principle: it compares the words in your document with the entries in several dictionaries, flags words that don't appear in any of the dictionaries, and lists similar entries as possible corrections.

The main dictionary contains 120,000 common words, and there is a separate site dictionary, which may contain terms added by your system administrator, if your system is on a network. You create document dictionaries and personal dictionaries yourself, using words flagged during checks. The document dictionary works with a specific document, while the personal dictionary works with all your documents.

The Thesaurus gives definitions and offers substitutes

The FrameMaker Thesaurus provides word definitions and lists synonyms and antonyms for words you look up. You can use the Thesaurus when you review word choices during revision. But you might also use the Thesaurus in the earliest stages of composition. Sometimes finding a particular word generates the idea you want.



FrameMaker remembers words as you look them up—up to the last 10.

In this chapter

This chapter shows you how to check and correct your spelling and typing, manage the dictionaries used by the Spelling Checker, and use the Thesaurus.

CHECKING SPELLING

When you spell-check a document, FrameMaker questions any words in it that aren't in one of its dictionaries. If a questioned word is spelled correctly, you can confirm its spelling by adding the word to your personal dictionary. If a questioned word is misspelled, you can correct its spelling. FrameMaker provides suggestions for the correct spelling.

Besides misspelled words, FrameMaker can find typing errors that don't involve spelling—repeated words, extra or misplaced spaces, or unusual capitalization, for example. You tell FrameMaker the specific kinds of typing errors you want it to look for.

You can have FrameMaker limit its check so that it overlooks certain types of words. For example, you may want FrameMaker to overlook words that contain digits so it won't question filenames.

For information on correcting or confirming a questionable spelling, see "Correcting and confirming spellings" on page 9-9.

To check for spelling errors

You can direct FrameMaker to check all the text in a document, the text on the current page, a range of text, or a single word. FrameMaker confines the check to the type of page displayed. For example, if a body page is displayed, only the text on body pages is checked.

1 **Choose Spelling Checker from the Edit menu.**

2 **Choose the text you want to spell-check.**

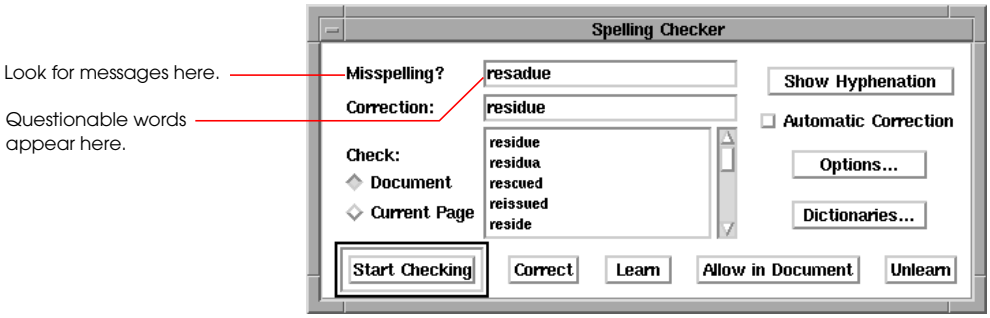
In most cases, you will want to spell-check the text on the body pages. To display a body page, choose Body Pages from the View menu.

To check	Do this
All text in a document	Click in the document and click Document in the Spelling Checker window.
All text on a page	Click on the page and click Current Page in the Spelling Checker window.
Specific text	Select the text.
A word	Click to place an insertion point in the word.

3 **Click Start Checking.**
FrameMaker begins spell-checking at the insertion point.

If you're checking a selection of text or a single word, hold down Shift as you click Start Checking.

When FrameMaker finds a questionable word, the word appears in a text box at the top of the Spelling Checker window. The message to the left of the text box—for example, `Misspelling?` —explains why the word has been questioned.



4 **Correct or confirm the spelling.**
For details, see "Correcting and confirming spellings" on page 9-9.

5 **If necessary, click Start Checking to find the next questionable word.**
FrameMaker finds the next questionable word. When the document contains no more questionable words, the message `Spelling OK` appears in the Spelling Checker window.

If you click Start Checking without first correcting or confirming the word just questioned, FrameMaker continues to question that word. After it reaches the end of the document (or range of text to be checked), it returns to the word and questions it again.

CANCELING THE SPELLING CHECKER

To cancel spell-checking, point in the Spelling Checker or document window, and press Control-c.

CHECKING SUPERSCRIPT AND SUBSCRIPT TEXT

When you spell-check, FrameMaker overlooks superscript and subscript text as well as vertically kerned text. You can spell-check this type of text by reformatting the text so that FrameMaker spell-checks it, running the Spelling Checker, and then reformatting the text to look the way you want. If you previously spell-checked the document, click Dictionaries in the Spelling Checker window and turn on Mark All Paragraphs for Rechecking before running the Spelling Checker. For details, see "Rechecking after changing options" on page 9-7.

CHECKING SPELLING IN TEXT INSETS

FrameMaker does not spell-check the contents of text insets. To check spelling in a text inset, open its source file and check the source file's spelling.

To check for typing errors

When you spell-check a document, FrameMaker also checks for potential typing errors. For example, it can find repeated words and it can find spaces before or after certain characters.

1. **In the Spelling Checker window, click Options.**
2. **Turn on the appropriate options and click Set.**

To have the Spelling Checker question	Turn on	The Spelling Checker finds
Repeated words	Repeated Words	the the
Words hyphenated incorrectly	Unusual Hyphenation	over-abundance
Unusual capitalization	Unusual Capitalization	GReen
A repeated character	Two in a Row—and specify a character	[[(if you specify a left bracket)
Straight quotation marks	Straight Quotes (")	"
Extra spaces between words and sentences	Extra Spaces	Extra spaces
Spaces before specific characters	Space Before—and specify a character	Space before a period . (if you specify a period)
Spaces after specific characters	Space After—and specify a character	" Space after a quotation mark (if you specify a quotation mark)

3 **Start spell-checking.**

RECHECKING AFTER CHANGING OPTIONS

If you change options after spell-checking a document, you may want to run the Spelling Checker again. This is because FrameMaker ordinarily rechecks only paragraphs that have been edited since the prior check. To recheck all paragraphs, even the unedited ones, click Dictionaries in the Spelling Checker window and turn on Mark All Paragraphs for Rechecking. Then proceed with the check.

RESETTING SPELLING CHECKER OPTIONS

If you change the Spelling Checker options and then want to reset the default options, click Get Defaults in the Spelling Checker Options dialog box.

To limit the types of words checked

You can prevent FrameMaker from questioning a word not only by putting the word in a dictionary (see "To correct or confirm a spelling" on page 9-9), but also by excluding the word from spell-checking, thereby limiting the check so that words of its type are overlooked. For example, you might tell FrameMaker to overlook all words that contain digits to prevent questioning filenames such as `DocPlan1993` and `Chap1.doc`. You may also want to overlook site-specific words, such as command names or pathnames, that would clutter the dictionary.

Be careful when specifying words to be overlooked. The more words FrameMaker overlooks, the greater the possibility your document will have misspelled words.

1 **In the Spelling Checker window, click Options.**

2 **Turn on the appropriate options and click Set.**

To overlook	Turn on
One-character words	Single-Character Words
Uppercase words	Words That Are All Uppercase
Words that contain specific characters	Words Containing—and specify a character
Roman numerals	Roman Numerals
Words that contain numbers	Words with Digits

If you change one of these options after you spell-check a document, you should have FrameMaker mark all paragraphs in the document for rechecking before you spell-check again. For more information, see "Rechecking after changing options" on page 9-7.

3 **Start spell-checking.**

OVERLOOKING INDIVIDUAL PARAGRAPHS OR TEXT LINES

If you don't want FrameMaker to spell-check certain paragraphs or text lines, assign no language to them; that is, change their language property to None. For information on changing the spell-checking language, see "To spell-check in a different language," next. When you set the language of a paragraph or text line to None, FrameMaker no longer provides hyphenation for it.

To spell-check in a different language

In FrameMaker, each paragraph and each text line is assigned a language. When you spell-check, FrameMaker uses the main dictionary of the language assigned to the paragraph or text line. You can change the language FrameMaker uses to spell-check text by changing the language assigned to the text.

- **To change the language of a single paragraph or of all the paragraphs in a document, use the Advanced properties in the Paragraph Designer.**
  For information on the Paragraph Designer, see "To display a designer window" on page 4-6.

- **To change the language of a text line, use the Language pop-up menu.**
  The menu appears when you choose Object Properties from the Graphics menu. All installed languages appear in the Language pop-up menu.

LANGUAGES AVAILABLE

FrameMaker provides dictionaries for the following languages: US English, International English, German, Swiss German, French, Canadian French, Spanish, Catalan, Italian, Portuguese (Portugal), Portuguese (Brazil), Danish, Dutch, Norwegian, Nynorsk, Finnish, and Swedish.

Not all dictionaries are automatically installed. If you need to use a dictionary not currently installed, ask the system administrator to install it for you.

CORRECTING AND CONFIRMING SPELLINGS

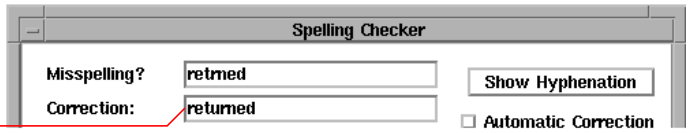
When you spell-check a document, FrameMaker finds questionably spelled words and possible typing errors and suggests corrections for them. You can accept the suggestion or provide your own correction. If a questioned word is spelled correctly, you can confirm its spelling by adding the word to a personal or document dictionary. And if you add the word to a personal dictionary, you can indicate where the word can be hyphenated, that it can't be hyphenated, or that it should always be hyphenated.

As well as suggesting a correction for a misspelled word, FrameMaker can correct it automatically. This saves time when you spell-check a document that has multiple occurrences of the same error.

To correct or confirm a spelling

When FrameMaker questions the spelling of a word, you must decide whether the word is misspelled. If the word is misspelled, you can provide the correct spelling. If the word is spelled correctly but is questioned because it isn't in one of the FrameMaker dictionaries, you can add the word to a personal or document dictionary.

- **To correct a misspelling, make sure the correctly spelled word is in the Correction text box and click Correct.**



The correctly spelled word appears here.

If the word FrameMaker suggests is not the word you want, you can select a different word in the Correction scroll list. If the Correction scroll list doesn't include the word you want, you can type the word in the Correction text box. Or you can move the insertion point to the document window and type the word correctly there.

- **To correct a typing error, make sure the correctly typed text is in the Correction text box and click Correct.**
  FrameMaker lists only one suggestion for mistyped text, such as repeated words. If the suggestion is not correct, you can type the correct text in the Correction text box, or you can type it directly in the document window.

  If FrameMaker questions something that you don't consider to be a typing error, you can turn off the option to find that type of potential error. For example, you can stop FrameMaker from questioning the use of straight quotation marks. For information on specifying the kinds of typing errors to include in a spell-check, see "To check for typing errors" on page 9-6.

- **To add a word to a personal dictionary, make sure the intended word is in the text box labeled Misspelling? and click Learn.**
  FrameMaker checks your personal dictionary when spell-checking any document. Add to this dictionary words that are neither document-specific nor site-specific—for example, your name. For more information, see "To manage personal or document dictionaries" on page 9-13.

- **To add a word to a document dictionary, make sure the intended word is in the text box labeled Misspelling? and click Allow in Document.**
  The document dictionary is stored only with the document being checked. FrameMaker uses this dictionary regardless of who is checking the document, unlike the way it uses the personal dictionary. For more information, see "To manage personal or document dictionaries" on page 9-13.

LEARNING WORDS THAT CONTAIN UPPERCASE LETTERS

If FrameMaker learns a word that contains uppercase letters, and if Unusual Capitalization is on in the Spelling Checker Options dialog box, FrameMaker considers any other capitalization of the word a spelling mistake. For example, if FrameMaker learns *Trinidad,* it questions the spelling of *TRINIDAD* and *trinidad.* However, if FrameMaker learns *trinidad,* in all lowercase letters, it allows you to spell the word with any type of capitalization, regardless of how the Spelling Checker options are set.

To correct spellings automatically

You can have FrameMaker automatically correct future occurrences of a misspelled word or typing error. The error isn't questioned in any document you open, and you don't have to provide the correction. FrameMaker keeps track of the errors to automatically correct until you exit FrameMaker or tell it to stop making the corrections.

With typing errors, when FrameMaker automatically corrects an error, it also changes the entire class of errors to which it belongs. For example, if you direct FrameMaker to replace *the the* with *the,* it also replaces repeated words such as *and and* with *and.* For information on the classes of typing errors, see "To check for typing errors" on page 9-6.

1. **Click Start Checking in the Spelling Checker window.**
2. **When FrameMaker questions a word or typing error, turn on Automatic Correction.**
   Before you decide to change a particular typing error automatically, make sure you know what other changes will be made. Make sure that the word you correct automatically isn't a misspelling of another word. For example, if *thst* is a misspelling of both *test* and *that,* you won't want to change it automatically to either word.
3. **Click Correct.**

CLEARING AUTOMATIC CORRECTIONS

When you exit FrameMaker, the list of corrections that FrameMaker automatically makes is cleared. If you need to clear the list before exiting, click Dictionaries in the Spelling Checker window and click Clear Automatic Corrections.

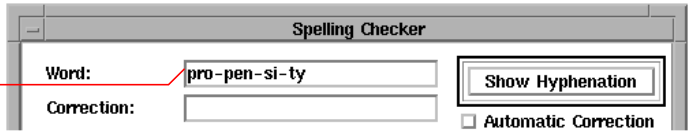
To control the hyphenation of a word

When you add a word to a personal dictionary, FrameMaker calculates and remembers the points where it can hyphenate the word. If the hyphenation points that FrameMaker suggests aren't appropriate, you can change them before adding the word. You can also direct FrameMaker to always hyphenate or never hyphenate a word. For example, you can hyphenate *heavy-duty* wherever it appears but never hyphenate your company's name.

For more information on hyphenation, see "To control hyphenation" on page 4-23.

- **To show a word's hyphenation points, type the word in the Word text box and click Show Hyphenation.**

Hyphens appear at the word's hyphenation points.



If the word is in the main dictionary or your personal dictionary, FrameMaker uses the dictionary definition of the word to determine the word's hyphenation points. If the word isn't in one of these dictionaries, FrameMaker calculates the hyphenation points.

If a word is hyphenated inappropriately, you can change its hyphenation points and add it to your personal dictionary.

- **To change the hyphenation of a word, show the word's hyphenation points, adjust the hyphenation, and click Learn.**
  Add or delete hyphens as necessary.
- **To prevent FrameMaker from hyphenating a word, type the word in the Word text box, type a hyphen before the word, and click Learn.**
  Make sure the word doesn't contain any hyphens other than the one before it.

REHYPHENATING THE DOCUMENT

When you make any hyphenation changes, rehyphenate the document so that you can see the new hyphenation. To do this, click Dictionaries in the Spelling Checker window and click Rehyphenate Document.

FINDING AUTOMATIC HYPHENS

You can search your document for all hyphens that FrameMaker has inserted automatically. This is useful when you want strict control over hyphenation—for example, before printing the final draft of a book. To find all the automatic hyphens, use Automatic Hyphen on the Find pop-up menu in the Find/Change window.

MAINTAINING DICTIONARIES

When you spell-check a document, FrameMaker compares each word in it with the words in a main dictionary and three custom dictionaries: a site dictionary maintained by your system administrator, a personal dictionary, and a document dictionary for each document. As you spell-check a document, you can add unknown words or hyphenated compound words to the dictionaries. Instructions for maintaining personal and document dictionaries follow. For information on the site dictionary, see the online manual *Changing Setup Files.* For more information on the contents of the dictionaries, see "Four types of dictionaries" on page 9-13.

To manage personal or document dictionaries

FrameMaker automatically creates a personal dictionary for you and a document dictionary for each of your documents. You can simply use the Spelling Checker to add or delete words, or you can manage the dictionaries directly. When you work with a dictionary directly, you can examine and edit its contents or merge it with another dictionary. You can create multiple personal dictionaries and then use them one at a time.

If you make changes to either a personal or document dictionary, mark all paragraphs for rechecking before you spell-check the document again. For more information, see "Rechecking after changing options" on page 9-7. For information on adding words to a personal or document dictionary, see "To correct or confirm a spelling" on page 9-9.

FOUR TYPES OF DICTIONARIES

Each dictionary contains a different set of words.

Main dictionary Contains words found in a standard dictionary such as Webster's. You can't add words to or delete words from this dictionary.

Site dictionary Contains some technical terms as well as words common to your site—for example, the company name and product names. The site administrator can add or delete words. FrameMaker provides one site dictionary for each language it supports.

Personal dictionary Contains words you use often. FrameMaker uses this dictionary whenever you spell-check any document. You can add or delete words. You can also create several personal dictionaries and switch between them.

Document dictionary Contains words that are acceptable in a particular document. FrameMaker uses this dictionary regardless of who is editing the document. You can add words to or delete words from it. This dictionary is part of the document, not a separate file like the other dictionaries.

- **To delete a word from the personal or document dictionary, type the word in the Word text box in the Spelling Checker window and click Unlearn.**
- **To delete the contents of the document dictionary, click Dictionaries in the Spelling Checker window and choose Clear from the Document Dictionary pop-up menu.**
- **To create another personal dictionary, create a document file, place words with their hyphenation points in the file, and save the file in Text Only format.**
  The first line of the file must be:

  ```
  <MakerDictionary 2.0>
  ```

  When you save the file, choose Text Only from the Format pop-up menu in the Save Document dialog box and click Save. In the Save as Text dialog box, click Only between Paragraphs and click Save.
- **To use a different personal dictionary, click Dictionaries in the Spelling Checker window, choose Change Dictionary from the Personal Dictionary pop-up menu, and identify the location of the dictionary.**
  In the dialog box that appears, type or select the name of the file that contains the personal dictionary you want to use. The default personal dictionary is located in the file `fmdictionary` in your home directory. FrameMaker displays the name of the current personal dictionary at the bottom of the Dictionary Functions dialog box.
- **To check the spelling of a document without using the personal dictionary, click Dictionaries in the Spelling Checker window and choose Set to None from the Personal Dictionary pop-up menu.**
- **To copy the contents of a dictionary to a file, click Dictionaries in the Spelling Checker window and choose Write to File from the Personal Dictionary or Document Dictionary pop-up menu.**
  You can edit this file and then merge it with the dictionary. Instructions for merging and editing follow.
- **To merge the contents of a dictionary with the current personal or document dictionary, click Dictionaries in the Spelling Checker window and choose Merge from File from the Personal Dictionary or Document Dictionary pop-up menu.**

EDITING A DICTIONARY

You edit a dictionary by having FrameMaker write its contents to a file, editing the file, and merging the file with the dictionary. When you remove words from the dictionary, delete the original dictionary before merging the file. Otherwise, the deleted words remain in the dictionary.

Delete the document dictionary by choosing Clear from the Document Dictionary pop-up menu in the Dictionary Functions dialog box. Delete a personal dictionary by deleting the file that contains the dictionary. (The default personal dictionary is in the file `fmdictionary` in your home directory.)

USING FRAMEMAKER TO EDIT A DICTIONARY

When you use FrameMaker to edit a dictionary, treat line endings as paragraph breaks when you open the file. To do this, choose Text Only from the Format pop-up menu in the Save Document dialog box when you save the file. Make sure the file is named correctly and click Save. In the Save as Text dialog box, click Only between Paragraphs and click Save.

To quickly add unknown words to a dictionary

If your document contains many correctly spelled words that FrameMaker will question, you can expedite spell-checking by adding these words to a dictionary in a separate operation before you begin to spell-check. To do this, you generate a file of words that FrameMaker questions, edit this file to contain just the correctly spelled words, and then merge the file with a dictionary.

1. **In the Spelling Checker window, click Dictionaries.**
2. **In the Dictionary Functions dialog box, click Write All Unknown Words to File and click OK.**
3. **In the Store Spell-Checking Results in File dialog box, type or select a filename for the dictionary file and click OK.**

   FrameMaker creates a dictionary file that contains all the unknown words in the document. The dictionary file doesn't include typing errors such as repeated words, capitalization errors, or extra spaces. (For a complete list of typing errors, see "To check for typing errors" on page 9-6.)

4 **Edit the dictionary file with a standard text editor or with FrameMaker.**
Delete any words you don't want to add to your dictionary—for example, any misspelled words.

For information on using FrameMaker to edit a dictionary, see "Using FrameMaker to edit a dictionary" on page 9-15.

5 **In the Spelling Checker window, click Dictionaries.**

6 **Choose Merge from File from the Personal Dictionary pop-up menu or the Document Dictionary pop-up menu and click OK.**
If you expect the words to appear in several documents, you should merge the words with a personal dictionary.

7 **In the Merge File into Document Dictionary dialog box or the Merge File into Personal Dictionary dialog box, type or select the filename of the dictionary file and click OK.**

To add a hyphenated compound word to your personal dictionary

Your document may contain a hyphenated compound word—a word or phrase made up of multiple words connected by hyphens. By default, FrameMaker spell-checks each word in a hyphenated compound word rather than check the hyphenated compound word as a whole. For example, with the word *heavy-duty,* FrameMaker spell-checks first *heavy* and then *duty.* By changing the default settings, you can have FrameMaker spell-check hyphenated compound words as one word, and you can add hyphenated compound words to your personal dictionary.

1 **In the Spelling Checker window, click Options.**

2 **In the Spelling Checker Options dialog box, turn on Unusual Hyphenation and click Set.**
FrameMaker spell-checks the hyphenated compound word as one word, rather than checking the individual words.

3 **Choose Document>Text Options from the Format menu.**

4 **In the Text Options dialog box, remove the hyphen from the Allow Line Breaks After text box and click Apply.**
This prevents FrameMaker from hyphenating the individual words that make up the hyphenated compound word.

5 **In the Word text box in the Spelling Checker window, type the hyphenated compound word to be added to your personal dictionary.**

Type a hyphen at the beginning of the compound word, and type a backslash (\) before each hyphen that connects words. For example, to add the word *vice-president*, type `-vice\-president`. For more information on specifying hyphenation points, see "To control the hyphenation of a word" on page 9-11.

6 **Click Learn.**

USING THE THESAURUS

You use the Thesaurus to look up synonyms, related words, and antonyms for a word you specify. Synonyms have the same meaning, related words a similar meaning, and antonyms the opposite meaning. If you specify *figment,* the FrameMaker Thesaurus provides synonyms such as *fiction* and *fable,* related words such as *concoction* and *fantasy,* and antonyms such as *fact.*

The Thesaurus lets you improve on a word already in a document or search for the right word to insert in it. In the example, you can replace *figment* with any of the synonyms, related words, or antonyms it shows.

The search for a word doesn't need to end with the first set of synonyms, related words, and antonyms you find. You can look up any one of these words, displaying *its* synonyms, related words, and antonyms, and so on. FrameMaker keeps track of the last 10 words you looked up, so you can quickly go back to a word you previously looked up.

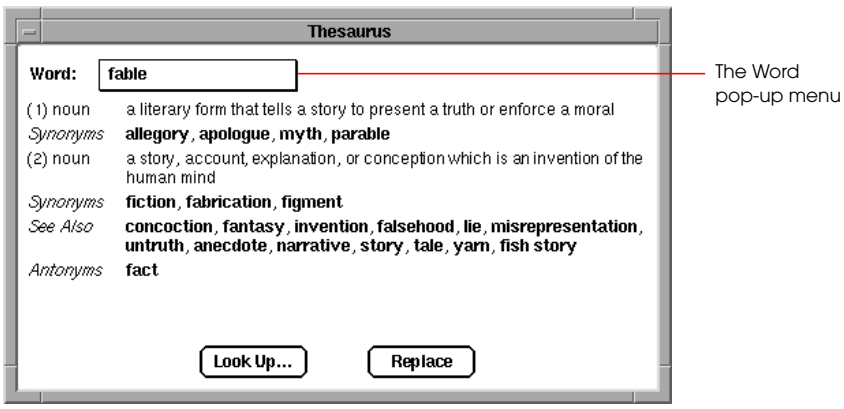
Some words have more than one meaning. For example, *cover* can be a noun or a verb. In these cases, FrameMaker displays synonyms, related words, and antonyms for each meaning.

To look up a word

FrameMaker provides several ways of navigating through the Thesaurus.

- **To look up a word visible in the document window, select the word and choose Thesaurus from the Edit menu.**
  Information about the word appears in the Thesaurus window.
- **To look up a word not visible in the document window, make sure that no text is selected, choose Thesaurus from the Edit menu, type the word in the Thesaurus Look Up dialog box, and click Look Up.**
  When you click Look Up, information on the word appears in the Thesaurus window.
- **To look up a phrase, make sure that no text is selected, choose Thesaurus from the Edit menu, type the phrase in the Thesaurus Look Up dialog box, and click Look Up.**
  Type hyphens between each word in the phrase. For example, type `free-for-all`.

  If you try to look up a phrase by selecting the phrase in the document window and then choosing the Thesaurus command, FrameMaker places only the first selected word in the Thesaurus Look Up dialog box.
- **To look up a synonym, a related word, or an antonym displayed in the Thesaurus window, click the word.**
  Synonyms, related words, and antonyms are shown in bold in the Thesaurus window.
- **To look up a word again, choose the word from the Word pop-up menu.**



This menu lists the last 10 words you looked up.

- **To look up a word that is not displayed in the Thesaurus window, click Look Up, type the word in the Thesaurus Look Up dialog box, and click Look Up.**

  The Look Up button appears in both the Thesaurus window and the Thesaurus Look Up dialog box. When you click Look Up in the Thesaurus window, the dialog box appears. When you click Look Up in the dialog box, information appears in the Thesaurus window.

VIEWING MORE INFORMATION

If you see arrows in the lower-right corner of the Thesaurus window, more information on the word in the Word pop-up menu is available. Click the down or up arrow button to display the next or previous page of information.

CAPITALIZATION OF WORDS

When you look up a word, FrameMaker displays the words in the Thesaurus window with capitalization that matches the word you looked up.

HOW FRAMEMAKER DETERMINES THE LANGUAGE TO USE

FrameMaker uses the language of the current paragraph. If a word isn't selected, or if the insertion point isn't in a paragraph, FrameMaker uses the custom document language. For information about custom document languages, see the online manual *Changing Setup Files*.

Alternatively, you can specify a different language when looking up a word. To do so, click Look Up in the Thesaurus window, type the word you want to look up, and choose a language. Then click Look Up. The dictionaries must be installed before you can use a Thesaurus.

FrameMaker provides a Thesaurus for each of the following languages: US English, International English, German, Swiss German, French, Canadian French, Spanish, Italian, Danish, Dutch, Norwegian, and Swedish.

Not all Thesauruses are automatically installed. If you need to use a Thesaurus not currently installed, ask the system administrator to install it for you.

To replace or insert a new word

You can replace a selected word with a word from the Thesaurus window. Alternatively, you can place a word displayed in the Thesaurus window at the insertion point in the document. The replacement or addition can be either the word looked up or one of the words in bold in the Thesaurus window—its synonyms, antonyms, or a related word.

- **To replace a selected word in your document with the word looked up in the Thesaurus, click Replace.**
- **To replace a selected word in your document with a word in bold in the Thesaurus window, Control-click the word and click Replace.**
- **To insert the word looked up in the Thesaurus in your document, place the insertion point in the document and click Replace.**
- **To insert a word in bold in the Thesaurus window in your document, place the insertion point in the document, Control-click the word, and click Replace.**

REPLACING SEVERAL OCCURRENCES OF A WORD

When replacing the selected word in your document with a word from the Thesaurus, you replace only the selected word—not all occurrences of the selected word. To replace all occurrences, use the Find/Change command. For more information, see "To make changes automatically" on page 8-18.

10

CROSS-REFERENCES

Referring the reader to other pages and documents

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10 CROSS-REFERENCES

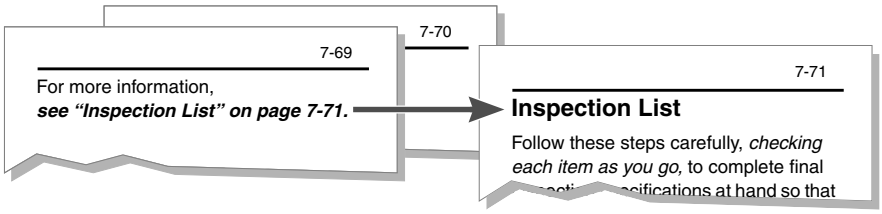
FrameMaker provides standard formats for cross-references to other pages or headings, and you can add your own formats. The formats make it unnecessary to type the cross-references. When page numbers or headings change, FrameMaker can automatically update the cross-references.

FrameMaker inserts the cross-reference

When you need a cross-reference, you place the insertion point where you need the reference and choose a format from a menu. The format provides a cross-reference sentence or phrase, appropriately formatted and punctuated (for example, *See "Inspection List" on page 7-71.*). The format also provides building blocks that stand for the specifics—for *Inspection List* and *7-71* in the example. You don't type a word.

Include headings and page numbers in the cross-reference

When you choose the cross-reference format, you also specify a paragraph—the source of the cross-reference—from a list. If the paragraph is a heading, such as *Inspection List,* the text of the heading can appear in the cross-reference as is. You don't have to retype the contents.



Whether or not the cross-reference includes identifying text, FrameMaker can put the page number of the source—*7-71* in the example—in the cross-reference for you.

You can change the formats and add new ones

FrameMaker documents contain a number of cross-reference formats. You can revise these formats, and you can define new ones. For example, you can create a complex definition that permits cross-references such as *See "Inspection List" under "Getting Started."* In the example, *Inspection List* is the text of the source paragraph. *Getting Started* is the text of a preceding higher-level heading.

Two types of cross-references

FrameMaker provides two types of cross-references—paragraph and spot. Normally, you use paragraph cross-references to cross-reference entire paragraphs—for example, a heading or a paragraph of text that describes a related subject. FrameMaker automatically places a marker at the beginning of the paragraph you cross-reference. The page on which the marker occurs is where FrameMaker refers the reader.

Sometimes, however, you may want to cross-reference a particular location in a paragraph. In this case you need a spot cross-reference. You manually insert the cross-reference marker exactly where you want to refer the reader. If FrameMaker breaks the paragraph across two pages, the cross-reference refers to the correct page number, rather than the page number on which the paragraph begins.

Maintaining cross-references is easy

FrameMaker can update cross-references automatically whenever you open or print a document. And when pagination changes in an open document, as it often does, you can update all the cross-references with a single command. FrameMaker updates page numbers and revises titles and headings in the cross-references. Updates need special attention only when you move the source to another file or delete the source.

In this chapter

This chapter shows how to create cross-references, create the formats they use, and help FrameMaker maintain the cross-references as you revise their source documents.

CREATING A CROSS-REFERENCE

FrameMaker provides two types of cross-references—to paragraphs and to spots. You use paragraph cross-references when you refer to a heading or some other text that occupies a whole paragraph. You use spot cross-references when you refer to an individual word or phrase—a spot—in a paragraph.

Paragraph cross-references are easier for you to create because you don't have to mark a particular spot. They also make it easier to edit a document that contains them, because you don't have to work around an easy-to-miss marker buried in the middle of a paragraph. For more information on cross-reference markers, see "A marker identifies the source of a cross-reference" on page 10-4.

Editing the cross-reference itself is confined to choosing a different format or source for it. You change the format to reword the cross-reference, and you change the source to refer to a different paragraph or spot. If you want to edit a cross-reference as you do regular text, you must convert it to text. And after conversion, FrameMaker no longer updates the text as a cross-reference.

A MARKER IDENTIFIES THE SOURCE OF A CROSS-REFERENCE

FrameMaker uses markers to keep track of the source of each cross-reference. For example, if you move a marker and then update the cross-references, FrameMaker uses the information at the new location of the marker.

You can display the information FrameMaker keeps for each cross-reference marker by displaying the Marker window and then choosing Marker of Type from the Find pop-up menu in the Find/Change window. Type `Cross-Ref` in the text box and then begin the search. As FrameMaker finds cross-reference markers, the text box in the Marker window displays information on each cross-reference marker.

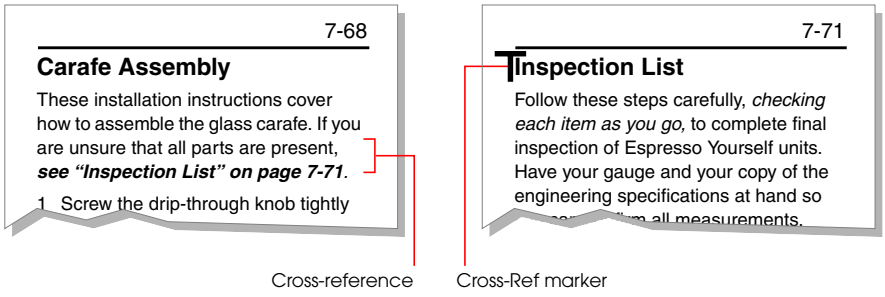
- For paragraph cross-references, FrameMaker displays the five-digit number it assigned to the marker and the paragraph tag and text of the paragraph being cross-referenced. (The marker text doesn't get updated, so the tag and text may be out of sync with the cross-reference.)
- For spot cross-references, FrameMaker displays the marker text you typed for the marker.

Within a document, if you copy and paste text that contains a cross-reference marker, FrameMaker pastes the text but not the marker. The cross-reference still refers to the text in its original location.

However, if you copy text that contains a marker, delete the original marker, and then paste the text, FrameMaker does paste the marker.

To insert a paragraph cross-reference

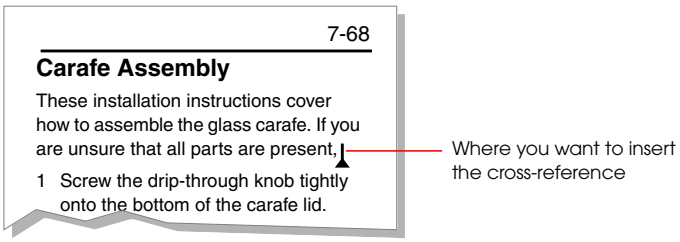
When you insert a paragraph cross-reference, FrameMaker places a marker at the beginning of the paragraph you're cross-referencing.



The wording and appearance of the cross-reference itself depend on the cross-reference format you choose and the information in the source paragraph you mark.

1 **If you're cross-referencing another document, open the document.**
You must have write permission to the document in order for FrameMaker to add a marker to it.

2 **Click where you want to insert the cross-reference.**

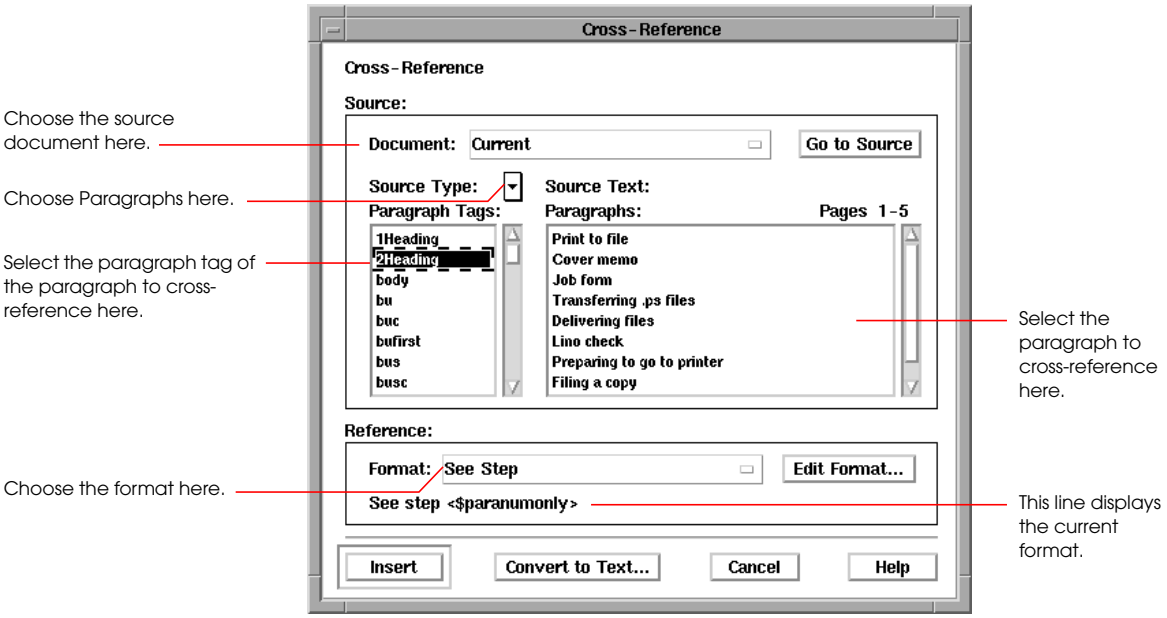


You can insert a cross-reference in text frames but not in text lines.

3 **Choose Cross-Reference from the Special menu.**

4 If the document you're cross-referencing is not the current one, choose the name of the document from the Document pop-up menu.

If you're cross-referencing information in another document, choose the name of that document from the Document pop-up menu. Otherwise, leave the pop-up menu set to Current.



The Document pop-up menu lists all open, named documents. If the document to cross-reference is not open, click Cancel, open the document, and begin again. If the document to cross-reference is open but has never been saved, save and name the document.

5 Choose Paragraphs from the Source Type pop-up menu.

6 **In the Paragraph Tags scroll list, select the tag of the paragraph you want to cross-reference.**

For example, if you're cross-referencing a paragraph with the tag 1Heading, select 1Heading in the Paragraph Tags scroll list. FrameMaker displays all the paragraphs in the document with the 1Heading paragraph tag in the Paragraphs scroll list.

7 **In the Paragraphs scroll list, select the particular paragraph to cross-reference.**

With paragraphs in text insets, the cross-reference marker FrameMaker inserts is lost when the text inset is updated. For more information, see "Cross-referencing a paragraph in a text inset" on page 10-7.

8 **Choose the format of the cross-reference from the Format pop-up menu.**

This menu lists the names of cross-reference formats in the current document.

For information on creating new cross-reference formats or modifying existing formats, see "Creating a cross-reference format" on page 10-10.

9 **Click Insert.**

FrameMaker puts the cross-reference at the insertion point and a marker at the start of the paragraph to which the cross-reference refers. FrameMaker inserts a marker only if there isn't a cross-reference marker already there.

CROSS-REFERENCING A PARAGRAPH IN A TEXT INSET

To make sure the cross-reference marker for a paragraph in a text inset is not removed when the inset is updated, insert a cross-reference to that paragraph in the source document. First, open the source of the inset, and then insert a cross-reference to the paragraph anywhere in the source document. When you insert the cross-reference, FrameMaker inserts a marker in the source document, at the beginning of the paragraph. At that point you can delete the cross-reference text. The marker will remain.

Next, save the source document, update the text inset, and insert another cross-reference to the paragraph, this time in the document that contains the inset. The cross-reference uses the marker that exists in the updated inset.

To insert a spot cross-reference

Before you can insert a spot cross-reference, you have to manually insert a marker. The marker indicates the spot within a paragraph to which FrameMaker refers—for example, a word or phrase. If the paragraph continues on the following page, the cross-reference refers to the page that contains the marker—not the page on which the paragraph begins.

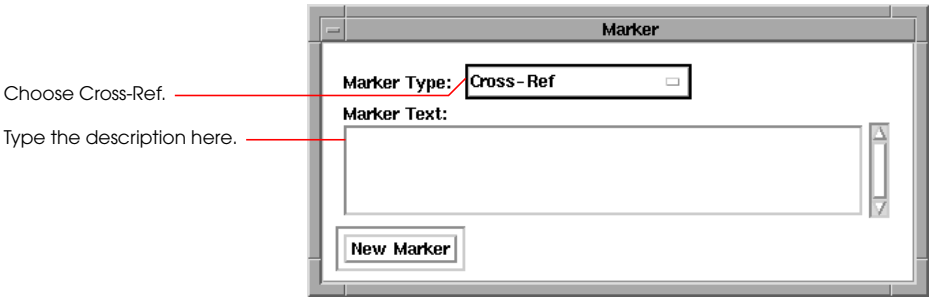
1 **Click where you want to insert the marker.**

For example, if you want to direct readers to a definition, click at the start of the defined word. Or, if you want to direct readers to an anchored frame, click next to the anchored frame symbol. You can put a marker anywhere within a column of text.

If you want to insert a cross-reference marker in a text inset, insert the marker in the source document.

2 **Choose Marker from the Special menu.**

3 **Choose Cross-Ref from the Marker Type pop-up menu and define the marker.**



The Marker Text text field helps you identify the marker when you insert a spot cross-reference. For example, if you insert a marker where *system variable* is defined, you can type `Definition of system variable`. This text appears in the Cross-Reference dialog box when you select Cross-Reference Markers from the Source Type pop-up menu. It doesn't appear in the cross-reference itself. The marker text can be up to 255 characters long.

4 **Click New Marker.**
If Text Symbols is on in the View menu, a marker symbol (T) appears at the insertion point. This symbol doesn't appear in the printed document.

5 **Insert a cross-reference.**
Use the directions for inserting a paragraph cross-reference (beginning on page 10-5). However, rather than choose Paragraph Tags from the Source Type pop-up menu, choose Cross-Reference Markers. When the marker text of the marker you just created appears in the Cross-Reference Markers scroll list, select the marker text, choose a cross-reference format, and click Insert.

GOING TO THE SOURCE

You can display the source of a cross-reference by double-clicking the cross-reference and clicking Go to Source in the Cross-Reference dialog box. FrameMaker displays the page that contains the source of the cross-reference and puts the insertion point at the marker. If the source is in a text inset, the text inset is selected.

To edit a cross-reference

You can edit a cross-reference by changing its source or format. You can also move it or delete it entirely.

You can edit the individual characters in a cross-reference after converting it to text. But, after the conversion, the text of the cross-reference loses the connection with its source and can't be updated if the source changes.

- **To use a different source for a cross-reference, double-click the cross-reference, change the source in the dialog box that appears, and click Replace.**
  You can change the Document, Source Type, and Source Text.
- **To use a different format for a cross-reference, double-click the cross-reference, choose a different format from the Format pop-up menu, and click Replace.**
  If none of these cross-reference formats is appropriate, you need to create a new format. For more information, see "To create a cross-reference format" on page 10-11.
- **To select a cross-reference, click it.**
- **To move or copy a cross-reference, select it, cut or copy it, and paste it in the new location.**

- **To delete a cross-reference, select it and press Delete.**

When you delete a cross-reference, FrameMaker doesn't delete the marker at the source of the cross-reference. You can delete the marker yourself, but it's not necessary. If you leave it, you avoid the risk of deleting the wrong marker or creating unresolved cross-references, because other cross-references may use that marker.

CONVERTING A CROSS-REFERENCE TO TEXT

You can convert all the cross-references in a document, all the cross-references in a document with a particular cross-reference format, or a single cross-reference. To convert a single cross-reference, select it; otherwise, click in the document. Then click Convert to Text in the Cross-Reference dialog box. Indicate the range of cross-references to convert and click Convert. If you convert a cross-reference to text, FrameMaker no longer updates the cross-reference.

CREATING A CROSS-REFERENCE FORMAT

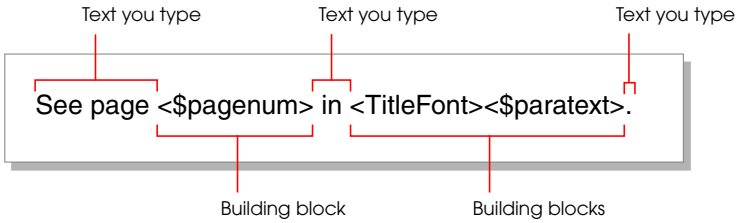
The format of a cross-reference determines its appearance—the wording, the information it contains, and its character format. For example, the format of the cross-reference *See also "Carafe Assembly" on page 7-68* determines that the section title is in quotation marks. The cross-reference also provides the words *See also* and *on page,* and it provides building blocks that stand for the actual section title and page number.

Cross-reference formats of this kind help you use a consistent cross-reference style throughout a document. Their building blocks let you edit the document without having to update cross-references in it by hand. In the example, you could change the title *Carafe Assembly* or move it to another page without having to change the cross-reference. FrameMaker does the updating for you.

FrameMaker provides a number of cross-reference formats, and you can change them or create others. The variety of building blocks FrameMaker provides lets you create almost any format you can imagine.

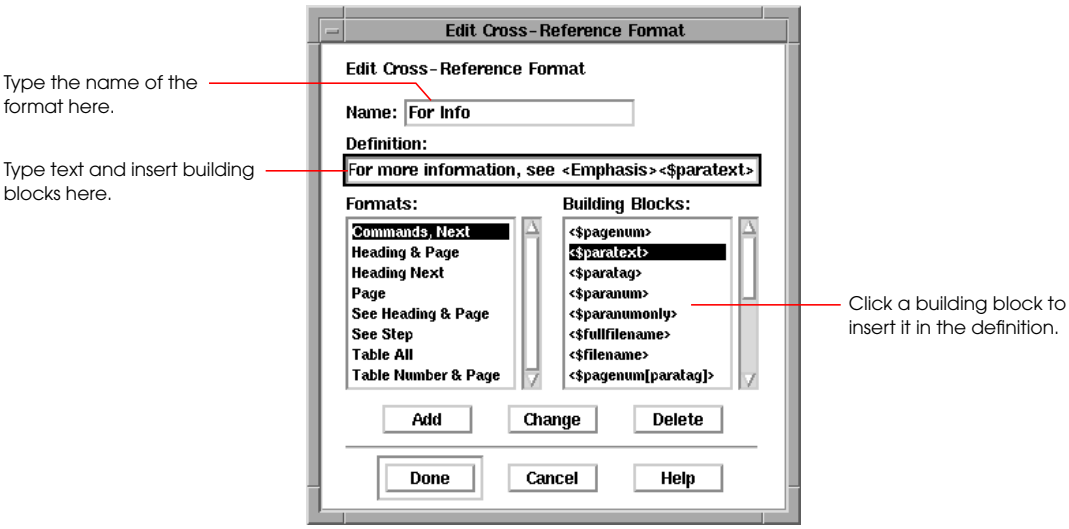
To create a cross-reference format

A cross-reference format consists of a name and a definition. The definition consists of building blocks and text. The definition for the format that might appear in text as
See page 18 in *Starting MetaForce 2.0*
would look like this.



You use text for words, punctuation, and regular and nonbreaking spaces. You add text to a definition by typing it. Building blocks appear between angle brackets (< and >). You add them by clicking in a list.

1. **Choose Cross-Reference from the Special menu.**
2. **In the Cross-Reference dialog box, click Edit Format.**
3. **Name and define the format.**



Format names are case-sensitive; *Page* and *page* would be separate formats. The complete definition, including typed text and building blocks, can be up to 255 characters long. You insert a building block in the Definition text box by clicking it in the Building Blocks scroll list.

For information on using the building blocks, see "To insert a building block" on page 10-13. For information on changing the format of a cross-reference, see "To change a cross-reference format" on page 10-16.

4 **Click Add, and then click Done.**

TYPING SPECIAL CHARACTERS

An angle bracket (< or >) ordinarily signals a building block. To include an angle bracket as text in a cross-reference definition, precede it with a backslash (\).

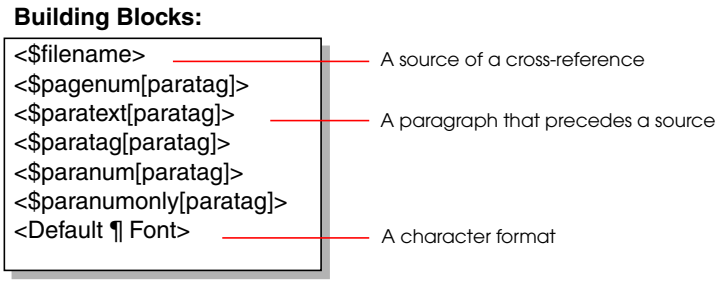
A few FrameMaker characters are not part of the ISO Latin 1 character set used in dialog boxes. As you type these characters in the Definition text box, they appear as a backslash followed by one or two characters. These special characters are displayed correctly when FrameMaker displays the cross-reference in the document. For a list of these special characters, see Chapter 3, "Character Sets," in the *Quick Reference*.

IMPORTING CROSS-REFERENCE FORMATS

You can copy cross-reference formats from one document to another just as you can copy paragraph formats. After opening both documents, choose Import>Formats from the File menu of the document to which you are copying. In the dialog box, identify the other document, turn on only Cross-Reference Formats, and click Import. For information on importing formats into a document, see "Importing formats into a document" on page 21-12. For information on importing formats into documents in a book, see "To update the format of files" on page 24-26.

To insert a building block

FrameMaker provides three types of building blocks.



A building block that refers to the source of a cross-reference is indicated by a dollar sign ($) and no square brackets ([and]). One that refers to a paragraph that precedes a source is indicated by a dollar sign, with the tag of the paragraph referred to enclosed in square brackets. One that refers to a format in the Character Catalog has no dollar sign and no square brackets.

- **To refer to the source paragraph, insert a building block with a dollar sign and no square brackets.**

To include	Use this building block
The page number of the source	`<$pagenum>`
The text of the source paragraph excluding its autonumber	`<$paratext>`
The tag of the source paragraph	`<$paratag>`
The autonumber of the source paragraph including any text in the autonumber format	`<$paranum>`
The autonumber of the source paragraph excluding any noncounter text	`<$paranumonly>`
The full pathname of the source document	`<$fullfilename>`
The name of the source document	`<$filename>`

- **To refer to a paragraph preceding the source, insert a building block with a dollar sign and square brackets.**

To include	Use this building block
The page number of the preceding paragraph with the specified tag	`<$pagenum[paratag]>`
The text of the preceding paragraph with the specified tag	`<$paratext[paratag]>`
The tag of the preceding paragraph with the specified tag	`<$paratag[paratag]>`
The autonumber and any noncounter text in the autonumber format of the preceding paragraph with the specified tag	`<$paranum[paratag]>`
The autonumber excluding any noncounter text of the preceding paragraph with the specified tag	`<$paranumonly[paratag]>`

Replace the word *paratag* in the building block with the tag of the paragraph to which you want to refer. Don't delete the square brackets. To avoid confusing FrameMaker, don't use a paragraph tag with a name that includes square brackets. For examples, see "Using preceding-paragraph building blocks" on page 10-14.

USING PRECEDING-PARAGRAPH BUILDING BLOCKS

A cross-reference to a subsection often needs to identify the section that contains it. For example, a cross-reference to the subsection "Troubleshooting" might identify the section "Assembling a Carafe" where it is found:

See "Troubleshooting" in "Assembling a Carafe."

In this cross-reference, "Troubleshooting" is the source paragraph. If the paragraph tag for "Assembling a Carafe" is 1Heading, the cross-reference format would be the following:

```
See "<$paratext>" in
"<$paratext[1Heading]>."
```

The building block `"<$paratext[1Heading]>."` corresponds to the definition `"<$paratext[paratag]>."`

Alternatively, the cross-reference format could be the following:

```
See "<$paratext>" in
"<paratext[ChapTitle, 1Heading]>."
```

In this case, the format identifies "Troubleshooting" with either chapter title (ChapTitle) or section heading (1Heading), whichever was closest to it. You can use this feature for various effects.

- **To change the character format of the text, insert a character format.**
  The Building Blocks scroll list includes all the formats in the Character Catalog of the current document. A character format inserted in the definition applies to all text between it and the next character format inserted. To avoid confusing FrameMaker, don't use a character tag with a name that includes angle brackets.

  If you don't insert a character format in the definition, FrameMaker uses the default font of the paragraph that contains the cross-reference. If you change the character format for the cross-reference, the change applies only to the cross-reference, not to the text following it in the paragraph. Insert `<Default ¶ Font>` in the definition to return to the default font before the end of the cross-reference.

  For information on adding character formats to the Character Catalog, see "To create a new character format" on page 5-18.

SOURCE AND CHARACTER-FORMAT EXAMPLES

Here are four cross-reference formats with examples of cross-references they might produce. All the formats use source building blocks, and the last two use character format building blocks.

For this cross-reference	Use this text and these building blocks
page 23	`page <$pagenum>`
Chapter 4, "Distribution Channels."	`Chapter <$paranumonly>, "<$paratext>."`
Section 2.3.4, *Product Champions*.	`Section <$paranumonly>, <Title><$paratext>.`
See *Training*, next.	`See <Title><$paratext> <Default ¶ Font>, next.`

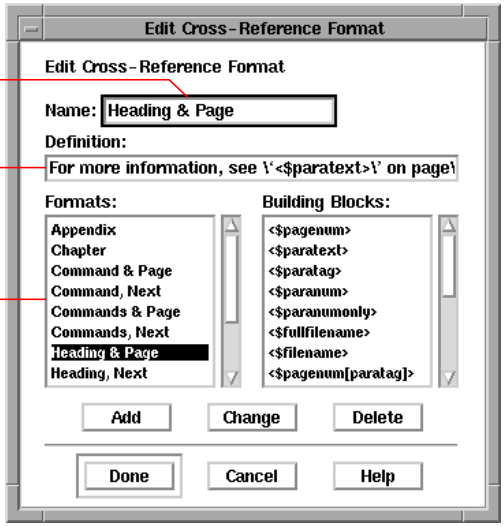
To change a cross-reference format

You may want to change the default cross-reference formats or the formats you create yourself.

1 **Choose Cross-Reference from the Special menu.**

2 **In the Cross-Reference dialog box, click Edit Format.**

3 **Select the format you want to change and edit the name or definition.**



4 **Click Change and then click Done.**

FrameMaker displays the Update Cross-References dialog box. If the document contains cross-references to other documents, click References to All Open Documents or References to All Documents and then click Update. If the document doesn't contain cross-references to other documents, click Internal Cross-References and then click Update.

After changing a cross-reference format, you can make the same change in other documents by using the Import>Formats command. For more information, see "Importing formats into a document" on page 21-12.

DELETING A CROSS-REFERENCE FORMAT

To delete a cross-reference format, click Edit Format in the Cross-Reference dialog box. In the dialog box that appears, select the format you want to delete in the Formats scroll list, click Delete, and then click Done.

If you delete a cross-reference format that some cross-references in the document use, FrameMaker asks whether you want to convert these cross-references to text.

CHANGING THE FORMAT OF CROSS-REFERENCES IN TEXT INSETS

You can change the format of cross-references in a text inset if the inset uses the formats of the document into which it is imported. If the inset uses formats from the source document, you need to change the formats in the source document. For more information on formatting text insets, see “Formatting an imported text flow” on page 3-16.

MAINTAINING CROSS-REFERENCES

When you insert a cross-reference, FrameMaker supplies information from the source—for example, the current page number or the paragraph of text. If you edit the source of a cross-reference, the cross-reference may no longer be accurate. If the pagination of your document changes, your cross-references may also be inaccurate. In either case, FrameMaker needs to update the information it supplies.

Normally, FrameMaker automatically updates all cross-references when you open a document. It also updates all cross-references to open documents when you print a document. But you can manually instruct FrameMaker to update if you have edited a document or if you have suspended automatic updating to improve performance. And whether or not updating is automatic, you need to help with the update process when there are unresolved cross-references—sources that FrameMaker can’t find.

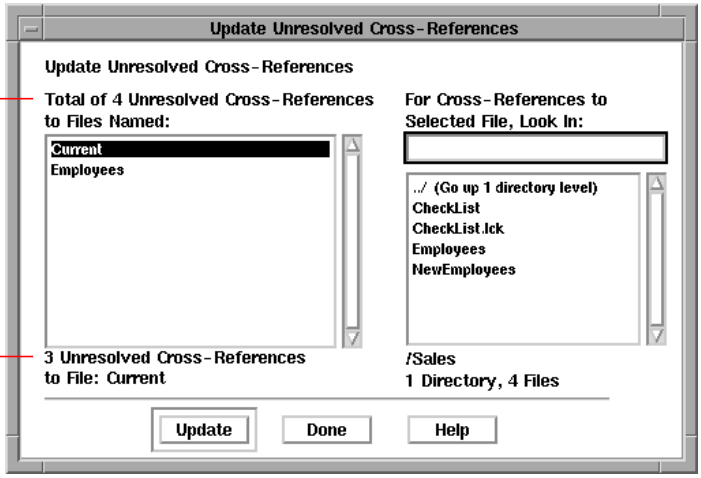
To resolve a cross-reference after automatic updating

Normally, FrameMaker automatically updates cross-references when you open or print a document. If FrameMaker can't resolve a cross-reference during the update, FrameMaker displays an alert. After dismissing it, you can resolve the cross-references.

1 **If the alert appears when you open the document, click Continue to dismiss it.**
If the alert appears when you print the document, click Cancel.

2 **Choose Update References from the Edit menu.**

3 **In the Update References dialog box, choose Update Unresolved Cross-References from the Commands pop-up menu.**
FrameMaker displays the Update Unresolved Cross-References dialog box.



The number of unresolved references in the current document

The number of unresolved references whose source was previously in the selected document

In the example, there are four unresolved cross-references, and three of them used to have their source in the current document.

4 **Resolve the cross-reference.**
If you think a source has been moved to another document or the document that contains it has been moved, use the technique in "To resolve a cross-reference when a marker is moved" on page 10-20 to resolve the cross-reference. If you think the source should be in the document listed for it, use "To resolve a cross-reference when a marker is deleted" on page 10-21.

UPDATING CROSS-REFERENCES WHEN PRINTING

FrameMaker automatically updates all cross-references to open documents when you print a document (if you haven't suspended automatic updating). FrameMaker updates cross-references to the versions of the open documents that are saved to disk, not the versions saved in memory. To make sure that FrameMaker updates cross-references that reflect changes you've made to the open documents when you print, save the open documents prior to printing.

To suppress automatic updating

If a document contains many cross-references, you can improve its opening and printing times by suppressing automatic updating. After suppressing automatic updating, you can still update cross-references manually.

1. **Choose Update References from the Edit menu.**
2. **In the Update References dialog box, choose Suppress Automatic Updating from the Commands pop-up menu.**
3. **In the Suppress Automatic Reference Updating dialog box, turn on Suppress Automatic Updating of All Cross-References and click Set.**
4. **In the Update References dialog box, click Done.**

   At this point, FrameMaker updates cross-references only on your instructions—that is, manually. For information, see "To update cross-references manually," next.

To update cross-references manually

You should manually update all cross-references in a document routinely before printing (if automatic updating is suppressed) or before distributing the document. You should also update routinely after editing the document or editing any other documents that are sources for the cross-references. For information on updating cross-references in a book, see "Generating and updating" on page 24-18.

1. **Choose Update References from the Edit menu.**
2. **In the Update References dialog box, turn on All Cross-References and click Update.**

   If FrameMaker resolves all the cross-references, you're finished. If FrameMaker can't resolve all the cross-references, it displays an alert. When you click Continue in the alert box, FrameMaker displays the Update Unresolved Cross-References dialog box.

   If you think a source has been moved to another document or the document that contains it has been moved, use the technique in "To resolve a cross-reference when a marker is moved," next, to resolve the cross-reference. If you think the

source should be in the document listed for it, use "To resolve a cross-reference when a marker is deleted" on page 10-21.

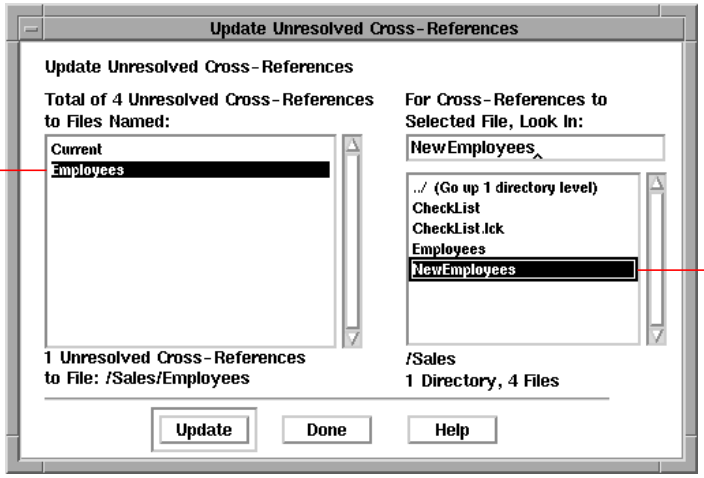
IF YOU'RE USING CONDITIONAL TEXT

FrameMaker can update all cross-references in the document except those with markers in hidden conditional text. Show the text that contains the source of the cross-reference before updating the cross-references.

To resolve a cross-reference when a marker is moved

FrameMaker can't update a cross-reference if the marker indicating its source is not in the expected file—for example, if the source has been moved to a different file or the file itself has been moved or renamed. If FrameMaker detects such an unresolved cross-reference during manual updating, it displays the Update Unresolved Cross-References dialog box. For details, see "To update cross-references manually" on page 10-19.

1 **In the Update Unresolved Cross-References dialog box, select the file that used to contain the source of an unresolved cross-reference and a file to look in for the source.**



In the example, there are four unresolved cross-references in the file. The source for one of them used to be in the file `Employees`. If you renamed that file `NewEmployees`, you can resolve the cross-reference by selecting `Employees` in the Total of Unresolved Cross-References scroll list and `NewEmployees` in the Look In scroll list.

2 **Click Update.**
If FrameMaker can't perform the update, select a different file in the Look In scroll list if you think it might contain the source. If you can't locate the file that contains the source, the cross-reference marker may have been deleted. If you think the source should be in the document listed for it, use the techniques in "To resolve a cross-reference when a marker is deleted," next, to resolve the cross-reference.

You can resolve cross-references to any other file listed in the Total of Unresolved Cross-References scroll list by redisplaying the Update Unresolved Cross-References dialog box and repeating steps 1 and 2.

3 **Click Done.**

To resolve a cross-reference when a marker is deleted

FrameMaker can't update a cross-reference if the marker indicating the source is deleted. If FrameMaker detects such an unresolved cross-reference during manual updating, it displays the Update Unresolved Cross-References dialog box. For details, see "To update cross-references manually" on page 10-19.

If you no longer need the cross-reference because the source text itself was deleted, you should delete the cross-reference. Otherwise, you should search for the source text and insert a new marker in it.

1 **In the Update Unresolved Cross-References dialog box, click Done.**

2 **Choose Find/Change from the Edit menu.**

3 **In the Find/Change window, choose Unresolved Cross-Reference from the Find pop-up menu and click Find.**
FrameMaker finds the first unresolved cross-reference and selects it. In the Find/Change window, FrameMaker displays the marker text of the last-used source marker for the cross-reference to help you locate the source.

4 **If FrameMaker finds an unresolved spot cross-reference, insert a new cross-reference marker in the appropriate text.**
For details, see "To insert a spot cross-reference" on page 10-8. After inserting the new cross-reference marker, you can continue the search for unresolved cross-references just as you would continue any other search.

5 **If FrameMaker finds an unresolved paragraph cross-reference, double-click the cross-reference.**

6 **In the Cross-Reference dialog box, specify a different source and click Replace.**
Use the Source Type and Source Text scroll lists to specify the source. At this point, you can continue the search for unresolved cross-references just as you would continue any other search.

GENERATING A LIST OF UNRESOLVED CROSS-REFERENCES

There is another way to handle unresolved cross-references besides using the Find/Change command. You can generate a list of unresolved cross-references. The generated list indicates whether each missing source is internal (in the current document) or external (in a different document). It also lists the paragraph tag, text, and page number of the unresolved cross-reference. The paragraph tag and text may be inaccurate because FrameMaker doesn't update them after you initially insert the cross-reference.

To generate the list, choose Generate/Book from the File menu. In the dialog box that appears, choose List of References from the List pop-up menu and click Generate. Move Unresolved Cross-Refs to the Include References scroll list and click Generate. For more information, see "Generating a list of references" on page 22-9.

11

FOOTNOTES

Creating and formatting footnotes

CREATING A FOOTNOTE 11-4

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To insert additional references to a footnote 11-6

To insert endnotes 11-7

CHANGING THE FOOTNOTE FORMAT 11-9

To change footnote properties 11-9

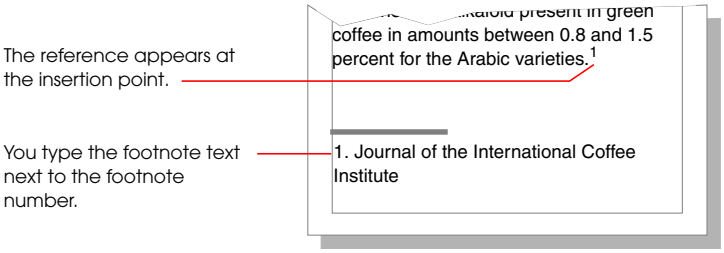
To change the separator 11-12

11 FOOTNOTES

FrameMaker creates, numbers, and positions footnotes for you. You simply identify the passage to be footnoted and type the footnote text. You can define the footnote format or use the default definition.

You type directly on a body page

Creating a footnote is easy. FrameMaker puts the footnote reference number where you want it, inserts a matching number for the footnote itself at the bottom of the text column, and moves the insertion point to a position right after the footnote number so you can begin typing. You type on the body page itself, not in a separate window, so you see just how the footnote will look.



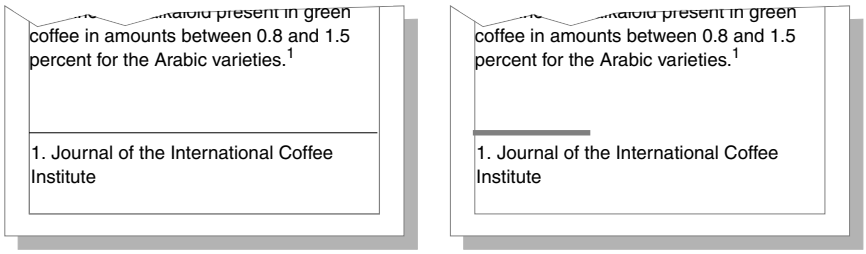
Footnotes adapt to your revisions

FrameMaker footnotes keep up with even the most extensive revisions. You never have to renumber them or cut and paste. If you insert a footnote reference before another footnote reference, FrameMaker adjusts the numbering and inserts the new footnote before the old one. If you move or remove a paragraph that contains a footnote reference, FrameMaker moves or removes the footnote and adjusts the numbering.

You can define the footnote format

The format of footnotes is determined by properties you can define. You can change the paragraph format used for footnote text, number continuously rather than start over on every page, use letters or symbols rather than numbers, and so on.

Changes to some properties can change the look of your pages. For example, you can change the maximum height the lines of footnote text can reach, or you can change the space separating the main text from the first footnote. You can also change the separator line that appears in the space or even remove the line.



Two different separators

You can create table footnotes and endnotes

FrameMaker provides three alternatives to standard footnoting. You can footnote individual table cells. (Footnotes appear at the end of a table even if the table extends several pages.) You can refer to the same footnote from several reference points in the main text or from several cells in a table. And, if you don't mind maintaining the notes, you can create endnotes that appear at the end of the document.

In this chapter

This chapter shows you how to create footnotes and how to change the format they use.

CREATING A FOOTNOTE

When you create a footnote, FrameMaker places the footnote reference and the footnote itself in the same text column. If the footnote reference moves to another column or page, FrameMaker moves the footnote with it. Similarly, when you insert a footnote reference in a table, FrameMaker places the footnote at the end of the table. If the table flows onto a second page, all the footnotes appear on the second page regardless of the page on which the footnote reference appears.

You can create a single footnote that has several footnote references—for example, a table footnote with references in several cells. You can also create endnotes—notes that appear at the end of a document rather than at the foot of a page.

Both these variants on the standard footnote employ a technique that uses FrameMaker cross-references and autonumbers. For general information on cross-references, see Chapter 10, "Cross-References." For information on autonumbers, see "Formatting lists" on page 4-36.

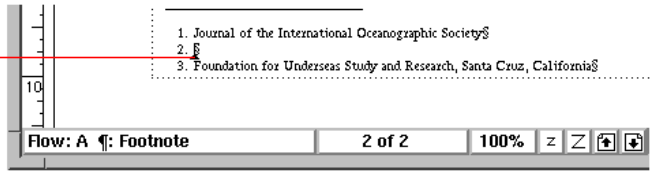
To insert a footnote

When you insert a footnote, you select a position for the footnote reference and then type the text for the footnote. FrameMaker numbers the footnote, formats the footnote text, and inserts a separator if the footnote is the first one in a column.

1 **Click where you want to place the footnote reference in the text.**
You can insert a footnote reference in a column of text or in a table cell.

2 **Choose Footnote from the Special menu.**
FrameMaker inserts the footnote reference, displays the footnote number at the bottom of the column or below the table, places the insertion point after the footnote number, and renumbers any footnotes that follow.

The insertion point appears after the number.



3 **Type the text of the footnote at the insertion point.**

When you finish typing the footnote, you can return to the main text by clicking in it or by choosing Footnote from the Special menu.

CHANGING OR DELETING A FOOTNOTE

You can change footnote text as you do any other text. You can't, however, change a footnote number because FrameMaker maintains the numbering. To delete a footnote, select the footnote reference (not the footnote text) and press Delete. FrameMaker deletes the reference, deletes the footnote, and renumbers subsequent footnotes.

PLACING TWO FOOTNOTE REFERENCES TOGETHER

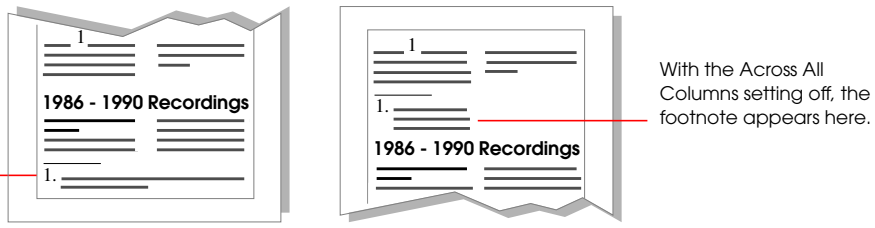
If you need to place two footnote references together, place a space or a comma between them—for example, *references* [5] [6] or *references* [5,6]. Otherwise the second footnote won't be created. (If the footnote references are superscripted, the space or comma between them should also be superscripted.)

FOOTNOTES IN MULTICOLUMN LAYOUTS

When a paragraph straddles columns, a footnote whose reference is above the paragraph is positioned above or below the paragraph depending on the Across All Columns setting in the Pagination properties of the Paragraph Designer.

If Across All Columns is on, the footnote appears below the straddle paragraph, at the bottom of the text frame (which is typically the bottom of the page).

If Across All Columns is off, the footnote appears just above the straddle paragraph, at the bottom of the column containing its reference.



IF A FOOTNOTE DOESN'T FIT IN A COLUMN

FrameMaker tries to keep footnotes in the column where the corresponding footnote reference appears. However, this isn't always possible. For example, if you insert a footnote reference at the bottom of a column of text so there is no space for the footnote below it, FrameMaker moves the footnote to the bottom of the next column. In such cases, forcing a column or page break before the footnote reference keeps the reference and the footnote together in the same column. You can also force column and page breaks by keeping paragraphs together or by controlling widow and orphan lines. For more information, see "To keep paragraphs together" on page 4-28 and "To control widow and orphan lines" on page 4-28.

Also, adding text to a footnote may cause the last footnote in a column to move to the bottom of the next column. To reduce the chance of a footnote not fitting in a column, you can allocate more space for footnotes in a column. For information, see "Maximum height per column" on page 11-10.

To insert additional references to a footnote

You may want several references to the same footnote. For example, you may have several cells in a table that use the same footnote.

Table 1: New York

Type of Fund	Risk Level	Average Rate of Return
High-tech stocks	Very high	15.5%
Tax-free bonds	Low[a]	6.8%
Money-market	Low[a]	7.2%

[a] In a volatile market, "low-risk" becomes a relative term.

You can create multiple footnote references by inserting the first reference in the usual way and then using cross-references for additional footnote references to the same footnote.

1 **Insert the first footnote reference.**

2 **Create a cross-reference format for additional footnote references.**
The format needs to display a particular number with a particular format. FrameMaker displays the correct footnote number because the footnote itself is an autonumbered paragraph. You, however, need to make sure that the number looks like the footnote reference. For example, if you have created a character format for superscript named Superscript, the cross-reference format `<Superscript><$paranumonly>` displays the autonumber of a paragraph as a superscript. When you use it to refer to a paragraph that contains a footnote, it displays the footnote number in superscript.

3 **Click where you want to insert the additional footnote reference.**

4 **Insert a cross-reference to the footnote where you clicked.**
Choose Cross-Reference from the Special menu. In the Cross-Reference dialog box, select the paragraph tag for document footnotes or table footnotes in the Source Type scroll list, select the footnote to which you're creating a cross-reference in the Reference Source scroll list, and choose the cross-reference format you created from the Format pop-up menu. Then click Insert.

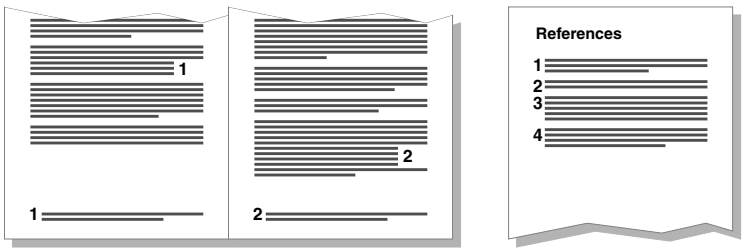
FrameMaker inserts a cross-reference to the footnote that looks just like the original footnote reference.

MAINTAINING CROSS-REFERENCES TO FOOTNOTES AFTER EDITING

After you edit a document, make sure that cross-references to footnotes are accurate. For example, the cross-reference to the footnote reference may be misnumbered, or the footnote—unless the reference is in a table—may be on the wrong page. If the cross-reference is misnumbered, update the cross-references in the document. If the footnote is on the wrong page, fix the page break or move the footnote. For information on updating cross-references, see "Maintaining cross-references" on page 10-17.

To insert endnotes

Endnotes appear at the end of a document rather than at the foot of a page or table.



Footnotes Endnotes

You type the endnotes at the end of the document just as you would any other paragraphs, give the endnote paragraph autonumbers, and then use cross-references to the autonumbered paragraphs as endnote references. Because you can cross-reference from either normal text or a table cell, this technique lets you combine endnotes from passages of normal text and table cells in the same set of endnotes.

1 **Create an autonumber paragraph tag for endnotes.**
For information on creating autonumber paragraphs, see "Formatting lists" on page 4-36.

2 **Create a cross-reference format for endnote references.**
The cross-reference format needs to display a particular number with a particular format. It also needs to make the number stand out from the surrounding text. FrameMaker displays the correct endnote number because the endnote itself is an autonumbered paragraph. For example, if you have created a character format for superscript named Superscript, the cross-reference format `<Superscript>[<$paranumonly>]` displays the autonumber of a paragraph in square brackets and as a superscript.

3 **Type the first endnote at the end of the document and assign it the paragraph tag for endnotes.**

4 **Click where you want to insert the endnote reference and cross-reference the endnote.**
Use the cross-reference format you created for endnotes.

5 **Create additional endnotes as you created the first one.**
You don't have to repeat the first two steps of this procedure for each additional endnote. You can use the same autonumber paragraph format and cross-reference format you created for the first endnote. Make sure that the sequence of endnotes reflects the sequence of references in the document. This isn't automatic as it is with footnotes.

MAINTAINING ENDNOTES

If you change the order of endnote references during revision of the text that contains them, the order of the endnotes themselves doesn't change. You have to arrange them in the correct order yourself. Then you update the cross-references to update the endnote reference numbers. For information on updating cross-references, see "Maintaining cross-references" on page 10-17.

If you delete an endnote and not the reference to it, you'll have an unresolved cross-reference. Either delete the endnote reference or reinsert the endnote.

If you're not willing to maintain the endnotes, you should use footnotes. FrameMaker automatically maintains footnote order and numbering.

CHANGING THE FOOTNOTE FORMAT

If the footnote format you start with isn't appropriate for your document, you can change any of the footnote properties—the style of numbers, the numbering format, or the paragraph format to use for footnote text, for example. And you have complete control over the size and contents of the separator—the area between the bottom of the column or table and the first footnote.

FrameMaker uses separate formats for document and table footnotes. If your document includes both types of footnotes, you need to define document footnote properties, table footnote properties, and separators for both types of footnotes.

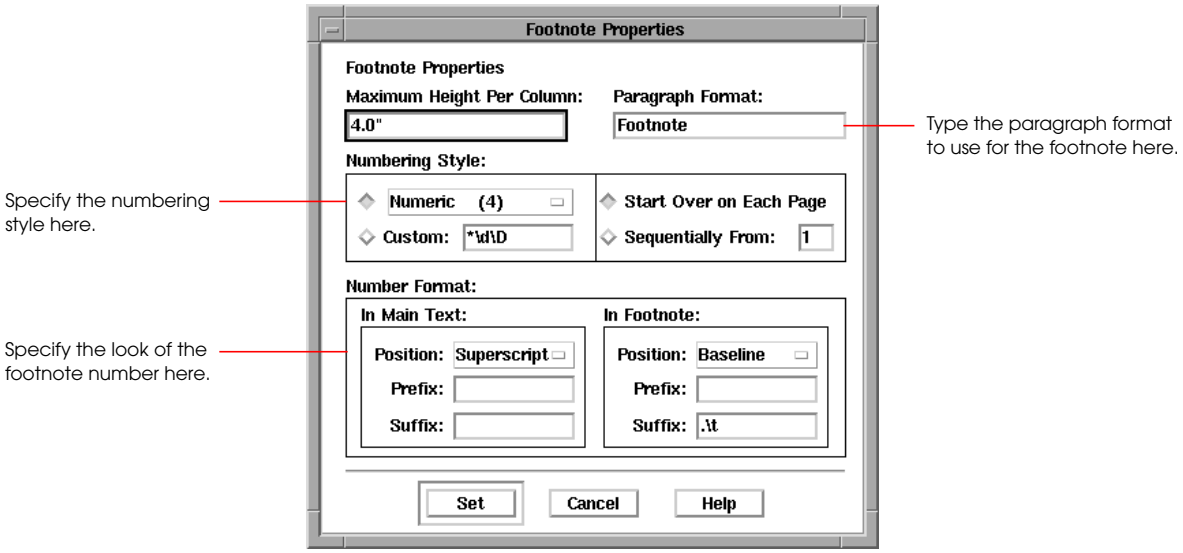
To change footnote properties

When you change footnote properties, all new and existing footnotes use the new properties. You can change the properties of the document footnotes, the table footnotes, or both.

1. **Click in a text frame or in a table cell.**
   Click in a text frame outside a table cell to change document footnote properties. Click in a table cell to change table footnote properties.
2. **Choose Document>Footnote Properties from the Format menu.**
   Depending on where you clicked, either the Footnote Properties dialog box or the Table Footnote Properties dialog box appears.

   For information on changing the values in the Footnote Properties or the Table Footnote Properties dialog box, see the following sections.

3 **Change the properties of the footnote.**



The Footnote Properties dialog box for document footnotes is illustrated. In the Table Footnote Properties dialog box, you have the same options, except that you can't set the maximum space allowed for footnotes, start the numbering over for each page, or indicate the starting footnote number.

4 **Click Set.**

MAXIMUM HEIGHT PER COLUMN

If adding another footnote causes the height of the footnotes plus the footnote separator to exceed the maximum height per column, FrameMaker moves the last footnote to the bottom of the following text column. You can adjust the maximum height allowed by typing a different value in the Maximum Height Per Column text box.

PARAGRAPH FORMAT

By default, documents include paragraph formats named Footnote and TableFootnote. You can change the definitions of these formats to change the look of footnotes.

You can also use other formats in the Paragraph Catalog for footnotes. To use another paragraph format, type its name in the Paragraph Format text box. The format in the Paragraph Format text box applies to new footnotes. To

change the format of an existing footnote, apply a paragraph format to it directly.

NUMBERING STYLE

You can choose a numbering style from the pop-up menu or type a style in the Custom text box. The menu provides numbers and letters. Your custom style can use any combination of numbers, letters, and symbols. Simply type them in the order you want to use them. With document footnotes, you can start numbering over on each page or number sequentially throughout the document. When you number sequentially, you can start from any number. The numbering of table footnotes starts over with each table. For details, see "More about footnote numbering styles" on page 11-11.

NUMBERING FORMAT

You specify the format of the footnote reference in main text and the footnote number in the footnote. Either number can be in the superscript, baseline, or subscript position, and either can have a prefix and suffix. For example, the following footnote places the footnote number in baseline position and uses a period and space as a suffix to the footnote number.

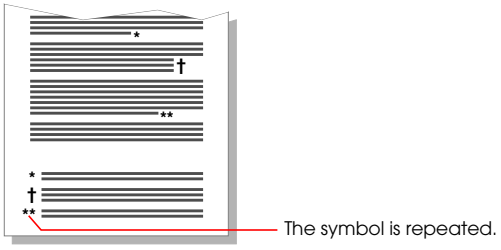
```
1. Use footnotes sparingly.
```

MORE ABOUT FOOTNOTE NUMBERING STYLES

Numbers can be Arabic (numeric) or Roman. Both Roman numerals and letters can appear in uppercase and lowercase. The default numbering style for document footnotes is numeric. The default style for table footnotes is lowercase letters.

You can use special character combinations to type custom characters that don't appear on the keyboard; for example, press Control-q space to get the dagger character (†). For a list of these character combinations and for information on typing them in a dialog box, see Chapter 3, "Character Sets," in the *Quick Reference*.

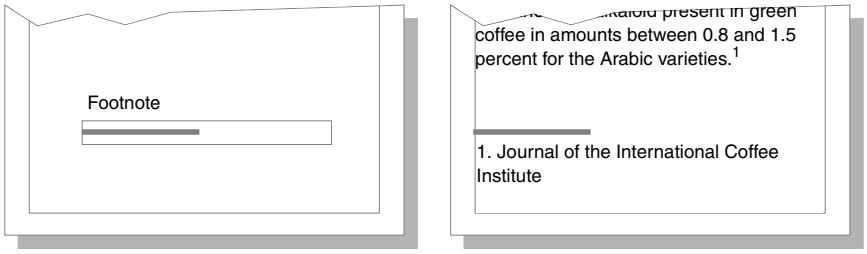
If you use symbols in a custom style and there are more footnotes than symbols, the symbols are repeated. For example, if you use the two symbols * and † and there are three footnotes, the third footnote is marked **.



To change the separator

The footnote separator is a graphic frame automatically placed between the bottom of the body text or table and the first footnote. It usually contains a line or other design element to provide visual separation between the body text and the footnotes. The height of the frame determines the space between the body text or table and the footnote.

Separator frames for document and table footnotes are stored on a reference page. Their names are the same as the paragraph formats used for these footnotes—by default, Footnote and TableFootnote.



Reference page Body page

You can change these separators on the reference page.

For more information on using graphic frames on reference pages, see "Working with reference pages" on page 19-22.

1. **Choose Reference Pages from the View menu.**
2. **Display the page that contains the footnote separator frame.**
3. **Edit the frame or its contents.**
   You can change the size of the frame, change the size or position of the line in it, or remove or replace the line. If you reduce the height of the frame, the first footnote is positioned closer to the bottom of the text or table. If you move the line downward in the frame, the first footnote stays in the same position but the line moves closer to it.
4. **Choose Body Pages from the View menu.**

12

VARIABLES

Using variables for automatic placement of text

WORKING WITH USER VARIABLES 12-4

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To change the definition of a user variable 12-8

WORKING WITH SYSTEM VARIABLES 12-9

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12 VARIABLES

Variables represent text that will change—for example, the current date—or text that may change—for example, a product name. Variables save you the trouble of changing the text yourself. You can define your own user variables or work with the FrameMaker system variables.

Variables are placeholders for text

Variables are useful when you expect the text to change often or when you know the same text will be used in several places. For example, if you insert a current date variable in a memo template, you don't have to type the date in memos that use the template. If you're writing about a product that has not yet been named, you can insert a name variable wherever you refer to the product. When the name is finalized, you don't have to type the new name in all those places. You simply change the variable in one place.

User and system variables provide flexibility

Two types of variables—user and system—give you complete flexibility in the way you use placeholders. User variables, such as the product name variable, are defined by you. System variables derive information, such as the current date, from the computer system.

You name and define user variables

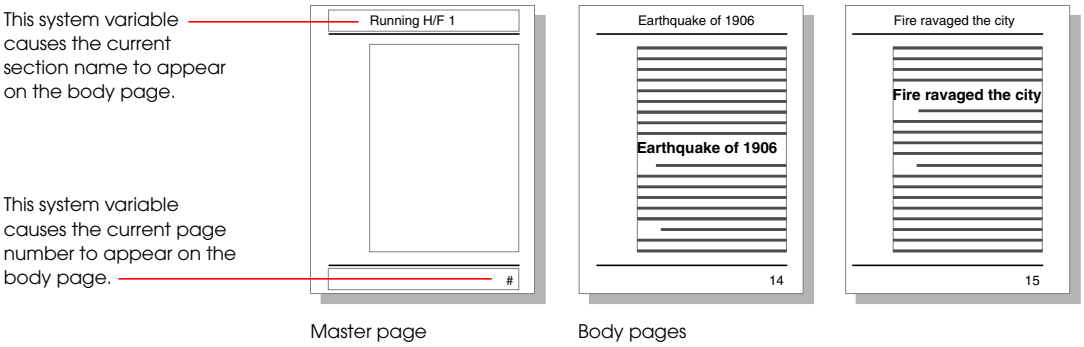
You create a user variable by naming and defining it. A definition is made up of text and building blocks for the character format of the text. For example, a product name variable defined as `<Title>Primo Coffee Maker` would appear on the page as Primo Coffee Maker. If the character format Title was defined as italic, the variable would appear as *Primo Coffee Maker*.

FrameMaker updates the values of system variables

FrameMaker provides the names and default definitions of system variables. A system variable is defined by an arrangement of building blocks that FrameMaker updates, by character format blocks, and by text characters such as the comma and the spaces that appear in the date May 1, 1995. You can edit the default definitions by changing the format or text and by adding, removing, and rearranging blocks. With a system variable, FrameMaker substitutes the current value for items in the definition when it displays the variable in the document.

Running headers and footers use system variables

Running headers and footers contain page numbers, chapter titles, or section headings that may change from page to page. You manage these items by inserting variables in the headers and footers on a master page—the nonprinting page that determines the design of the page. FrameMaker provides the correct values for each body page.



You can get other special header and footer effects by using variables with paragraph autonumbers, markers, and condition tags.

In this chapter

This chapter shows you how to work with user and system variables. It also shows you how to create running headers and footers with system variables. It provides a list of system variables and their definitions on page 12-11 and a list of building blocks used in date and time variables on page 12-17.

WORKING WITH USER VARIABLES

When you create a user variable, first you give it a name and then you define it. The definition includes the text of the variable and any character formatting it needs. When you insert the variable, FrameMaker displays its value—the text in the character format you specified. If you insert the variable in several places in the document, the same text and format appear at each place.

The FrameMaker templates don't provide any user variables. If you're using one of these templates, you have to create your own user variables. If you're using a template created at your site, it may already include some user variables.

You can change the definition of any user variable. For example, if you're using a variable to represent the name of a product that will change later in the development cycle, you'll need to change the definition of the variable when the name is finalized. When you change the definition, FrameMaker updates all occurrences of the variable in your document to use the new definition.

You can't edit occurrences of the variable directly in a document. To change the variable, you change its definition, or you convert it to text and then edit it in the document. If you convert it to text, however, FrameMaker no longer considers the text a variable.

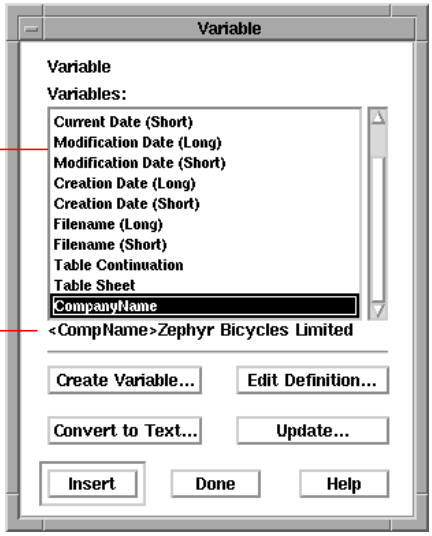
To insert a user variable

You can insert a user variable on any type of page in a FrameMaker document. If you know the name of the variable you're inserting, you can use a keyboard shortcut.

When you insert a user variable, its value is displayed at the insertion point. You can move it, replace it with another variable, or delete it. You can delete a single instance of the variable you inserted or delete it entirely—name and definition—from the document.

1. **Click where you want to insert the variable.**
   You can insert a variable in a text frame but not in a text line.
2. **Choose Variable from the Special menu.**

3 **Select a variable in the Variables scroll list and click Insert.**



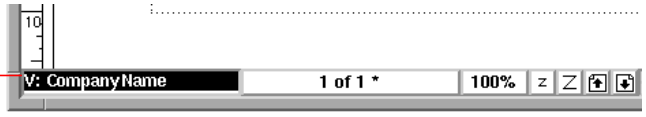
Variables appropriate for the current page appear here.

The definition of the selected variable appears here.

The user variables appear in the scroll list after the system variables. The last system variable is Table Sheet.

KEYBOARD SHORTCUT

Click where you want to insert the variable and press Control-0 (zero). The Tag area on the left side of the status bar prompts you for a variable name.



The highlighted Tag area prompts you to type a tag.

Start typing the variable name. You may need to type only a few characters before the name appears in the Tag area. Type lowercase letters to search forward; uppercase to search backward. You can also use the up arrow and down arrow keys to scroll through variables. Press Return to insert the variable in the document or, if you decide to cancel the operation, click in the document without pressing Return.

You need to type only enough letters to identify the variable uniquely. For example, if there is only one variable beginning with *P* (such as ProductName), the phrase *ProductName* appears in the Tag area when you type `P`.

MOVING OR REPLACING A USER VARIABLE

When you click a variable, FrameMaker selects the variable. You can then copy or move the variable just as you do editable text—by using the Cut, Copy, and Paste commands.

You can replace an existing variable. First, double-click the variable to display the Variable dialog box. Then select a different variable in the Variables scroll list and click Replace.

DELETING A USER VARIABLE

To delete a single occurrence of a user variable, select the variable and press Delete. To delete the variable definition from the document, start by selecting the user variable in the Variable dialog box and clicking Edit Definition. In the dialog box that appears, click Delete and then click Done. FrameMaker converts all occurrences of the variable in your document to editable text. At that point, FrameMaker no longer considers the text a variable.

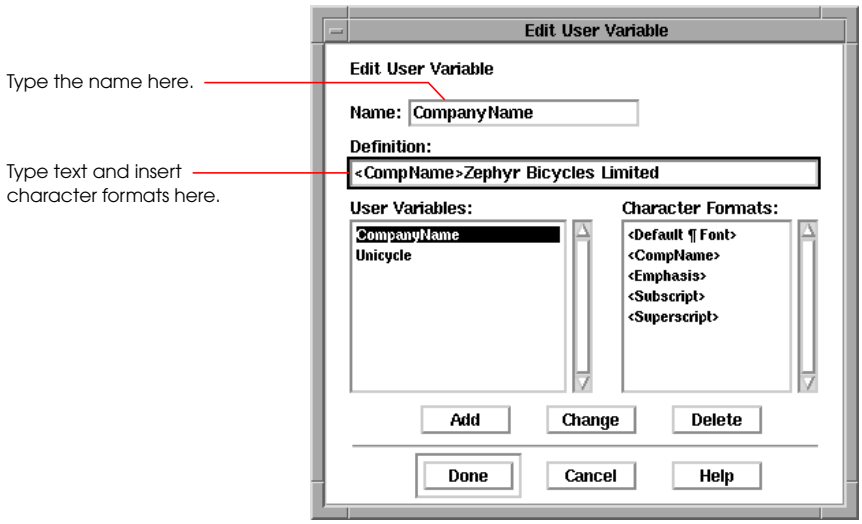
To create a user variable

Before you create a user variable, you need to decide on the name of the variable, the text it will contain, and the character format of the text.

For example, you might create a user variable for a product name that may change or for a long manual name that is difficult to type. You can also change the character format within the variable definition.

1. **Click in a text frame.**
2. **Choose Variable from the Special menu.**
3. **In the Variable dialog box, click Create Variable.**

4 **Type the name and definition of the variable.**



Variable names are case-sensitive; *Product* and *product* would be separate variables. The complete definition, including typed text and character formats, can be up to 255 characters long. You insert a character format in the Definition text box by clicking it in the Character Formats scroll list.

5 **Click Add.**

The variable appears in the User Variables scroll list. To add more user variables, repeat step 4.

6 **Click Done to return to the Variable dialog box.**

FrameMaker adds the user variable or variables to the document. If you decide not to add the variables, click Cancel rather than Done.

FORMATTING CHARACTERS IN THE DEFINITION

The Character Formats scroll list includes all the formats in the Character Catalog of the current document. A character format inserted in the variable definition applies to all text between it and the next character format inserted or to the end of the variable. To avoid confusing FrameMaker, don't use a character format with a name that includes angle brackets.

If you don't insert a character format in the definition, FrameMaker uses the default font of the paragraph that contains the variable. If you change the character format for the variable, the change applies only to the variable, not to

the text following it in the paragraph. Insert `<Default ¶ Font>` in the definition to return to the default font before the end of the variable.

TYPING SPECIAL CHARACTERS

An angle bracket (< or >) ordinarily signals a character format. To include an angle bracket in a variable definition as text, precede it with a backslash (\).

A few FrameMaker characters are not part of the ISO Latin 1 character set used in dialog boxes. As you type these characters in the Definition text box, they appear as a backslash followed by one or two characters. These special characters are displayed correctly when FrameMaker displays the variable in the document. For a list of these special characters, see Chapter 3, "Character Sets," in the *Quick Reference*.

IMPORTING USER VARIABLES

When another document already has user variable definitions you want to use, you can copy those definitions to your document or to files in a book by using the Import>Formats command on the File menu. For information on importing formats into a document, see "Importing formats into a document" on page 21-12. For information on importing formats into documents in a book, see "To update the format of files" on page 24-26.

To change the definition of a user variable

You can change the name or the definition of a user variable before or after you insert the variable in a document. For example, if you have a user variable that defines a product code name, you'll eventually need to change the definition of the variable to the final product name.

When you change a user variable, FrameMaker immediately updates the variable throughout the document. If the user variable appears in the header or footer on a master page, you may need to redisplay the page to see the update.

1. **Click in a text frame.**
2. **Choose Variable from the Special menu.**
3. **In the Variable dialog box, select a user variable in the Variables scroll list and click Edit Definition.**
   When you select a variable, its name and definition appear in the text boxes.
4. **In the Edit User Variable dialog box, change the variable name or the definition.**
   To change the variable name, edit the text in the Name text box.

To change the user variable definition, edit the text in the Definition text box. For information on user variable definitions, see "To create a user variable" on page 12-6.

5 **Click Change.**

6 **Click Done to return to the Variable dialog box.**
FrameMaker changes the definition of the user variable in the document. If you decide not to change the variable definition, click Cancel rather than Done.

VARIABLES IN TEXT INSETS

If the variable resides in a text inset that doesn't use the current document's formats, you need to change the variable in the source document. For information on text insets and their formatting options, see "Importing text" on page 3-12.

CONVERTING A USER VARIABLE TO TEXT

If you no longer want text in your document to be treated as a variable, you can convert the variable to text. You can then edit the text. However, FrameMaker no longer updates the text if the variable definition changes.

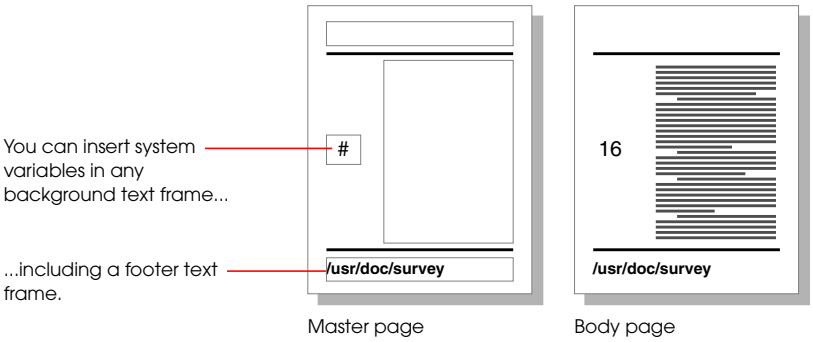
Except for variables in text insets, you can convert all the variables in a document, all the occurrences of a particular variable in a document, or a single variable. To convert a single variable, double-click it; otherwise, click in the document. Then click Convert to Text in the Variable dialog box, indicate the range of variables to convert, and click Convert.

WORKING WITH SYSTEM VARIABLES

FrameMaker documents come with a set of system variables. You can't add to the set, delete a variable from it, or rename a variable. The *system* used by these system variables is FrameMaker and your computer system working together. The variables display information that FrameMaker or your computer system generates—for example, the current page number, the page count of the document, the current date.

Each system variable has a name and a definition. You can't change the name of a system variable, but you can change the definition—for example, the way the current date is displayed. For a complete list of the system variables and their default definitions, see "Default values for system variables" on page 12-11.

Probably the most common way to use system variables is in background text frames. (A background text frame is on a master page and doesn't have a flow tag.) FrameMaker shows whatever is in these text frames on the corresponding body pages. For example, by inserting the appropriate system variable in background text frames, you can display the filename at the foot of every page in a document or have FrameMaker number the pages automatically.



You also use system variables for running headers and footers, which can give information about the contents of a page and so can change from page to page. For details, see "Using system variables in headers and footers" on page 12-18. For information on master pages and background text frames, see "Creating headers and footers" on page 18-10.

FrameMaker automatically updates the value of system variables inserted on master pages. For example, when the value of the current date changes, FrameMaker updates all occurrences of the variable throughout the document. However, if you place a system variable on a body or reference page, FrameMaker automatically updates the value of the variable only when you open or print the file. You can manually update the value of the variable when the file is open.

To insert a system variable

You can insert a system variable in any text frame. If you know the name of the variable you're inserting, you can use a keyboard shortcut.

When you insert a system variable, its value is displayed at the insertion point. You can move it, replace it with another variable, or delete it.

1 **Click where you want to insert the variable.**
For most system variables, you can click in any text frame.

If you're inserting the Current Page # or a running header or footer variable, you must click in a background text frame on a master page. For information, see "Using system variables in headers and footers" on page 12-18.

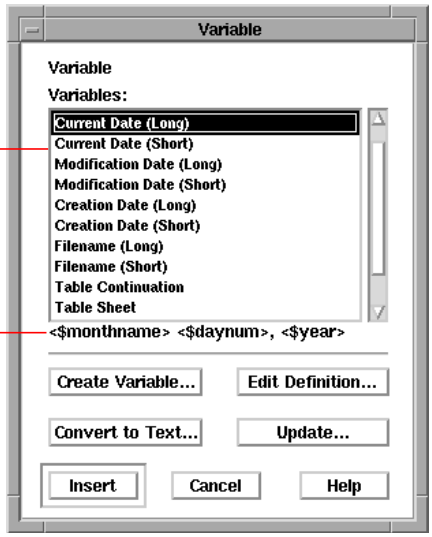
2 **Choose Variable from the Special menu.**

DEFAULT VALUES FOR SYSTEM VARIABLES

Most of the system variables can be inserted in any text frame on a body, reference, or master page. The Current Page # and Running H/F 1, Running H/F 2, Running H/F 3, and Running H/F 4 variables can be inserted only in a background text frame on a master page.

System variable	Default definition (US version)	Sample display
Current Page #	`<$curpagenum>`	3
Page Count	`<$lastpagenum>`	18
Current Date (Long)	`<$monthname> <$daynum>, <$year>`	October 11, 1995
Current Date (Short)	`<$monthnum>/<$daynum>/<$shortyear>`	10/11/95
Modification Date (Long)	`<$monthname> <$daynum>, <$year>, <$hour>:<$minute00> <$ampm>`	September 24, 1995, 10:48 am
Modification Date (Short)	`<$monthnum>/<$daynum>/<$shortyear>`	9/24/95
Creation Date (Long)	`<$monthname> <$daynum>, <$year>`	July 1, 1995
Creation Date (Short)	`<$monthnum>/<$daynum>/<$shortyear>`	7/1/95
Filename (Long)	`<$fullfilename>`	/usr/biff/memos/staffing
Filename (Short)	`<$filename>`	staffing
Running H/F 1	`<$paratext[Title]>`	The Turbulent Oceans
Running H/F 2	`<$paratext[Heading1]>`	Threat of Extinction
Running H/F 3	`<$marker1>`	Inspection Checklist
Running H/F 4	`<$marker2>`	Drawing Objects
Table Continuation	`(Continued)`	(Continued)
Table Sheet	`(Sheet <$tblsheetnum> of <$tblsheetcount>)`	(Sheet 1 of 2)

3 **Select a system variable in the Variables scroll list.**



Variables appropriate for the current page appear here.

The definition of the selected variable appears here.

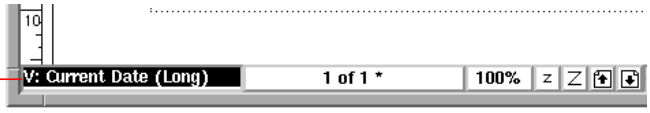
FrameMaker lists the variables allowed at the insertion point in the document. For example, if the insertion point is in a text frame on a body page, FrameMaker doesn't display the current page variable.

4 **Click Insert.**

In most cases, FrameMaker displays the value of the variable on both the master and the corresponding body pages. However, if you insert the page number variable, FrameMaker displays a number sign (#) on the master page and the actual page number on the body page.

KEYBOARD SHORTCUT

Click where you want to insert the variable and press Control-0 (zero). The Tag area on the left side of the status bar prompts you for a variable name.



The highlighted Tag area prompts you to type a tag.

Start typing the variable name. You may need to type only a few characters before the name appears in the Tag area. Type lowercase letters to search forward; uppercase to search backward. You can also use the up arrow and down arrow keys to scroll through variables. Press Return to insert the variable

in the document or, if you decide to cancel the operation, click in the document without pressing Return.

You need to type only enough letters to identify the variable uniquely. For example, if there is only one variable beginning with *P* (such as Page Count), the phrase *Page Count* appears in the Tag area when you type `P`.

MOVING, REPLACING, OR DELETING A SYSTEM VARIABLE

When you click a variable, FrameMaker selects the variable. You can then copy or move the variable just as you do editable text—by using the Cut, Copy, and Paste commands. You can delete it by pressing Delete.

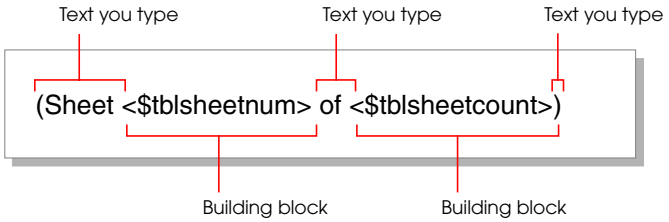
You can replace an existing variable. First, double-click the variable to display the Variable dialog box. Then select a different variable in the Variables scroll list and click Replace.

UPDATING A SYSTEM VARIABLE ON BODY OR REFERENCE PAGES

FrameMaker automatically updates the values of system variables on body and reference pages whenever you open or print the file. If the value of a variable changes after you open or print the file, you can update the variable again by clicking Update in the Variable dialog box. If you change the definition of the variable, FrameMaker immediately updates the variable throughout the document, regardless of the type of page on which the variable occurs.

To change the definition of a system variable

You can change the definition of a system variable before or after you insert the variable in a document. The definition of a system variable is similar to the definition of a cross-reference format. It consists of building blocks and text. The definition that might appear in a table title as *Sheet 3 of 5* would look like this.



You use text for words, punctuation, and regular and nonbreaking spaces. You add text to a definition by typing it. Building blocks appear between angle brackets (< and >). You add them by clicking in a list.

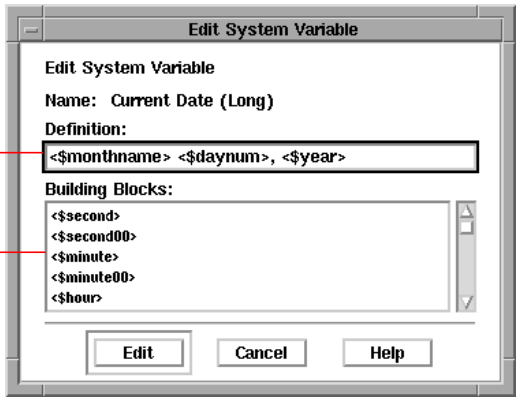
When you change the definition of a variable, FrameMaker immediately updates the variable throughout the document, regardless of the type of page on which the variable occurs.

1 **Click in a text frame.**
For most system variables, you can click in any text frame. If you're changing the definition of the Current Page # or a running header or footer variable, you must click in a background text frame on a master page. For information, see "Using system variables in headers and footers" on page 12-18.

2 **Choose Variable from the Special menu.**

3 **In the Variable dialog box, select a system variable in the Variables scroll list and click Edit Definition.**

4 **Redefine the variable.**



A definition can contain typed text and building blocks. The complete definition, including typed text and building blocks, can be up to 255 characters long. You insert a building block in the Definition text box by clicking it in the Building Blocks scroll list.

The building blocks displayed in the scroll list depend on the system variable you're editing. For example, if you're editing the Page Count variable, the `<$curpagenum>` and `<$lastpagenum>` building blocks are displayed. If you're editing the filename variables, the `<$fullfilename>` and `<$filename>` building blocks are displayed.

5 **Click Edit in the Edit System Variable dialog box.**

FrameMaker makes the change throughout the document. If the variable appears on the current page, and if you inserted the variable on a master page, FrameMaker won't update the value until it redraws the page. To redraw the current page, page forward and back a page.

FORMATTING CHARACTERS IN THE DEFINITION

The Building Blocks scroll list includes all the formats in the Character Catalog of the current document. A character format inserted in the variable definition applies to all text between it and the next character format inserted or to the end of the variable. To avoid confusing FrameMaker, don't use a character format with a name that includes angle brackets.

If you don't insert a character format in the definition, FrameMaker uses the default font of the paragraph that contains the variable. If you change the character format for the variable, the change applies only to the variable, not to the text following it in the paragraph. Insert `<Default ¶ Font>` in the definition to return to the default font before the end of the variable.

For information on adding character formats to the Character Catalog, see "To create a new character format" on page 5-18.

TYPING SPECIAL CHARACTERS

An angle bracket (< or >) ordinarily signals a building block. To include an angle bracket in a variable definition as text, precede it with a backslash (\).

A few FrameMaker characters are not part of the ISO Latin 1 character set used in dialog boxes. As you type these characters in the Definition text box, they appear as a backslash followed by one or two characters. These special characters are displayed correctly when FrameMaker displays the variable in the document. For a list of these special characters, see Chapter 3, "Character Sets," in the *Quick Reference*.

IMPORTING SYSTEM VARIABLES

When another document already has system variable definitions you want to use, you can copy those definitions to your document or to files in a book by using the Import>Formats command on the File menu. For information on importing formats, see "Importing formats into a document" on page 21-12. For information on importing formats into documents in a book, see "To update the format of files" on page 24-26.

VARIABLES IN TEXT INSETS

If a variable resides in a text inset that uses the source document's formats, you need to change the variable in the source document. For information on text insets and their formatting options, see "Importing text" on page 3-12.

CONVERTING A SYSTEM VARIABLE TO TEXT

If you no longer want text in your document to be treated as a variable, you can convert the variable to text. You can then edit the text. However, FrameMaker no longer updates the text if the variable definition changes.

Except for variables in text insets, you can convert all the variables in a document, all the occurrences of a particular variable in a document, or a single variable. To convert a single variable, double-click it; otherwise, click in the document. Then click Convert to Text in the Variable dialog box, indicate the range of variables to convert, and click Convert.

To change the styles of dates and times

You can use system variables for the current date, the date the document was last modified, and the date the document was created. There are long and short versions of each date, and FrameMaker provides variable building blocks for fine-tuning the definitions of the six variables. The building blocks display seconds, minutes, and hours as well as days, months, and years. For details, see "Date and time building blocks" on page 12-17. The default values of the six variables are listed in "Default values for system variables" on page 12-11.

As with all system variables, FrameMaker automatically updates the value of the variable as long as you insert the variable in a background text frame on a master page. However, when you insert the variable on a body or reference page, you may need to update the variable yourself. For more information, see "Updating a system variable on body or reference pages" on page 12-13.

- **To display the current date, insert the Current Date (Long) or Current Date (Short) variable.**
  FrameMaker updates the values of these variables whenever it redraws a page—for example, when zooming or when changing pages.
- **To display the date the file was created, insert the Creation Date (Long) or Creation Date (Short) variable.**
  FrameMaker sets the values of these variables when you create a document by using the New command.

- **To display the date the document was last modified, insert the Modification (Long) or Modification (Short) variable.**
  FrameMaker updates the values of these variables whenever you save or print a document.

DATE AND TIME BUILDING BLOCKS

You can redefine the six date and time variables by using the building blocks listed below.

Building block	What it displays	Example
<$second>	Seconds	8 or 32
<$second00>	Seconds with a zero placeholder for numbers smaller than 10	08 or 32
<$minute>	Minutes	8 or 32
<$minute00>	Minutes with a zero placeholder for numbers smaller than 10	08 or 32
<$hour>	Hours	8 or 12
<$hour01>	Hours with the zero placeholder for numbers smaller than 10	08 or 12
<$hour24>	Hours between 01 and 24	08 or 22
<$ampm>	The morning or evening designation using lowercase letters	am or pm
<$AMPM>	The morning or evening designation using uppercase letters	AM or PM
<$daynum>	The number of the day	8 or 28
<$daynum01>	The number of the day with the zero placeholder for numbers smaller than 10	08 or 28
<$dayname>	The name of the day	Monday
<$shortdayname>	The abbreviated name of the day	Mon
<$monthnum>	The number of the month	8 or 12
<$monthnum01>	The number of the month with the zero placeholder for numbers smaller than 10	08 or 12
<$monthname>	The name of the month	August
<$shortmonthname>	The abbreviated name of the month	Aug
<$year>	The year	1995
<$shortyear>	The abbreviated year	95

CHANGING THE LANGUAGE

FrameMaker uses the language of the current paragraph to determine the language used in date and time system variables. For example, the current date variable may appear as *10 December 1995* in an English paragraph but as *10 Dezember 1995* in a German paragraph. If you change the language of a paragraph, FrameMaker updates the system variables in the paragraph to use the new language.

USING SYSTEM VARIABLES IN HEADERS AND FOOTERS

A running header or footer variable gives information about the contents of a page and so can change from page to page. For example, you can include information such as the manual title, the number and title of the current chapter, the name of the current first-level section, and the current page number in the running headers and footers.

Running headers and footers use system variables such as the current page and current date variables. They also use four system variables provided especially for running headers and footers.

The value of a running header or footer variable can be a paragraph with a particular tag—usually a title or heading paragraph—or marker text. You can use these variables with their default definitions, or you can customize them—for example, by changing the heading paragraph tag that appears in the running header.

Keep in mind that a system variable has both a name and a definition. With running header and footer variables, the name appears on the master page; the value on each body page depends on the definition and the contents of the page.

To insert a variable in a running header or footer

You insert a running header or footer variable in a background text frame on a master page. The techniques for inserting a variable are the same whether the variable has the default definition or a custom definition. But it makes sense to insert the variable before you customize, because it's easier to perfect the definition of the variable when it's already in place.

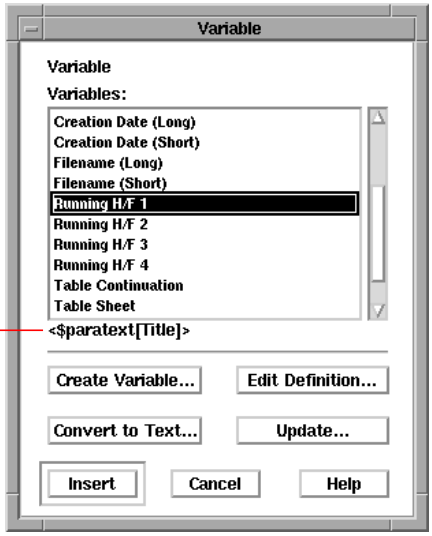
For information on customizing the definition of a running header or footer variable, see "To display the text, autonumber, or tag from a paragraph" on page 12-20, "To display text from a marker" on page 12-22, "To display a condition tag" on page 12-23, or "To create dictionary-style headers or footers" on page 12-24.

1 **Choose Master Pages from the View menu.**

2 **Click in a background text frame.**
If you are using blank paper, you see default header and footer text frames. If no header or footer text frames are included, you can draw your own. You can also move or resize the text frames to match the design of your document.

3 **Choose Variable from the Special menu.**

4 **Select one of the running header/footer variables in the Variables scroll list.**



The definition of the selected variable refers to a paragraph tagged Title.

By default, the Running H/F 1 and Running H/F 2 variables use definitions that refer to paragraphs. The Running H/F 3 and Running H/F 4 variables use definitions that refer to markers. You can change these default definitions as necessary.

5 **Click Insert.**
FrameMaker displays the name of the variable on the master page and the text of the running header or footer on the body page.

To display the text, autonumber, or tag from a paragraph

The most common application of running headers and footers is to refer to a paragraph by its tag and show the text, autonumber, or tag from that paragraph. For example, a running header might be the current section heading or the chapter number. For more examples, see "More text, autonumber, and tag examples" on page 12-20.

FrameMaker searches on each body page to find a paragraph with the tag you specify and then puts the paragraph's text, autonumber, or tag in the running header or footer for that page. If a page doesn't contain a paragraph with the tag you specify, FrameMaker searches backward through the preceding pages and uses information from the first appropriate paragraph it finds.

1 **Insert a variable in the header or footer.**

MORE TEXT, AUTONUMBER, AND TAG EXAMPLES

Here are some examples of variables in running headers and footers that use paragraph tags.

Running header/footer variable definition	Sample display	Explanation
`<$paratext[1Heading]>`	Changing a Filter	The text of the first paragraph FrameMaker finds with the tag 1Heading
`<Header><$paratext [1Heading]>`	*CHANGING A FILTER*	The text of the first paragraph FrameMaker finds with the tag 1Heading; the text appears in the Header character format—uppercase, italic letters
`<$paranum[1Heading]>`	Chapter 2	The complete autonumber definition of the first paragraph FrameMaker finds with the tag 1Heading
`<$paranumonly[1Heading]>`	2	Just the autonumber of the first paragraph FrameMaker finds with the tag 1Heading
`<$paratag[1Heading]>`	1Heading	The tag of the first paragraph FrameMaker finds with the tag 1Heading
`<$paratext[ChapTitle, AppendixTitle]>`	Filters	The text of the first paragraph FrameMaker finds with either the ChapTitle or AppendixTitle tag
`<$condtag[Retail, Wholesale,No Prices]>`	Retail	The condition tag of the condition currently showing; if both conditions are hidden, the text *No Prices* appears

2 **Edit the definition of the variable so that it includes a building block that uses `[paratag]`.**

The table explains the four `[paratag]` building blocks.

To show this from the paragraph	Use this building block
The text	`<$paratext[paratag]>`
The autonumber including any text in the autonumber format	`<$paranum[paratag]>`
The autonumber excluding any noncounter text in the autonumber format	`<$paranumonly[paratag]>`
The paragraph tag	`<$paratag[paratag]>`

Replace the word *paratag* in the building block with the tag of the paragraph for which you want to display information. Don't delete the square brackets. To avoid confusing FrameMaker, don't use a paragraph format with a name that includes square brackets.

MORE THAN ONE TAG

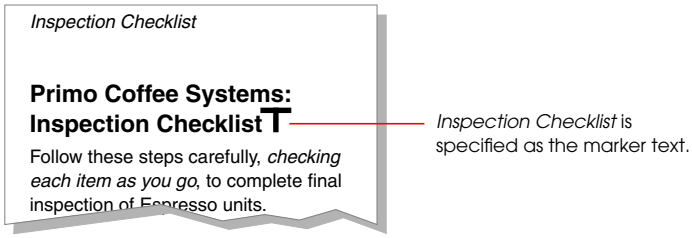
You can include more than one paragraph tag in the `[paratag]` part of a building block. When you include multiple paragraph tags, FrameMaker searches the current page and then backward in the document and uses the first paragraph it finds with one of the tags. If a page contains multiple paragraphs with the tags, FrameMaker uses the paragraph closest to the top of the page. Separate the tags with commas as in the following example:

```
<$paratext[1Heading,2Heading]>
```

This building block lets you include different levels of headings in the same header or footer.

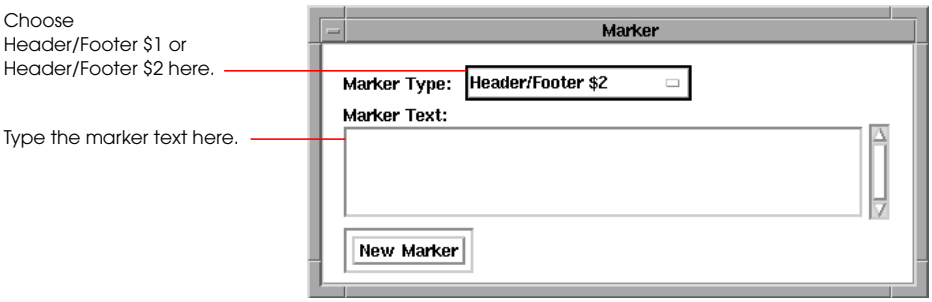
To display text from a marker

If the text you want to show in a header or footer doesn't appear in a paragraph of its own, you can show text associated with a marker. For example, you can use a marker to show an abbreviated version of a title or to summarize the contents of a page.



FrameMaker searches for a marker just as it does for a paragraph tag, searching the current page and then backward from the current page until it finds an occurrence of the marker.

1. **Insert a variable in the header or footer.**
   By default, the Running H/F 3 and Running H/F 4 variables use definitions that look for markers.
2. **Edit the definition of the variable to use a `<$marker1>` or `<$marker2>` building block.**
   The `<$marker1>` building block displays the text of a Header/Footer $1 marker. The `<$marker2>` building block displays the text of a Header/Footer $2 marker.
3. **Display a body page and click where you want to insert a marker.**
4. **Choose Marker from the Special menu.**
5. **Choose one of the marker types, type the marker text, and click New Marker.**



When you type the marker text, make sure that the spaces, punctuation, and capitalization are as you want them. You can't format the marker text in the Marker Text text box. To format the marker text, insert a character format building block before the marker building block in the system variable definition.

To display a condition tag

In a document that uses conditional text, you can show a condition tag that appears on the current page in the running header or footer. FrameMaker doesn't include a predefined variable for this purpose, but you can redefine any of the existing running header and footer variables to use the conditional tag building block. Unlike the system variables that refer to a paragraph or a marker, variables with the conditional tag building block search only on the current page.

1 **Insert a variable in the header or footer.**

2 **Edit the definition of the variable to use the `<$condtag [hitag,...,lotag, nomatch]>` building block.**

Replace *hitag, lotag,* and the ellipsis with one or more condition tags you want FrameMaker to look for. Replace *nomatch* with the text you want to display if FrameMaker doesn't find one of the tags in the definition. If you don't want to display any text when there's no match, type a nonbreaking space (press Control-space) in place of *nomatch*.

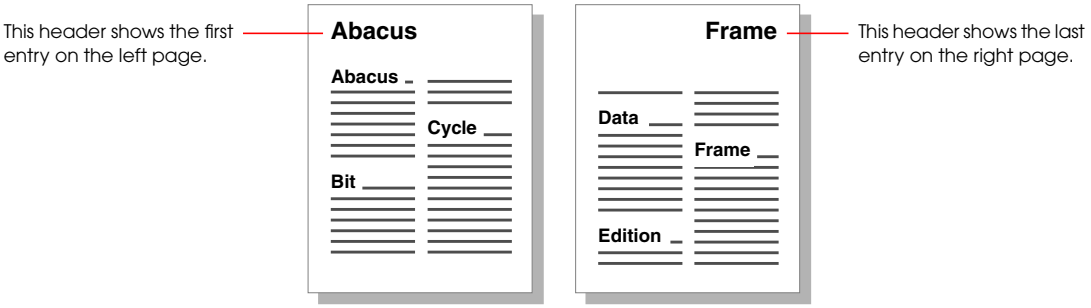
FrameMaker searches a page for the tags you specify. If it finds one of the tags, the tag appears in the running header or footer. If it finds more than one tag, the tag that comes earliest in the definition appears.

USING CONDITION TAGS FOR CLASSIFIED INFORMATION

If your document contains classified information, you can apply condition tags such as Top Secret and Secret to the classified information. Then set up the header or footer of the document to include the Top Secret or Secret condition tag on the pages that contain classified information. To have FrameMaker display Top Secret on pages with both Top Secret and Secret information and Unclassified on pages with neither condition tag, define the building block as `<$condtag[Top Secret,Secret,Unclassified]>`.

To create dictionary-style headers or footers

If you're setting running headers or footers in a document such as a dictionary, an index, or a glossary, you can use dictionary headers or footers to show the range of information that appears on one body page or on two facing body pages.



1. **Insert two variables in the headers or footers of two facing master pages.**
   For example, you can insert Running H/F 1 on the left master page and Running H/F 2 on the right master page.
2. **Edit the definition of the variable on the left master page to use the `<$paratext [paratag]>` building block.**
3. **Edit the definition of the variable on the right master page to use the `<$paratext [+,paratag]>` building block.**
   Replace *paratag* with the paragraph tag of dictionary terms in both variables. The plus sign (+) on the right master page tells FrameMaker to find the last paragraph on the page matching the tag rather than the first paragraph.

PART III

Graphics

13

ILLUSTRATING A DOCUMENT

Creating objects with the FrameMaker drawing tools

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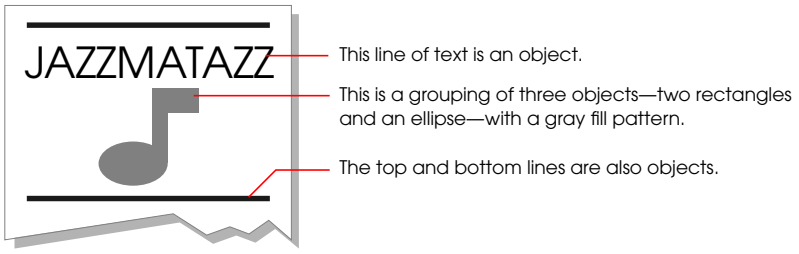
13 ILLUSTRATING A DOCUMENT

You illustrate a document by using the FrameMaker drawing tools—working with objects such as straight and curved lines, circles, polygons, text lines, and text frames.

You draw and combine objects to create illustrations

An illustration usually includes several objects. Some objects, such as the straight lines in the following illustration, stand alone. Others are combined into more complex shapes.



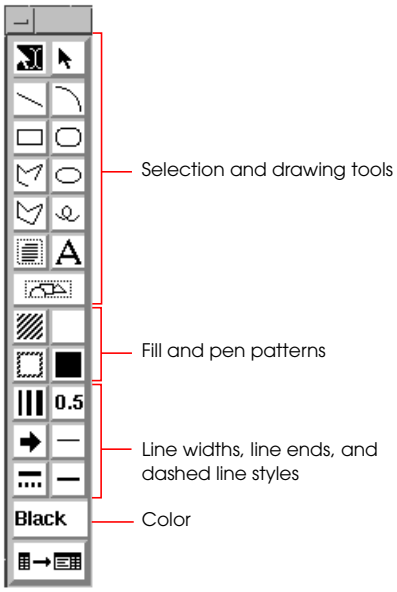
Text lines, such as the one in the illustration, are separate objects. You can also add text frames to your illustration for text that flows from line to line.

You can draw anywhere you wish

You can draw objects anywhere on a page and run the document text around the objects. Objects you draw on a page don't move as you edit text. If you want an illustration to move with the surrounding text, you must put the object in an anchored frame.

You use the Tools palette and grids as you draw

When you draw, you choose the tool and properties you want on the Tools palette. Use the snap grid and Gravity to help you draw and position objects.



You choose properties for different effects

You can change the properties of any object. For example, you can change the thickness of lines, make them dashed rather than solid, make the ends rounded, and even add arrowheads. You can also change the fill pattern of objects using shades of gray or patterns included with FrameMaker, and you can change the color.

You can choose the properties an object will have before you draw it, or you can draw first and change the object's properties later.

In this chapter

This chapter shows you how to display the Tools palette; set up the grids; draw objects, select them, and change their properties; add text; and customize settings on the Tools palette.

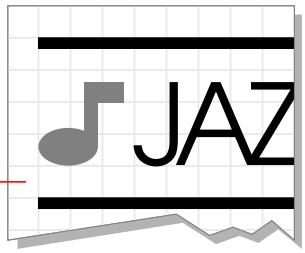
Chapter 14 shows you how to work and rework objects to polish your illustrations. It explains how to resize, reshape, flip, and rotate objects, and how to align objects, distribute them equally apart, and group them together. Chapter 15 shows you how to anchor graphics to text.

SETTING UP THE DRAWING ENVIRONMENT

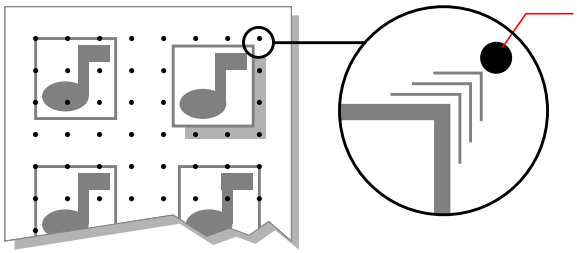
Before you draw or edit objects, take a few moments to set up your drawing environment—the Tools palette and the drawing grids.

The Tools palette contains drawing tools. It also contains pop-up menus you use to change an object's properties. You can use a larger Tools palette if you have room on the screen. Individual patterns and other settings are visible on the large Tools palette, as are some commands from the Graphics menu.

Grids—a visible grid and an invisible snap grid—are available as drawing aids. The visible grid appears on the screen but does not appear in the printed document. You use the visible grid as a guideline when you draw or arrange objects.



The invisible snap grid has magnetic properties. As you draw, move, resize, or reshape objects on the screen, they snap to the invisible grid. As you rotate objects, they snap to the rotation grid. The snap grid can help you draw objects that are the same size and that are aligned with one another.



You can choose your own spacing for the grids.

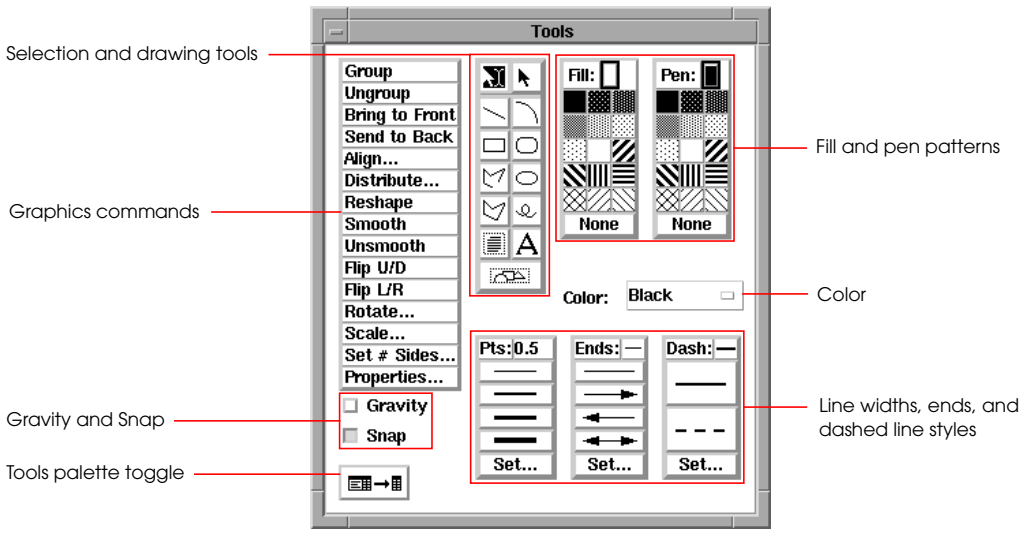
To display the Tools palette

You usually have the Tools palette open as you draw or edit objects.

- **Choose Tools from the Graphics menu.**
- **Click the Tools button** **at the right side of the document window.**

To display the large Tools palette

If you have room on your screen, you may prefer to use the large Tools palette.



Fill patterns, pen patterns, line widths, line ends, and dashed line styles are visible on the palette. When you want to change an object's properties, you can click the setting you want rather than choose it from a pop-up menu as you do on the small Tools palette. Also, the large Tools palette includes many of the commands from the Graphics menu. You choose a command on the palette by clicking it.

- **To display the large Tools palette, click the Tools palette toggle on the small Tools palette.**
- **To change back to the small Tools palette, click the Tools palette toggle on the large Tools palette.**

To turn the grids on and off

When you turn on the visible grid, grid lines appear in the margins of a page and in frames. When the fill pattern of a text frame is None, the page's grid lines also appear through the text frame. When you turn on the snap grid, the document's appearance doesn't change, but objects snap to the grid as you draw, move, resize, reshape, or rotate them.

These grids can be on or off in any combination: grid lines with Snap on or off, or no grid lines with Snap on or off.

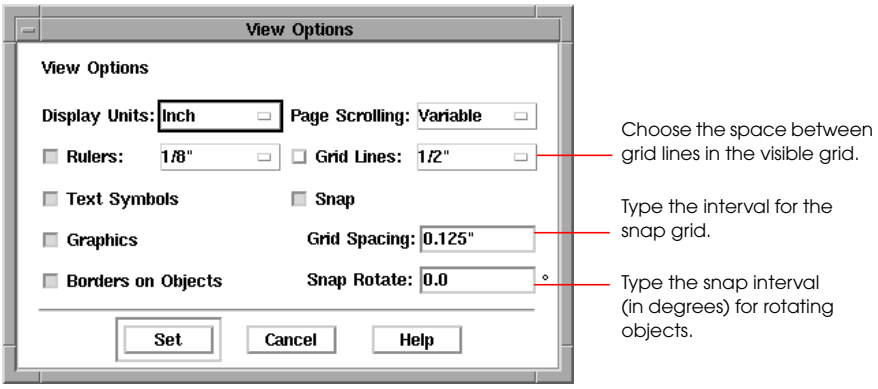
- **To show or hide the visible grid, choose Grid Lines from the View menu.**
- **To turn the snap grid on or off, choose Snap from the Graphics menu.**
  When the snap grid is on, the checkbox next to the command name on the menu is on.

To set the grid spacing

You can set the space between lines in the visible grid and in the snap grid. You can also set the snap interval for rotating objects—for example, every 15 degrees.

1. **Choose Options from the View menu.**

2 **Set intervals for the visible grid, snap grid, and rotating objects, and then click Set.**

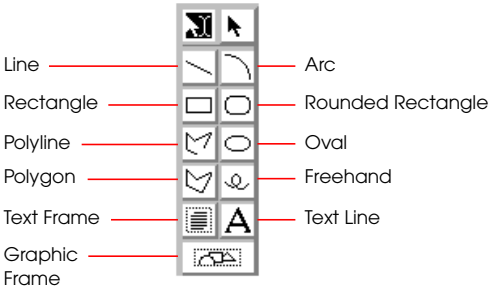


You should make the visible grid interval a multiple of the snap grid interval. For example, if the snap grid spacing is .125", you could make the visible grid spacing .125", .25", or .5".

You can type a whole number or a decimal in the Snap Rotate text box. When you set the value to zero, objects won't snap when you rotate them.

DRAWING OBJECTS

The Tools palette contains tools for drawing objects.



Use the Line, Polyline, Arc, and Freehand tools to create various types of lines. Use the Rectangle, Rounded Rectangle, Oval, and Polygon tools to create closed shapes. Use either the Text Frame or Text Line tool to add text to a graphic, and use the Graphic Frame tool to crop objects. For an overview of text and graphic

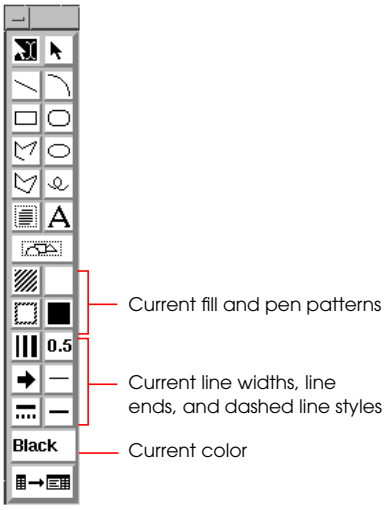
frames, see “Frames” on page 13-33. For information on cropping objects, see “To crop or mask a graphic” on page 14-19.

Objects drawn on a page don’t move as you edit text. Objects in an anchored frame move with the surrounding text. For information on anchored frames, see Chapter 15, “Anchoring Graphics.”

To draw any object

Regardless of which type of object you’re creating, drawing an object is a simple series of clicks or drags. As you draw, FrameMaker displays the outline of the object, so you can experiment with the shape before completing the action.

After you draw an object, it has the current properties—the properties that appear next to the pop-up menus on the Tools palette. The object is also selected, to make changing these properties easier.



You can choose an object’s properties before you draw it, or you can change them after you draw. For information on choosing properties, see “Choosing object properties” on page 13-18.

1 **Click a drawing tool.**

When you click a tool, the pointer changes to a drawing cross (+) in the document window for all tools except the Text Line tool. When you click the Text Line tool, the pointer changes to I.

2 **Draw the outline of the object.**

In some cases, you click at various points to draw an object. In other cases, you drag from the beginning of a shape to the end. Don't worry about the exact placement of an object when you draw it. You can move it easily later.

The remaining instructions in this section describe exactly how to draw each type of object.

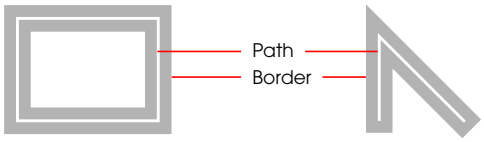
3 **Release the mouse button.**

TEXT CAN RUN AROUND OBJECTS

When an object (except a text line or an equation) overlaps a text frame, the text in the text frame can run around the object. To change the object's runaround properties, use the Runaround Properties command on the Graphics menu. For details, see "To run text around a graphic" on page 13-30.

FRAMEMAKER POSITIONS OBJECTS ALONG THEIR PATHS

The outline that appears as you draw an object is the object's path—an imaginary line through the center of its border.



FrameMaker uses the path to position objects. So when the snap grid is on as you draw, FrameMaker aligns the path—not the outside of the border—with the snap grid.

DRAWING SEVERAL OBJECTS OF THE SAME TYPE

After you draw an object, the pointer normally changes back to so you can select objects or to so you can select text. To draw another object, you must click a drawing tool again.

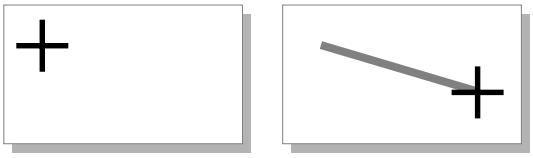
To draw several objects of the same type (except text lines) without clicking the tool each time, Shift-click a tool. To stop using the tool, click another drawing tool or one of the selection tools on the Tools palette.

To draw another text line without clicking the tool again, press Return at the end of a text line and continue typing. For more information, see "To add a text line" on page 13-25.

To draw a line

You can draw a line in any direction, or you can constrain the line to horizontal or vertical or to a 45-degree angle.

1. **Click the Line tool** .
2. **Click where you want to start the line.**
3. **Click where you want to end the line.**



Click to start. Click to end.

You can also drag from the beginning point to the endpoint.

To draw a horizontal or vertical line, or a line at a 45-degree angle, Shift-click or Shift-drag.

DRAWING CONNECTED LINES

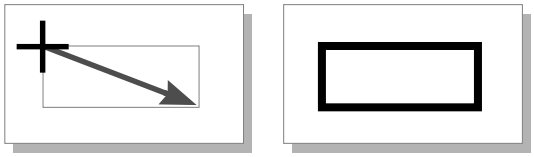
When you want to draw several connected lines, you can use the Line tool to draw them and use the Gravity feature to make sure they connect. Or you can use the Polyline tool to draw the connected lines all at once. For details, see "To draw a polyline or polygon" on page 13-11.

To draw a rectangle, a square, an oval, or a circle

You use the Rectangle tool to draw a rectangle or a square. You use the Oval tool to draw an oval or a circle. A common use of the Rectangle tool is to draw a border around a graphic.

1. **Click the Rectangle tool , the Oval tool , or the Rounded Rectangle tool** .
2. **Drag diagonally across the area in which you want the object to appear.**
   To draw a square or circle, Shift-drag.

3 **Release the mouse button.**



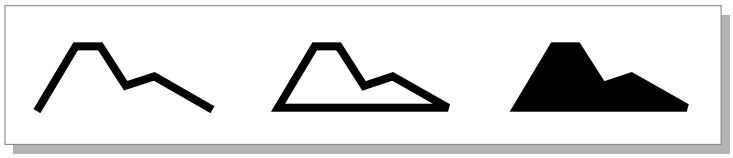
Drag. Release.

DRAWING A BORDER AROUND A GRAPHIC

To draw a border around a graphic, simply draw a rectangle around the graphic. Make sure the rectangle has a fill pattern of None. For details on choosing a fill pattern, see "To change a graphic property" on page 13-19.

To draw a polyline or polygon

A polyline is a series of connected line segments. A polygon is a closed polyline shape.



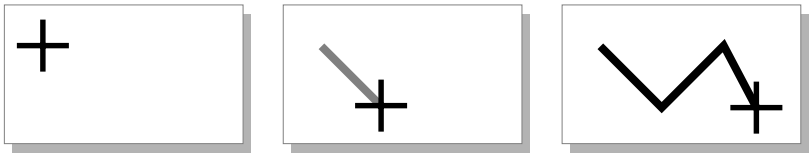
Polyline Polygon Filled polygon

1 **Click the Polyline tool or the Polygon tool .**

2 **Click at a vertex of the polygon or polyline.**

3 **Click at each vertex in turn.**
To draw a horizontal or vertical segment, or a segment at a 45-degree angle, Shift-click at a vertex.

4 **Double-click at the last vertex.**



Click to start. Click at each vertex. Double-click to end.

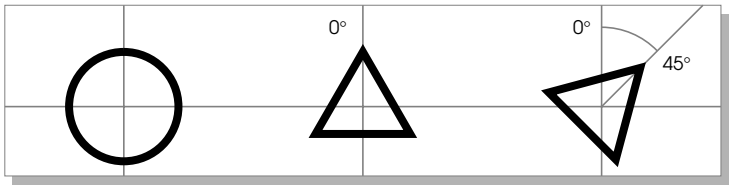
To draw a regular polygon

A regular polygon has equal angles and equal sides. For example, a pentagon is a regular polygon with five sides.

1 **Draw a circle or square that is slightly larger than the regular polygon you want to create.**
If you draw a rectangle or an oval, the polygon you create won't be regular.

2 **Select the object and choose Set # Sides from the Graphics menu.**

3 **In the Set Number of Sides dialog box, specify the number of sides and the start angle of the polygon.**
For example, when you specify three sides and a start angle of zero degrees, the circle becomes an equilateral triangle with a vertex at the top.



Original object | Number of sides = 3, Start angle = 0° | Number of sides = 3, Start angle = 45°

4 **Click Set.**

To draw an arc

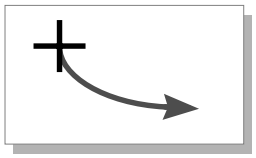
An arc is a section of an oval or a circle. When you draw an arc in FrameMaker, it initially is a 90-degree arc. To create one with a different angle, draw the arc and then reshape it. For details on reshaping an arc, see "To reshape an arc" on page 14-22.

1 **Click the Arc tool** .

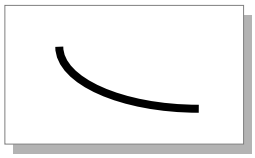
2 **Put the pointer where you want to start the arc.**

3 **Drag along the path of the arc.**
To draw a circular arc, Shift-drag.

4 **Release the mouse button.**



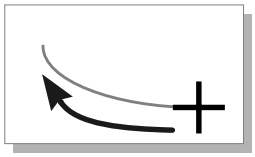
Drag.



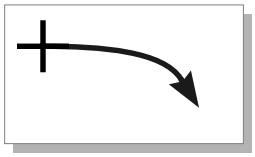
Release.

CORRECTING THE SHAPE OF AN ARC

If the arc isn't the shape you want (for example, if it's concave rather than convex), don't release the mouse button. Drag the cross back to the starting point and draw the arc again, dragging along the path you want the arc to trace.



Drag the cross back to the starting point.



Redraw the arc.

To draw a freehand curve

A freehand curve is similar to a curve you draw with a pen on paper. Draw freehand curves when you need shapes with smooth, continuous curves—Bezier curves.

The snap grid is ignored for all but the first point of a freehand curve; however, you may want to turn the snap grid off before drawing the curve.

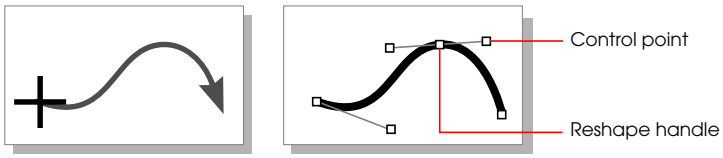
1 **Click the Freehand tool** .

2 **Put the pointer where you want to start the freehand curve.**

3 **Drag along the path of the curve.**

4 **Release the mouse button.**

When you release the mouse button, FrameMaker approximates a curve along the path you drew and displays reshape handles and control points so you can reshape the curve. For information, see "To reshape a curve" on page 14-20.



Drag. Release.

CONTROLLING THE SHAPE MORE PRECISELY

For more precise control over the shape of the curve, you can create a curve by drawing polylines or polygons and then smoothing them. For information, see "To draw a polyline or polygon" on page 13-11 and "To smooth and unsmooth an object" on page 14-18.

To draw an unanchored graphic frame

You use unanchored graphic frames to crop graphics and to hold reference art on a reference page. For details, see "To crop or mask a graphic" on page 14-19 and "Working with reference pages" on page 19-22.

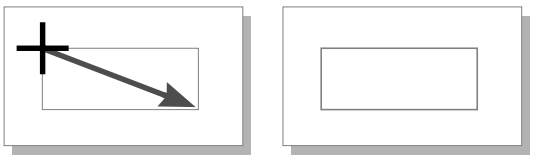
1 **Click the Graphic Frame tool** .

2 **Put the pointer where you want to start the frame.**

3 **Drag diagonally to where you want to end the frame.**

To draw a square frame, Shift-drag.

4 **Release the mouse button.**



Drag. Release.

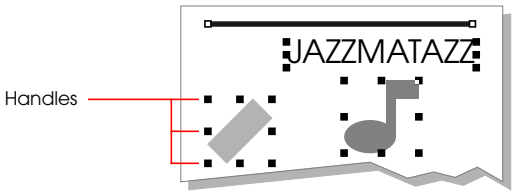
USING ANCHORED FRAMES

When you want a graphic to move along with related text as you edit a document, put the graphic in an anchored frame. For details, see Chapter 15, "Anchoring Graphics."

SELECTING OBJECTS

When you draw an object, the object is automatically selected. You can select different objects to change their properties or to edit the objects.

You can select one object or several. Handles appear around each selected object. When you drag a handle, you resize an object.



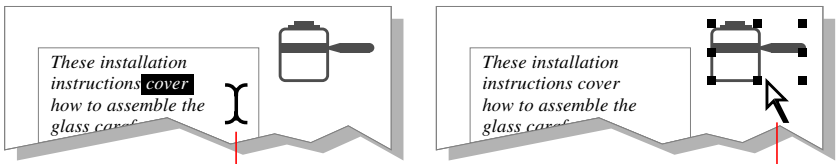
You can use the Smart Selection tool or the Object Selection tool. The Smart Selection tool allows you to place an insertion point or select text when the pointer is over text. The Object Selection tool always selects objects.

To choose a selection tool

FrameMaker provides two tools on the Tools palette that you can use to select objects—the Smart Selection tool and the Object Selection tool.

Normally, the Smart Selection tool is active (highlighted).

In general, use the Smart Selection tool as you work. When the Smart Selection tool is active, the pointer changes shape as you move it—to an I-beam (I) indicating that you'll place an insertion point in text or to a hollow arrow ( ) indicating that you'll select an object when you click.



Use the Object Selection tool when you're working with text lines and text frames as objects—for example, when you want to move or resize a text frame. When the Object Selection tool is active, you can select only objects. This means

that when you click in text, you select the text line or text frame as an object rather than put an insertion point in the text.

- **To use a selection tool, click it on the Tools palette.**
  Normally, FrameMaker activates the Smart Selection tool when you finish drawing an object.
- **To keep the Object Selection tool active after drawing an object, Shift-click it on the Tools palette.**

To select an object

You select all objects (except text lines and text frames) in the same way, no matter which selection tool is active.

- **To select an object, click it.**
  If the object is hollow (a fill pattern of None), click its border.

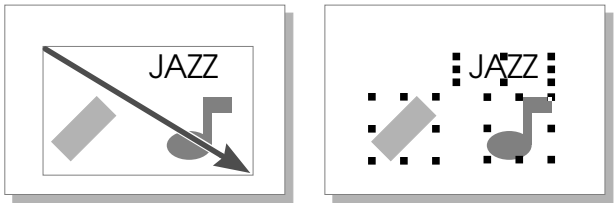
  Selecting an object deselects any currently selected objects.
- **To select a text line or text frame when the Smart Selection tool is active, Control-click the line or frame.**

To select several objects

You may want to change the fill or pen pattern of several objects at once. Or you may want to align several objects with one another.

You can select several objects at once, or you can add objects to an existing selection. However, all the objects must be on the same page or in the same graphic frame. Also, when you select a graphic frame, nothing else can be selected at the same time.

- **To select several objects in the same area, point outside the objects and drag diagonally to draw a selection border around them.**



Drag. Release.

All objects you want to select must be completely within the selection border.

- **To select all objects in a graphic frame, select the frame and choose Select All in Frame from the Edit menu.**

- **To select all objects on a page, click outside any objects or text on the page and choose Select All on Page from the Edit menu.**
- **To add an object to a selection, hold down Shift while you click the object.**
  If you're adding a text line or text frame to the selection using the Smart Selection tool, hold down Control-Shift while you click.
- **To add several objects in the same area to a selection, hold down Shift and drag diagonally to draw a selection border.**
  When you release the mouse button, all the objects completely within the selection border are added to the selection. If any objects within the selection border were selected when you began dragging, they are deselected.

  #### IF YOU MOVE THE OBJECT BY MISTAKE

  If the pointer is on an object when you begin dragging to draw a selection border, you move the object rather than draw a selection border. If this happens, immediately choose Undo from the Edit menu to reposition the object. Then hold down Control-Shift while you drag. This forces a selection border to appear.

To deselect objects

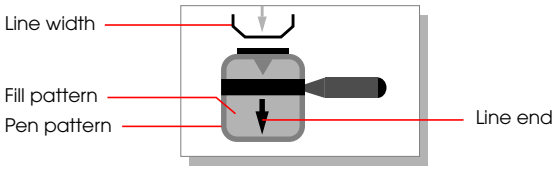
You may occasionally select an object you didn't intend to. Or you may want to select all the objects in an area and then deselect the ones you don't want, rather than select the ones you want one by one.

You can deselect one object, several objects, or all selected objects at once.

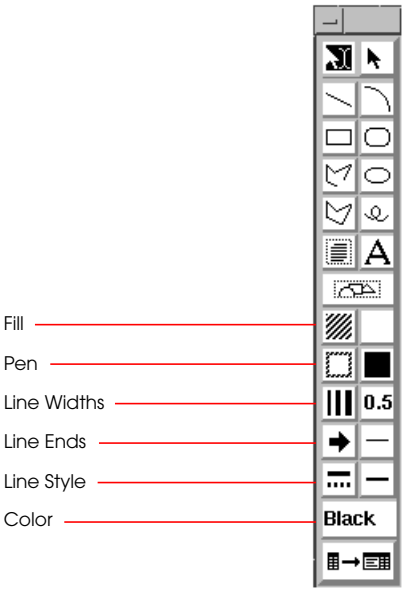
- **To deselect the only object selected, click outside the object.**
- **To deselect one of several selected objects, Shift-click the object (not a handle).**
- **To deselect all selected objects, click on the page away from any objects.**
- **To deselect several objects in the same area, point outside all the objects, hold down Shift, and drag diagonally to draw a selection border around the objects.**
  When you release the mouse button, all the objects completely within the selection border are deselected. If any objects within the selection border were not selected when you began dragging, they are selected.

CHOOSING OBJECT PROPERTIES

Object properties include the fill pattern, pen pattern, line width, line end, color, and whether the line is solid or dashed. Pen pattern applies to the border of an object, fill pattern to the interior.



You choose object properties from pop-up menus on the Tools palette.



You can also make objects look alike by applying one or more properties from one object to another.

To change a graphic property

You can choose properties before you draw an object, or you can select objects that you've already drawn and change their properties. After you choose a property (except for the color), it remains the current property until you choose another or until you exit FrameMaker.

- **To fill an object with a pattern, choose the pattern from the Fill pop-up menu.**
  The eight gray fill patterns have the following percentages: 100, 90, 70, 50, 30, 10, 3, and 0 percent (white). To make an object transparent (so objects in back of it show through), choose None. You can fill any object except lines, text lines, and equations.
- **To select a pattern for the border of an object, choose the pattern from the Pen pop-up menu.**
  The gray pen patterns have the same percentages as the gray fill patterns. If you don't want the object to have a border, choose None. To see the border of an object that uses both a pen and a fill pattern of None, turn on Borders on the View menu. A dotted object border appears on the screen but does not appear in the printed document.
- **To select a line width for a line or an object's border, choose a width from the Line Widths pop-up menu.**
  You can change the line width of any object except text lines.

  You can also change the line width of an object with the Object Properties command on the Graphics menu.
- **To change the ends of an arc, a line, a polyline, or a freehand curve, choose from the Line Ends pop-up menu.**
  You can place an arrowhead at the beginning, at the end, or at both ends.
- **To determine whether a line or an object's borders will be solid or dashed, choose from the Line Styles pop-up menu.**
- **To assign a color, choose one from the Color pop-up menu.**
  To draw several objects in the same color, hold down Shift when you choose the color. The color you choose remains the current color until you close the Tools palette, open a different document, or exit FrameMaker.

  To assign the same color to all objects, select one object, hold down Control-Shift, and choose a color.

  You can also change the color of an object with Object Properties on the Graphics menu. If an object isn't visible after you assign it a color, make sure that the color isn't in the Invisible scroll list in the Define Color Views dialog box for the current view. For details, see "Viewing colors" on page 17-11.

CHANGING THE PROPERTIES OF TEXT FRAMES AND TEXT LINES

You change any properties of a text frame and the color of a text line just as you change the properties of other objects. For example, you can change the color or fill pattern of a text frame to provide a background for text.

To change the color of text in a text frame, use the Character Designer or the Paragraph Designer. For details, see "To choose a color" on page 4-9.

INSPECTING AN OBJECT'S PROPERTIES

You can inspect the properties of an object you've already drawn. With the object selected, hold down Shift and choose Pick Up Object Properties from the Graphics menu. The object's properties appear as the current properties on the Tools palette.

CHANGING THE AVAILABLE PROPERTIES

You choose properties from a set of choices on the Tools palette. You can change the available choices for each property.

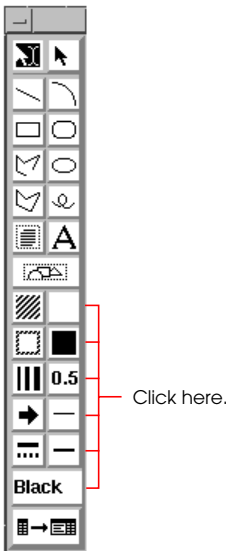
For information on changing the line widths, line ends, or line styles, see "Customizing the line properties" on page 13-21. For information on changing the colors in the Color pop-up menu, see "Assigning and defining colors" on page 17-4. For information on changing the pen or fill patterns you can choose, see the online manual *Changing Setup Files*.

To make objects look alike

You may want to change the properties of one object to match another. For example, you may want to change the border width and color of one line to match another.

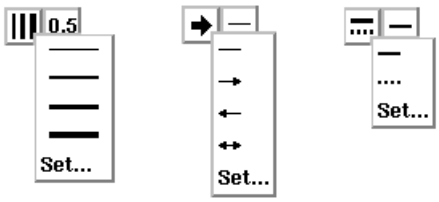
1. **Select the object that has the properties you want to copy.**
2. **Hold down Shift and choose Pick Up Object Properties from the Graphics menu.**
   The properties of the selected object become the current properties on the Tools palette.
3. **Select the objects you want to change.**

4 **Click the current object properties you want to apply to the selected objects.**



CUSTOMIZING THE LINE PROPERTIES

You can change many of the settings that appear on the Tools palette. For example, you can change the available line widths, design your own arrowhead, or use dotted lines instead of dashed lines. The new settings remain until you exit FrameMaker.



Line widths Line ends Line styles

The changes you make don't affect existing objects. After you change the settings, you can use them for new or existing objects.

To change the line width settings

You can change the values assigned to the four line widths that appear in the Line Widths area. For information on changing the line widths that appear when you start FrameMaker, see the online manual *Changing Setup Files*.

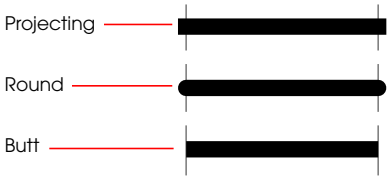
1 **Choose Set from the Line Widths pop-up menu on the Tools palette.**

2 **In the Line Width Options dialog box, type the line widths and click Set.**
You can type the values in any order. When you click Set, the line widths are sorted so the smallest value corresponds to the thinnest line in the Line Widths pop-up menu and the largest value corresponds to the thickest line.

To revert to the line widths you had when you started FrameMaker, click Get Defaults.

To change the line cap style

The cap style determines the appearance of any line ends that don't have an arrowhead. You can choose from three cap styles—projecting, round, and butt.



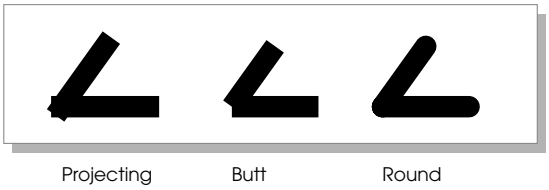
The projecting cap style uses a square cap that projects beyond the end of the line. The round style uses a rounded cap. The butt style uses no cap.

1 **Choose Set from the Line Ends pop-up menu on the Tools palette.**

2 **In the Line End Options dialog box, choose one of the line cap styles and click Set.**

CHOOSING THE CAP STYLE FOR CONNECTING LINES

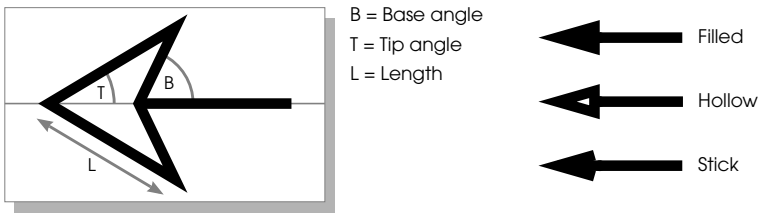
When two thin lines are connected, you may not notice the difference between different cap styles. But when the lines are thicker, they may appear not to intersect cleanly.



You get a clean intersection when the lines are the same thickness, meet at right angles, and use a projecting cap. If the lines don't meet at a right angle, try a round cap for both lines. If the lines aren't the same thickness, try a butt cap for the thinner line when the lines meet at their endpoints and for the stem of a *T* when they meet in a *T*.

To change the arrow style

You can choose from among several preset arrow styles. Arrow styles are determined by their base angle, tip angle, and length. They can be filled, hollow, or drawn with sticks.



You can also create your own custom styles. For details, see "Creating a custom arrow style" on page 13-24.

1. **Choose Set from the Line Ends pop-up menu on the Tools palette.**
2. **In the Line End Options dialog box, choose one of the preset arrow styles and click Set.**

To change the dashed line style

You can change the pattern that FrameMaker uses when you choose the dashed line style from the Line Styles pop-up menu. The pattern that appears in the pop-up menu doesn't change, but FrameMaker uses the new pattern.

1. **Choose Set from the Line Styles pop-up menu on the Tools palette.**
2. **In the Dashed Line Options dialog box, choose one of the patterns and click Set.**

USING A NONSTANDARD DASHED LINE STYLE

To copy a nonstandard dashed line style from another object, first select the object. Then hold down Shift and choose Pick Up Object Properties from the Graphics menu. Finally, select the object to which you want to apply the dashed line style and click the current line style next to the Line Styles pop-up menu on the Tools palette.

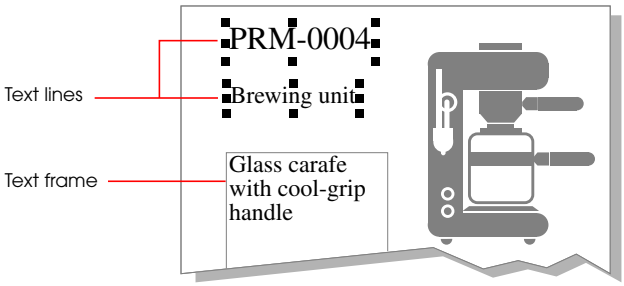
You can also use Maker Interchange Format (MIF) to create a nonstandard dashed line style. For information, see the online manual *MIF Reference*.

CREATING A DOTTED LINE THAT USES ROUND DOTS

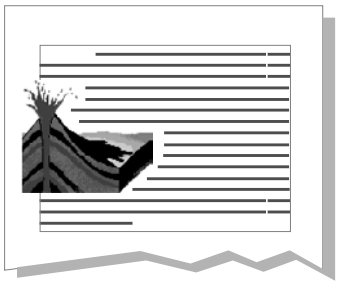
To create a dotted line that uses round dots, use a dashed line style of short dashes with a round line cap. For information on changing the cap style, see page 13-22.

USING TEXT WITH GRAPHICS

You can add single lines of text or text frames to a graphic. You use text lines for single-line callouts. You use text frames for multiline callouts, paragraphs of text, and any other text you want to wrap automatically from line to line.



Adding text to graphics



Running text around graphics

CREATING A CUSTOM ARROW STYLE

When none of the available arrow styles in the Line End Options dialog box meets your needs, you can create a custom arrow style by specifying new settings below the Custom button.

Base angle Between 10° and 175° (and at least 5° greater than the tip angle)

Tip angle Between 5° and 85°

Length Between 0 and 255 points

Style Filled, Hollow, or Stick

FrameMaker ignores the base angle setting when you choose Stick.

The length you specify applies to objects that have a line width of 1 point. When you use a thicker line width, the arrowhead is longer.

These are sample custom arrows.

Arrow	Base angle	Tip angle	Length
	70°	30°	10 points
	80°	30°	10 points
	70°	15°	10 points
	70°	30°	5 points

When graphics overlap text in a text frame, you can make the text run around the graphics.

To add a text line

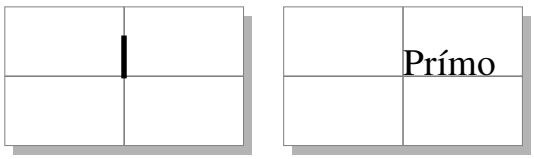
A text line is a single line of text that FrameMaker treats independently from other text. Text lines grow or shrink in length as you edit them, but they don't wrap around to the next line. If a text line overlaps a text frame, the text in the frame does not run around the text line.

You can assign character formats and a spell-checking language to text lines. However, text lines can't have paragraph formats, and they can't contain anchored frames, markers, variables, cross-references, or conditional text.

1 **Select the Text Line tool** A.
The pointer changes to a crossed I-beam (⌶) when you move it to the document window. The small horizontal line across the pointer indicates the baseline position of the text.

2 **Click in the text line to place an insertion point in it.**

3 **Type the text.**
FrameMaker uses the last character format you typed or selected in the document. You can change the character format at any time.



Click. Type.

ADDING ANOTHER TEXT LINE

When you press Return in a text line, you create a new, separate text line. For example, to create two single-line callouts, type the first callout, press Return, and type the second callout. Then you can select the text lines independently and move them to the correct locations.

CHANGING THE CHARACTER FORMAT

You change the character format of text in a text line just as you do for any other text. (For details, see "Specifying font properties" on page 4-7.) To change the font of several text lines at once, select the text lines and change their format.

CHANGING THE SPELL-CHECKING LANGUAGE

When you use text lines to create callouts in several languages, you can specify the language you want the Spelling Checker to use for individual callouts. To change the language that FrameMaker uses when spell-checking a text line, select the text line and choose Object Properties from the Graphics menu. Then choose a language from the Language pop-up menu and click Set.

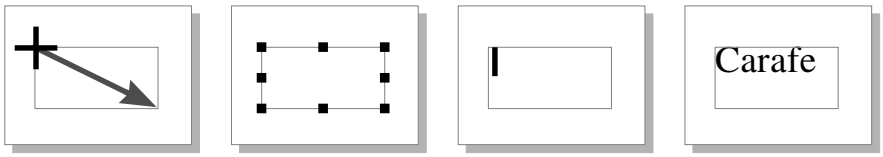
To add a text frame

Unlike a text line, a text frame can contain more than one line of text. For example, the main text in a document appears in text frames that FrameMaker creates automatically when it creates new pages.

You use text frames for multiline callouts, paragraphs of text, and any other text you want FrameMaker to wrap automatically from line to line. You also use text frames when you want to insert variables, cross-references, or markers in the text, when you want to include the text in a generated list, or when you want to make the text conditional.

Text frames also appear on master pages to specify the placement of headers, footers, and body text in a document. You can draw text frames on master pages to customize the page layout of a document. For details, see Chapter 19, "Custom Page Design."

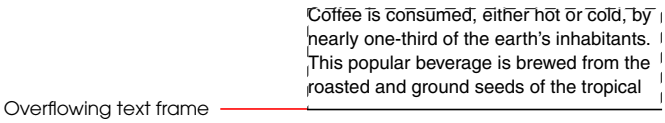
1. **Select the Text Frame tool** .
2. **Drag diagonally where you want to add the text frame.**
3. **Release the mouse button.**
4. **In the dialog box that appears, specify the number of columns and the gap and click Set.**
5. **Double-click in the text frame to place an insertion point in it.**
6. **Type the text.**



Drag. Release. Double-click. Type.

FIXING AN OVERFLOWING TEXT FRAME

When the text you type overflows the text frame, the insertion point moves below the bottom of the frame and the text doesn't appear. If borders are visible, the bottom border of the text frame is a solid line.



When the text overflows the text frame, you can enlarge the frame so the text fits, or you can connect the flow of the text frame to another frame. You can also decrease the font size of the text. To enlarge the text frame, Control-click the frame to select it. Then drag a handle to enlarge the frame.

For details on connecting flows between text frames, see "Controlling the flow of text" on page 20-7. For details on decreasing the font size of text, see "Specifying font properties" on page 4-7.

To create reverse text

You may want to create reverse text (text that appears in white on a dark background) for special emphasis.

1. **Draw an object to act as the background for the text.**
   Generally, it's best to use a nearly black fill pattern for the object.
2. **Outside the background object, add a text line and type its text.**
3. **Move the text line so part of it disappears into the background object.**
4. **Select the text line.**
   If the Smart Selection tool is active, Control-click the text line to select it.
5. **Choose White from the Color pop-up menu.**
   The text becomes white and appears partially cut out of the background object.

   If the text doesn't appear in front of the object, choose Bring to Front from the Graphics menu. If you still have trouble, make sure the current color view of the document shows White as Cutout. For details, see "Viewing colors" on page 17-11.

6 **Move the text line so all its letters appear cut out of the background object.**

Move line part of the way. Choose White. Move line all the way.

CREATING REVERSE TEXT WITH A TEXT FRAME

To use a text frame rather than a text line to create reverse text, set the desired pen, fill pattern, and color of the text frame. Then change the color of the text with the Character Designer or the Paragraph Designer. For details, see "To choose a color" on page 4-9.

To add a title to a graphic

You can use a text line or text frame as the title of a graphic, but you may find it easier to use the FrameMaker table commands instead. The illustration below is a single-cell table with the title below the table.

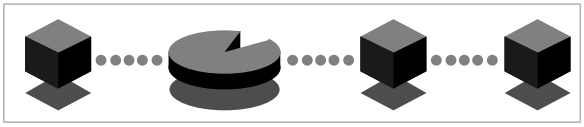


Figure 2-2. Widget

You can also use multicell tables to achieve various effects with graphics and text. For details, see "Using multicell tables for graphics" on page 13-29.

Using this technique requires some knowledge of paragraph formats, table formats, and anchored frames. For information on paragraph formats, see Chapter 4, "Formatting Text," and Chapter 5, "Format Catalogs." For information on table formats, see Chapter 7, "Table Formats." For information on anchored frames, see Chapter 15, "Anchoring Graphics."

1 **Create a single-cell table wide enough for your figure.**
Use the Insert Table command on the Table menu.

2 **Specify the location of the title.**
Use the Table Designer command on the Table menu.

3 **Format the table title.**
Use any of the formatting methods described in Chapter 4, "Formatting Text."

4 **Store the format for the table title in the Paragraph Catalog.**

5 **Change the cell's paragraph format so that the size of an anchored frame can affect the paragraph's line spacing.**
Use the Custom Line Spacing dialog box to turn off fixed line spacing. For details, see "To specify custom line spacing" on page 4-19.

6 **Create an anchored frame in the cell for the graphic.**
Anchor the frame at the insertion point.

7 **Put the graphic in the frame and resize the frame appropriately.**
If necessary, the cell grows vertically to accommodate the frame's height.

8 **If the frame is wider than the cell, change the column's width.**
Use the Resize Columns command on the Table menu.

9 **Store the table format in the Table Catalog, with a name such as FigureTable.**
The next time you need to add a table for a figure and its title, either use the Insert Table command on the Table menu or copy and paste the table.

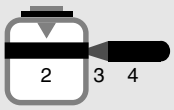
USING MULTICELL TABLES FOR GRAPHICS

Use multicell tables to achieve various effects.

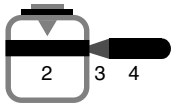
For example, the following illustration is a two-cell table.

Figure 2-2 **Widget**	

The next illustration is also a two-cell table. One cell contains several autonumbered paragraphs. The other contains the figure.

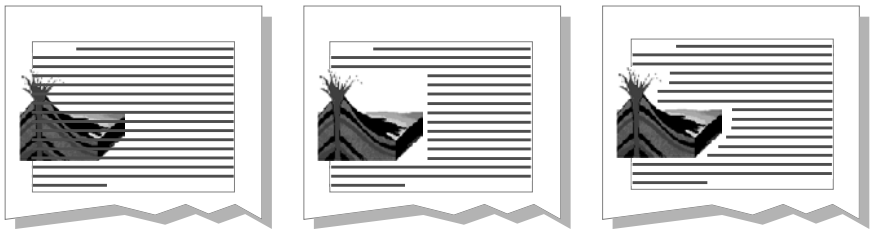
2 Slide metal belt and housing around outside of carafe. 3 Attach metal handle ring to housing assembly by screwing it clockwise. 4 Screw black plastic handle into the metal handle ring.	

The last illustration is a six-cell table. The figure is in the first row, in a cell that straddles all three columns. An autonumbered paragraph appears in each cell in the second row.

		
2 Slide metal belt and housing around outside of carafe.	3 Attach metal handle ring to housing.	4 Screw black plastic handle into the metal handle ring.

To run text around a graphic

You can make the text in a text frame run around a graphic. When a graphic is placed directly on the page or in an unanchored frame, the text can follow the contours of the graphic, or it can align vertically at the edge of an imaginary box bounding the graphic.



For some purposes, you can also run text around anchored frames—for example, to set a small graphic or a drop cap at the beginning of a paragraph. For information on running text around an anchored frame positioned in this way, see "To run text around an anchored frame" on page 15-13.

Text will not run around a text line or an equation. If text in a text frame runs around a graphic, FrameMaker does not feather text in that frame. For information on feathering text, see "To feather text to the bottom of text frames" on page 18-17.

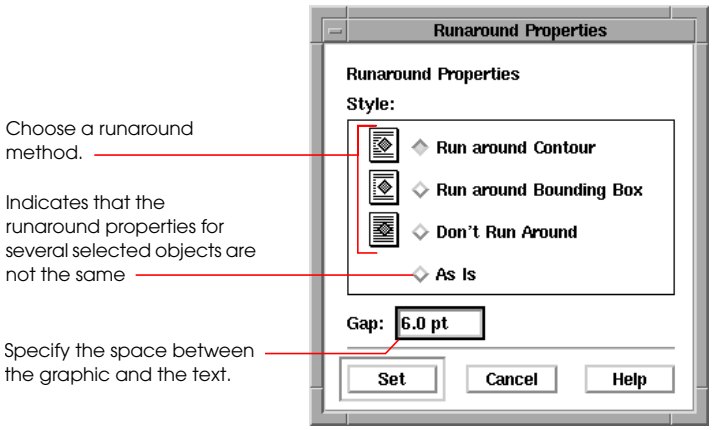
1 **Draw or place the graphic on either a master page or a body page.**
When you place the graphic on a master page, it appears as a background graphic on all associated body pages. You can then make the text on all the associated body pages run around the graphic.

Make sure you click in the page margin before importing or pasting the graphic. That way you won't have an insertion point in a text frame and inadvertently place the graphic in an anchored frame.

2 **Select the graphic.**
If the graphic is made up of several objects, select all the objects.

3 **If the graphic's runaround properties aren't set as you want them, choose Runaround Properties from the Graphics menu.**

4 **In the Runaround Properties dialog box, choose a runaround method and a gap.**



If you want the text to follow the shape of the graphic, click Run around Contour. If you want all the affected text to move the same amount, click Run around Bounding Box.

5 **Click Set.**

If the settings don't produce exactly the results you want, you can add an additional object near the graphic to create the desired contour that the text runs around. For information, see "Adjusting the way text runs around a graphic" on page 13-32.

RUNNING TEXT AROUND AN IMPORTED GRAPHIC

If you want to run text around the contour of an imported graphic, make sure the graphic is behind the text frame. To do so, select the graphic and choose Send to Back from the Graphics menu.

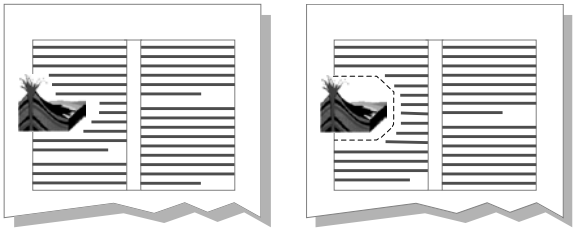
PREVENTING TEXT FROM RUNNING AROUND A GRAPHIC

To stop text from running around a graphic, select the graphic and choose Runaround Properties from the Graphics menu. In the Runaround Properties dialog box, click Don't Run Around and click Set.

ADJUSTING THE WAY TEXT RUNS AROUND A GRAPHIC

If the runaround setting of a graphic doesn't give the text the look you want, you can change the look by adding an object to the original graphic. Over the original graphic, draw an object that has roughly the contours you want. Set the object's pen and fill pattern to None. (When borders are visible, you see a dotted border around the object.) Then edit the object and its runaround properties as necessary until the text runs around the object the way you want.

For the object, you can use a polyline to adjust a single line of text closer to or farther away from the graphic. You can also use a rectangle to prevent text from appearing in the column beside the graphic at all or any other object that has the contours you want.



Natural runaround

Runaround changed by an additional object

For information on drawing objects and changing their pen and fill patterns, see "To draw any object" on page 13-8 and "To change a graphic property" on page 13-19.

FRAMES

In FrameMaker, text and graphics appear in rectangular *frames*. *Text frames* control placement of the document text. *Graphic frames,* which can be anchored or unanchored, control the position and look of graphics. *Anchored frames* hold graphics related to specific text and move along with the text as you edit it. You can use anchored frames to crop the edges of the graphics they hold.

You use *unanchored frames* to crop graphics that stay in the same place on the page. You can also use unanchored frames to hold reference art.

TEXT FRAMES FOR DOCUMENT TEXT

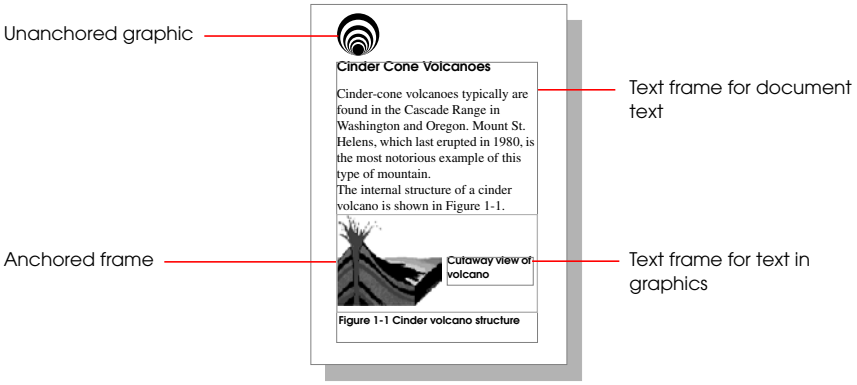
You type document text in text frames. When you fill a text frame, FrameMaker creates a new page and automatically creates a text frame for it. The text frame on the first page is automatically connected to the text frame on the next page to form a single text flow running through the entire document.

The size and placement of text frames is determined by the page-margin settings in the document's column layout. The column layout also determines the number of columns in the frame. Each paragraph's format specifies the paragraph's indentation from the edges of the text frame. For information on specifying column layout, see Chapter 18, "Basic Page Design." For information on formatting paragraphs, see Chapter 4, "Formatting Text."

GRAPHIC FRAMES

If you want a graphic to move along with specific text automatically because it's related to the text, you place the graphic in an anchored frame. You can create an anchored frame with the Anchored Frame command on the Special menu. You can also paste or import a graphic directly into text; FrameMaker creates an anchored frame for you. For more information on anchored frames, see Chapter 15, "Anchoring Graphics."

If you don't want the graphic to move, but you want it to appear at a specific location on a page, you usually draw or import the graphic directly on the page. If you need to crop a graphic or include it as reference art on a reference page, you place it in an unanchored graphic frame—a graphic frame that doesn't move as you edit text. You draw unanchored graphic frames with the Graphic Frame tool on the Tools palette. For details, see "To draw an unanchored graphic frame" on page 13-14, "To crop or mask a graphic" on page 14-19, and "Working with reference pages" on page 19-22.



TEXT FRAMES IN GRAPHICS

You can also use text frames for components of graphics—for example, for callouts or captions. You draw these text frames yourself, with the Text Frame tool on the Tools palette. For single lines of text in graphics, you can also use the Text Line tool. For details, see "Using text with graphics" on page 13-24.

14

EDITING ILLUSTRATIONS

Resizing and reshaping objects and arranging them on the page

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14 EDITING ILLUSTRATIONS

You edit an illustration by working and reworking the objects that compose it—positioning and arranging them, flipping and rotating them, and changing their sizes and shapes.

You edit as you draw

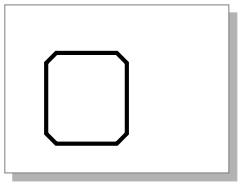
Drawing the objects in an illustration and then reworking those objects are parts of the process of creating an illustration. You can draw part of an illustration, rework the objects you've drawn, and then draw some more.

You can zoom in to work with fine detail and zoom out for a sense of the entire illustration.

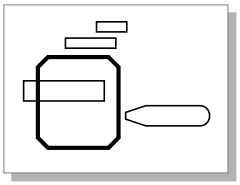
You can arrange objects where you want them

You can make copies of objects you use repeatedly. You can position objects anywhere on a page or in a graphic frame.

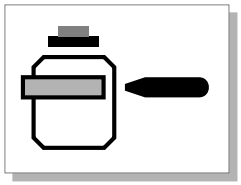
You can stack objects in front of one another, align them horizontally or vertically, and distribute them so they're an equal distance apart.



Draw main object.



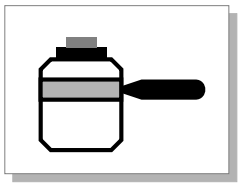
Draw remaining objects.



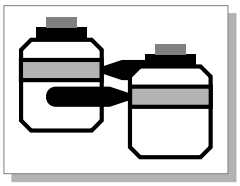
Change fill, line weights, and front/back relationships.

You can flip an object to create a mirror image. You can rotate most objects to any angle you want.

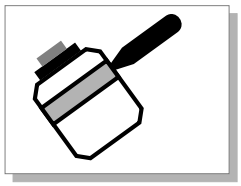
When you need to work with several objects as a unit, group them. When you want to edit the objects individually, ungroup them.



Align, distribute, and group.



Copy and flip left/right.

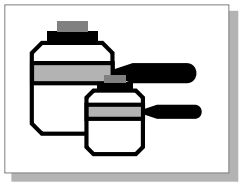


Rotate.

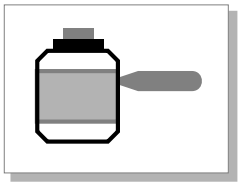
You can change an object's size and shape

You can resize an object by changing its width or its height, or you can change both to maintain the object's proportions.

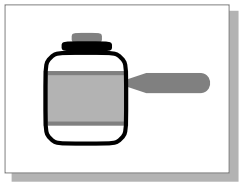
As you work with an object such as a line, polyline, or polygon, you may find the original shape isn't exactly what you want. You can add, move, or remove corners to change the shape.



Resize objects larger or smaller.



Ungroup to reshape and edit the individual objects.



Ungroup and smooth selected objects.

You can smooth corners to create a freehand curve. You can change the shape of freehand curves. And you can join lines and curves to create a single complex outline.

In this chapter

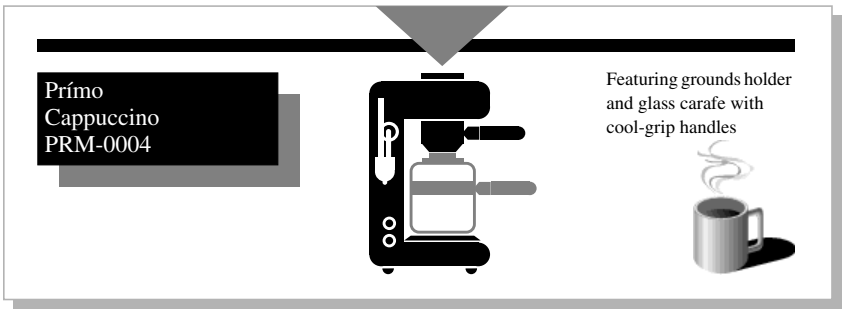
This chapter shows you how to edit an illustration. It shows you how to resize, reshape, flip, and rotate objects and how to align objects, distribute them, and group them.

Chapter 13, "Illustrating a Document," shows you how to create the objects that make up an illustration.

ARRANGING OBJECTS

You often move and duplicate objects after you create them, and you delete objects you no longer need. You can move and duplicate objects directly on a page or in a graphic frame. You can connect objects easily as you draw them, resize them, or reshape them. You can also cut or copy objects to the FrameMaker Clipboard and then paste them anywhere in the same document or in a different document.

You can also arrange objects in relation to other objects. For example, in the illustration below, the drop shadow on the left was created with two rectangles stacked one in front of the other and then grouped together as a single object. The rectangle, coffee maker, and text frame are aligned along their tops and distributed an equal distance apart. The coffee maker and the coffee cup are aligned along their baselines.



You can also join individual lines and curves to create complex outlines, which you can then fill or color.

To move an object

You can quickly move an object by dragging it, or you can make small position adjustments by moving the object with the arrow keys.

For information on placing an object precisely, see "To specify the exact position of an object," next. For information on moving an object several pages away or to another document, see "To cut, copy, and paste an object" on page 14-6.

- **To move an object approximately, select the object and drag its border (not a handle).**

  To move the object horizontally or vertically, Shift-drag.

  To move an object into a graphic frame, drag it until the pointer is in the frame. To move an object out of a graphic frame, drag it until the pointer is outside the frame. As you drag, the frame's border may temporarily crop the object.

When you drag the object, the status bar contains the distance from the upper-left corner of the object to the upper-left corner of the page (or frame, if the object is in a graphic frame). If rulers are visible, lines in the rulers show you the object's position.

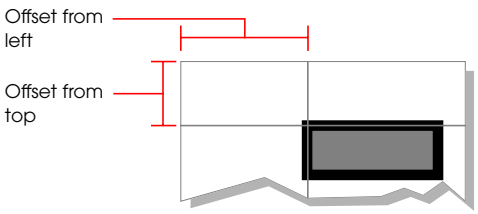
If Snap is on in the Graphics menu, objects snap to the invisible grid as you drag them.

- **To move an object in small increments, select the object, hold down either Control or Shift-Control, and press an arrow key.**
  The distance the object moves depends on the keys you hold down and the current zoom setting. Zoom in to move an object by smaller amounts.

Hold down	At this zoom setting	To move an object
Control	50%	2.0 points
	100%	1.0 point
	200%	0.5 point
Shift-Control	50%	12.0 points
	100%	6.0 points
	200%	3.0 points

To specify the exact position of an object

You can define the offset of an object from the left and top edges of its page or graphic frame.



In this way, you can specify the exact position of an object. The position of an object is determined from its path, not from the edge of its border. For details, see "FrameMaker positions objects along their paths" on page 13-9.

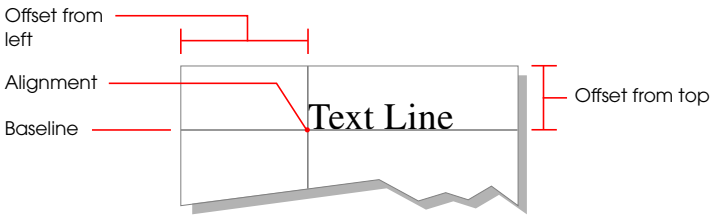
1. **Select the object.**
2. **Choose Object Properties from the Graphics menu.**

3 **In the Object Properties dialog box, specify the offsets from the top and left edges of the page or graphic frame.**
For all objects (except text lines and equations), specify the offsets in the Offset From area.

4 **Click Set.**

SPECIFYING THE OFFSET OF A TEXT LINE OR AN EQUATION

For text lines and equations, specify the offset in the Alignment Point Offset From area. The following illustration shows a left-aligned text line.



To delete or duplicate an object

You can delete or duplicate an object quickly without using the FrameMaker Clipboard.

- **To delete an object, select the object and press Delete.**
- **To duplicate an object quickly, first select the object. Then point on the object (not on a handle), hold down Control, and drag the duplicate of the object with the middle mouse button.**
Depending on the direction you initially drag the object, its movement is constrained to either a horizontal or vertical direction. To move the duplicate in any direction, release the Control key and the mouse button after you make the duplicate. Then drag the duplicate where you want it.

To cut, copy, and paste an object

You can use Cut, Copy, and Paste on the Edit menu to duplicate or move an object. The Cut and Copy commands place a copy of the object on the FrameMaker Clipboard. You can then paste the object anywhere in the same document or in a different FrameMaker document.

Objects remain on the Clipboard until you choose Copy or Cut again, so you can paste several copies of an object.

1 **Select the object and then choose Cut or Copy from the Edit menu.**
To remove the object and paste it elsewhere, use Cut. To leave the object unchanged and paste a copy elsewhere, use Copy.

2 **Choose where you want to paste the object and then choose Paste from the Edit menu.**

To paste an object	Click
On a page	In the margin of the page
In an existing graphic frame	The frame border to select the frame
In text	In the text where you want the object

When you paste the object in a graphic frame or on a page that is the same size as the one from which you copied or cut the object, FrameMaker puts the object in the same relative location. Otherwise, FrameMaker centers it.

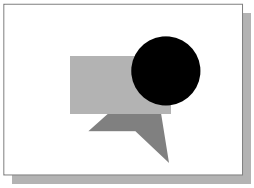
When you paste an object into text, FrameMaker inserts an anchor symbol (⊥), creates an anchored frame to hold the object, and centers the object in the frame.

To change object stacking

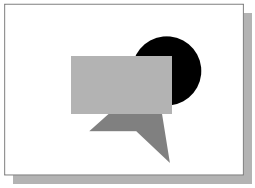
When you draw or paste an object, FrameMaker places it in front of all other objects on the page or in a graphic frame. If the object is filled, it obscures objects in back of it. You can control how objects overlap by putting them in front of or in back of other objects.

When you click overlapping objects, FrameMaker selects the frontmost object.

- **To put an object in front of other objects, select the object and choose Bring to Front from the Graphics menu.**
- **To put an object in back of other objects, select the object and choose Send to Back from the Graphics menu.**



Circle in front

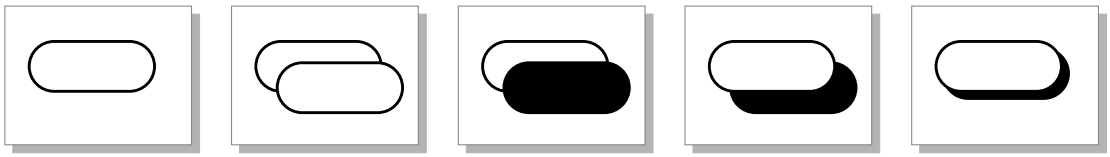


Circle in back

To create a drop shadow

You use a drop shadow when you want objects to convey a sense of depth. To create a drop shadow, use two objects and stack them so the bottom object looks like a shadow.

1. **Draw the object for which you want to make a drop shadow.**
2. **With the object selected, choose Copy and then choose Paste from the Edit menu.**
   A copy of the object appears on top of the first object.
3. **With the copy selected, choose a gray or black fill pattern on the Tools palette.**
4. **With the copy still selected, choose Send to Back from the Graphics menu.**
   The copy moves behind the original.
5. **Move the copy up and to the left until a narrow band is visible.**



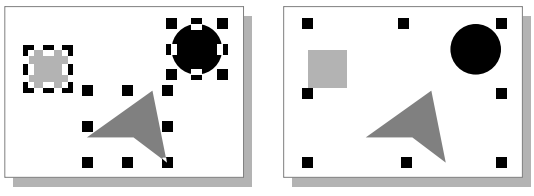
Draw. Copy and paste. Change fill pattern. Send to back. Move.

To group and ungroup objects

When several objects (except graphic frames) are part of the same graphic, you can group the objects. You can then move, resize, flip, or align them as a single object.

You can combine a group of objects with other objects to form an even larger group. Because FrameMaker groups and ungroups objects hierarchically, the first set of grouped objects is maintained as a set when you group another object with it.

- **To group objects, select them and choose Group from the Graphics menu.**
  One set of handles appears around the group.

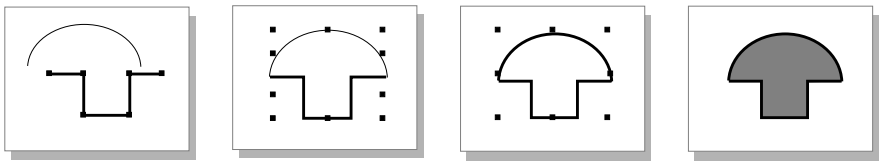


Select objects. Choose Group.

- **To ungroup objects, select the group and choose Ungroup from the Graphics menu.**
  Handles appear on each object in the group. When a group has been grouped with other objects, you must choose Ungroup more than once to ungroup all objects.

To join lines and curves

You can create complex outlines by joining individual lines, polylines, arcs, or smoothed polylines created with FrameMaker drawing tools. The endpoints of the objects you want to join must be touching, and the objects can't be grouped. Joining creates a single continuous curve. You can then change the new curve's properties, such as border width, pen and fill pattern, and color.



Objects drawn | Objects positioned and selected | Objects joined | Fill pattern selected

For information on grouping objects so that you can reposition or resize them all at once, see "To group and ungroup objects" on page 14-8.

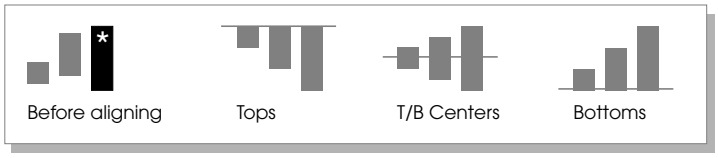
1. **Position the objects so that their endpoints touch.**
   The ends of the lines or curves must be within 1 point of each other. Turn on Snap and Gravity and zoom in if necessary.
2. **Select the objects and choose Join from the Graphics menu.**
   The new curve takes on the properties of the last object selected before joining—for example, the object's line width, pen pattern, or color. (In the illustration above, the last object selected before joining was the polyline.)

IF YOU JOIN LINES OR CURVES BY MISTAKE

If you join lines or curves by mistake, immediately choose Undo from the Edit menu to undo the mistake. Joining creates a single continuous curve (a Bezier curve) that cannot be "unjoined" at a later time in the way that grouped objects can be ungrouped.

To align objects

You can align objects (except graphic frames) with one another. You align objects along a horizontal line by specifying the top/bottom alignment.



You align objects along a vertical line by specifying the left/right alignment.

FrameMaker aligns the objects—along their paths—with the last object you select. (In the illustrations above, the last objects selected are marked with a star.) When you select objects by dragging a selection border, FrameMaker aligns the objects with the frontmost object (the one that appears last in draw order).

You can also align a single object in a graphic frame or on a page.

1. **Select the objects.**
2. **Choose Align from the Graphics menu.**
3. **In the Align dialog box, choose the alignment you want and click Align.**
   To align objects in only one direction, set the other direction to As Is.

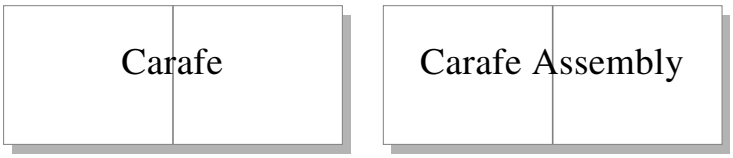
ALIGNING AN OBJECT IN A GRAPHIC FRAME OR ON A PAGE

You can align one object in a graphic frame or on a page—for example, along the left side of a graphic frame. Select only the object you want and use the Align command.

To change the alignment of a text line

When you create a text line, it is left aligned on its alignment point (where you clicked). You can change the alignment to centered or right aligned.

FrameMaker maintains a text line's alignment when you insert text; for example, a centered text line remains centered.



1 **Select the text line.**

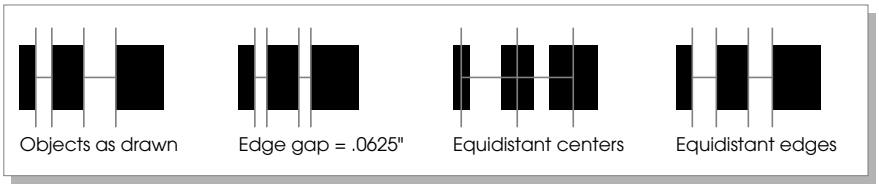
2 **Choose Object Properties from the Graphics menu.**

3 **In the Object Properties dialog box, choose a new alignment from the Alignment pop-up menu and click Set.**

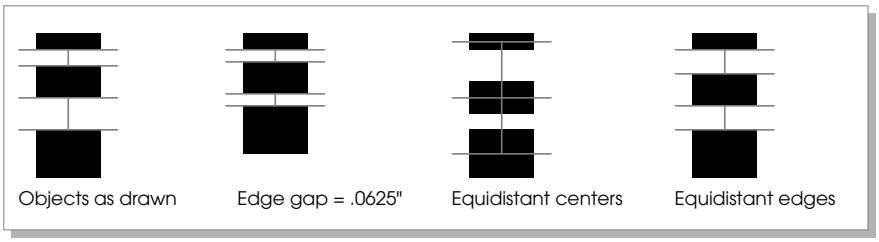
To distribute objects

You can move objects—distribute them—so they have an equal amount of space between them. You can distribute objects horizontally and vertically. If you specify the exact space between the objects (the edge gap), FrameMaker moves all objects except the one at the left (or top). If you specify that the objects' centers or edges should be equidistant, FrameMaker leaves the left and right (or top and bottom) objects where they are and moves the others.

Horizontal distribution



Vertical distribution



1 **Select the objects.**
You can select the objects in any order.

2 **Choose Distribute from the Graphics menu.**

3 **In the Distribute dialog box, choose the spacing you want and click Distribute.**
To distribute objects in only one direction, set the other direction to As Is.

IF OBJECTS MOVE OFF THE PAGE

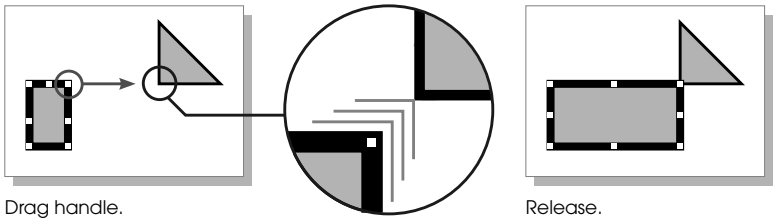
When you specify a large edge gap, objects may move off the page. If they do, immediately choose Undo from the Edit menu.

To connect objects

It's easier to connect objects when you use "gravity." With Gravity on, an object attracts the pointer as you draw, resize, or reshape a nearby object.

1 **If Gravity isn't already on, choose Gravity from the Graphics menu.**
When Gravity is on, the checkbox next to the command name on the menu is on.

2 **Drag a handle of an object, or draw, close to the object to which you want to connect.**
As you drag, the handle jumps to connect the two objects.



HOW GRAVITY WORKS

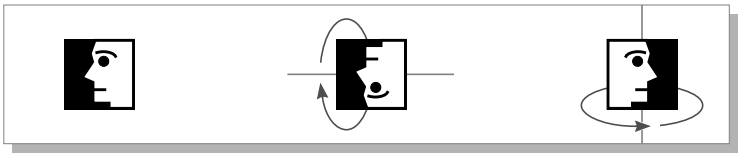
Objects have gravity along their paths and at their corners. Rectangles and ovals also have gravity at their centers.

Some points on an object exert a greater pull than others. For example, the corners of a triangle attract the pointer more than its sides do.

Gravity extends the same distance on the screen regardless of the zoom setting. When you zoom in, objects and the space between them appear larger, so you can drag a handle or draw closer to an object without the object attracting the pointer.

FLIPPING AND ROTATING OBJECTS

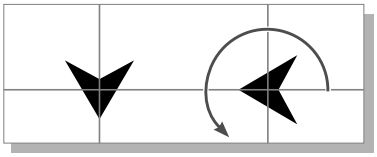
You can create a mirror image of an object by flipping it up and down or left and right.



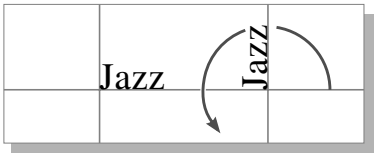
Original Flipped up and down Flipped left and right

You can rotate all objects (except equations and graphic frames) any number of degrees. You can rotate graphic frames and equations in 90-degree increments.

All objects (except equations and text lines) rotate around their centers. Equations and text lines rotate around their alignment points.



Objects rotate around their centers.



Text lines rotate around their alignment points.

You edit most rotated objects just as you edit unrotated objects. However, to edit the contents of a rotated equation, or the contents of an anchored frame in a rotated text frame, you first need to restore the equation or text frame to its unrotated position.

To flip an object

You can flip all objects around their top/bottom or left/right center lines. You can also create symmetrical objects by flipping.

- **To flip an object, select the object and choose Flip Left/Right or Flip Up/Down from the Graphics menu.**

- **To create a symmetrical object, draw an object, copy it, flip the copy, and move the copy until it touches the original.**

Draw. Make a copy. Flip and move.

Rather than move the duplicate to the original, you can use the Distribute command with an edge gap of zero to ensure exact alignment of the objects. For details, see "To distribute objects" on page 14-11.

TEXT IN A FLIPPED OBJECT

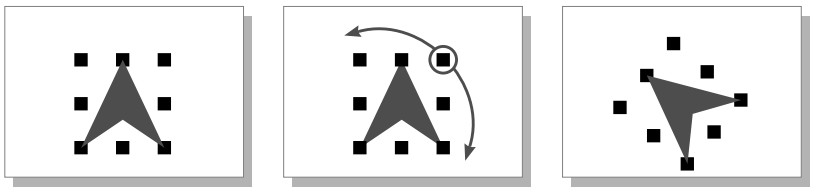
Flipping an object that contains text doesn't flip the text in the object. For example, the text in a flipped text line doesn't appear reversed, but the alignment point of the text line is flipped.

To rotate an object

You can quickly rotate all objects (except equations and graphic frames) any number of degrees by dragging them. You can also specify the exact rotation of an object from either its current or its unrotated position. For details, see "Specifying the exact rotation of an object," next.

You can also reset the rotation angle of a polygon or polyline to change its natural orientation.

1. **Select the object.**
2. **Hold down Control and drag a handle with the right mouse button.**



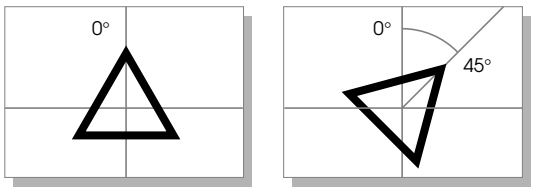
Select. Drag. Release.

When Snap is on in the Graphics menu, the object snaps to multiples of the angle specified in the View Options dialog box. (For details, see "To set the grid

spacing" on page 13-6.) To constrain the rotation to 45-degree increments, hold down Shift-Control while you drag with the right mouse button.

SPECIFYING THE EXACT ROTATION OF AN OBJECT

To specify the exact rotation of an object from its current position, select the object and choose Rotate from the Graphics menu. In the Rotate Selected Objects dialog box, specify the direction and amount of rotation and click Rotate.



You can rotate several ungrouped objects in this way. When you do, each object rotates around its center.

To specify the exact rotation of an object from its unrotated orientation, select the object and choose Object Properties from the Graphics menu. Then type the angle in the Angle text box and click Set.

INSPECTING THE ROTATION ANGLE

To inspect an object's rotation angle, select the object and choose Object Properties from the Graphics menu. The rotation angle appears in the Angle text box.

RESETTING THE ROTATION ANGLE

After you rotate a polygon, polyline, freehand curve, or grouped object, you can reset the rotation angle of the object or group to zero. That is, you can define the current orientation as the unrotated orientation. To do this, select the rotated object or group and press Esc g 9.

When an object isn't rotated, its handles are aligned parallel to the window borders. Resetting the current rotation angle to zero repositions the handles around the object.

To rotate an equation or graphic frame

You can rotate an equation or graphic frame in 90-degree increments. You specify the rotation from the equation's or frame's unrotated position.

1. **Select the object.**
2. **Choose Rotate from the Graphics menu.**
3. **In the dialog box, choose the rotation angle you want and click Rotate.**

INSPECTING THE ROTATION ANGLE

To inspect an equation's or graphic frame's rotation angle, select the frame or equation and choose Rotate or Object Properties from the Graphics menu. The rotation angle appears in the dialog box.

To unrotate and rerotate an object

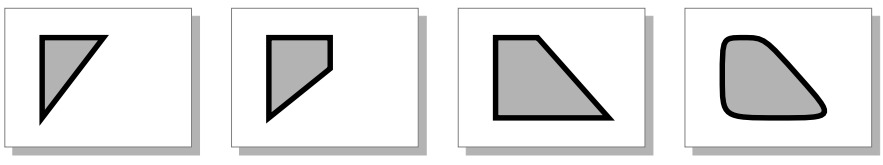
You edit most rotated objects just as you edit unrotated objects. However, to edit the contents of a rotated equation, or the contents of an anchored frame in a rotated text frame, you first need to restore the equation or text frame to its unrotated position. You may find it easier to edit other objects—for example, to align and distribute them—in their unrotated position. After you edit the object, you can rerotate the object to restore it to its rotated position.

- **To unrotate an object, select it and press Esc g 0 (zero).**
- **To rerotate an object, select it and press Esc g 1 (one).**

RESIZING AND RESHAPING OBJECTS

As you refine a graphic, you may want to change the size or shape of objects. You can resize an object as precisely as you wish.

Reshaping possibilities are unlimited. For example, you can add a corner to a polyline or polygon, move a corner to change the shape, and smooth a polyline to create a freehand curve.

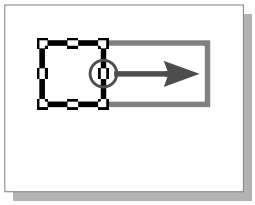


You can also crop a graphic to mask out certain parts. You can crop graphics drawn with the drawing tools as well as images that you import.

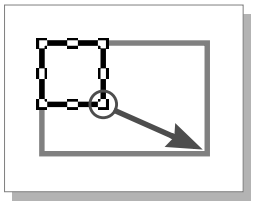
To resize an object

You can resize all objects except text lines.

1. **Select the object.**
2. **Drag one of its handles.**



Drag a side handle to change either width or height.



Drag a corner handle to change both width and height.

As you resize an object, FrameMaker displays its dimensions in the status bar. To increase or decrease the dimensions proportionally, Shift-drag a corner handle.

RESIZING AN OBJECT PRECISELY

You can resize an object by specifying its dimensions or a scale factor. Select the object and choose Scale from the Graphics menu. Then type a scale factor or the exact dimensions in the Scale dialog box and click Scale.

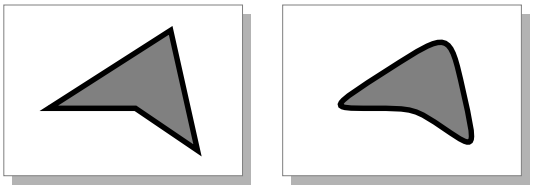
A scale factor increases both the height and width of an object proportionally. The scale factor is always relative to the object's current size (so 100 percent means no change). The dimensions shown when you display the dialog box are the object's current dimensions.

RESIZING A TEXT LINE

You can't resize a text line by dragging one of its handles—even if the text line is part of a grouped object. To change the size of a text line, change the font size of the text in the text line. For details, see "Specifying font properties" on page 4-7.

To smooth and unsmooth an object

You can smooth polylines, polygons, rectangles, and rounded rectangles. When you smooth a polyline, polygon, or rectangle, you change its angles to smooth curves. When you unsmooth a curve, you restore its angles.



Before smoothing | After smoothing

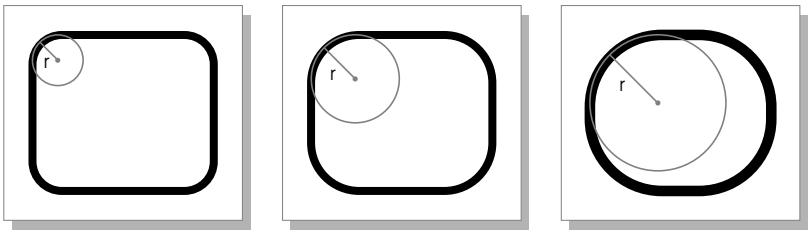
Each time you smooth a rounded rectangle, you increase the curvature of its corners (its corner radius).

When you unsmooth a freehand curve and later smooth it, its shape may be somewhat different from the original.

- **To smooth an object, select the object and choose Smooth from the Graphics menu.**
  After smoothing a polygon or polyline, reshape handles and control points appear so you can reshape the curve. For details, see "To reshape a polygon or polyline" on page 14-20.
- **To unsmooth an object, select the object and choose Unsmooth from the Graphics menu.**

To change the corner radius of a rounded rectangle

You can define the curvature of the "corners" of a rounded rectangle by specifying the radius of an imaginary circle drawn in the corner of a rectangle. The longer the radius, the more curved the corners.



Radius (r) = .125 inches | Radius (r) = .25 inches | Radius (r) = .375 inches

When you specify a corner radius, you also change the current drawing properties. New rounded rectangles you draw have this corner radius until you change it with the Object Properties command or until you exit FrameMaker.

1. **Select a rounded rectangle.**
2. **Choose Object Properties from the Graphics menu.**
3. **In the Object Properties dialog box, specify the corner radius and click Set.**
   The largest meaningful radius is one-half the length of the shortest rectangle side. For example, if the rectangle is 2 inches by 4 inches, the largest meaningful radius is 1 inch (one-half of 2 inches).

To crop or mask a graphic

When you want to crop the edges of a graphic, you use an anchored or unanchored graphic frame.

Uncropped graphic

Graphic placed and cropped in an unanchored graphic frame

An anchored graphic frame moves with the surrounding text. An unanchored graphic frame stays wherever you place it on a page, even when the text around it moves as the result of editing.

When you want to mask an area of a graphic, particularly if the part you want to mask is in the middle of a graphic, you can cover the area with nonbordered objects.

- **To crop the edges of a graphic, create a graphic frame, put the graphic in the frame, and resize the frame around the graphic.**
  When you resize the frame, the parts of the graphic that extend beyond the frame's border appear cropped.

  For details on creating a graphic frame, see "To draw an unanchored graphic frame" on page 13-14 and "Creating an anchored frame" on page 15-4.

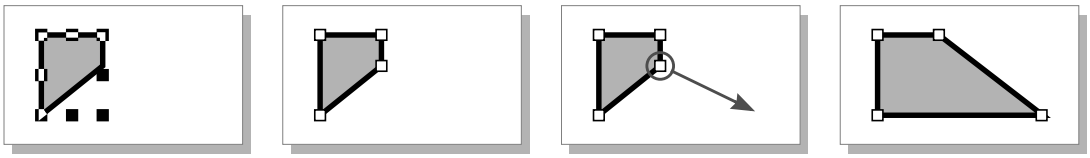
- **To mask an area of a graphic, put graphic objects (such as rectangles and polygons) with a white fill and pen pattern in front of the parts you want to mask.**

Original graphic | Selected polygon over part to be masked | White fill and pen pattern | Resulting graphic

To reshape a polygon or polyline

You reshape a polygon or polyline by moving its corners one at a time.

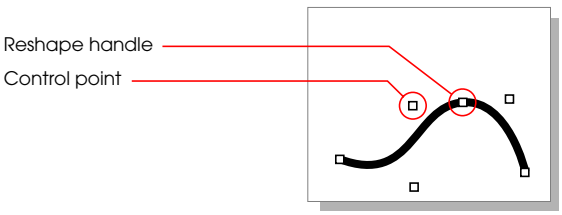
1. **Select the object.**
2. **Choose Reshape from the Graphics menu.**
   Reshape handles appear on the object, replacing the selection handles.
3. **Drag a reshape handle.**
   To move the handle horizontally or vertically, Shift-drag.



Select. | Choose Reshape. | Drag. | Release.

To reshape a curve

You can create shapes with smooth, continuous curves—Bezier curves—either by drawing freehand curves or by drawing polygons or polylines and then smoothing them. You use reshape handles and control points to change the shape of the curve.



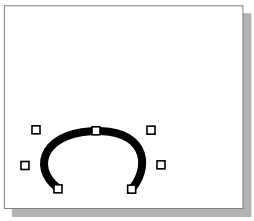
You can make reshape handles appear at each location that defines a curve. Except at the ends of a curve, each reshape handle has two control points.

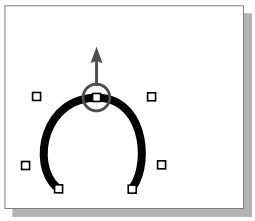
1 **Select the curve and choose Reshape from the Graphics menu.**
Reshape handles appear at the locations that define the curve. Control points also appear around one of the handles.

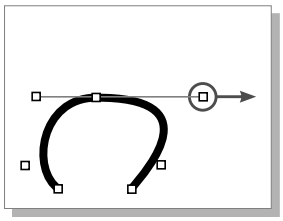
2 **If the control points aren't the ones you want, click the reshape handle where you want to change the curve.**
Control points appear around the reshape handle that you click—the two control points that correspond to the reshape handle and the next closest one on each side of the reshape handle.

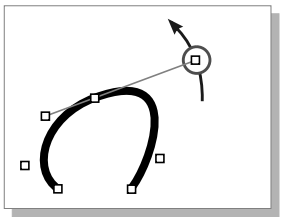
3 **Drag a reshape handle or drag or rotate a control point.**
Dragging a reshape handle changes the position of the curve at the handle.

Dragging or rotating a control point changes the curvature. When you begin to drag, a lever appears that touches the curve at the reshape handle. You can achieve different effects by dragging along the lever or by rotating it.


Select Reshape.


Drag reshape handle.

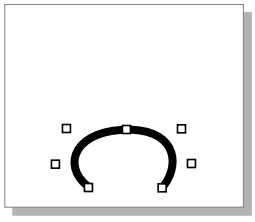

Drag control point.

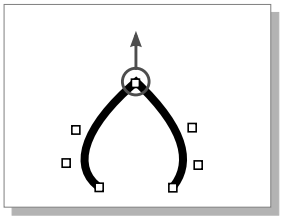

Rotate control point.

As you drag a reshape handle, the control points move as well, so the result is a smooth curve. As you drag a control point, the curvature changes on both sides of the reshape handle, so the result is also a smooth curve.

CRIMPING A CURVE

You crimp a curve by dragging a reshape handle without moving its control points, or by changing the curvature on only one side of a reshape handle. To do so, Control-drag the handle or the control point.


Select Reshape.

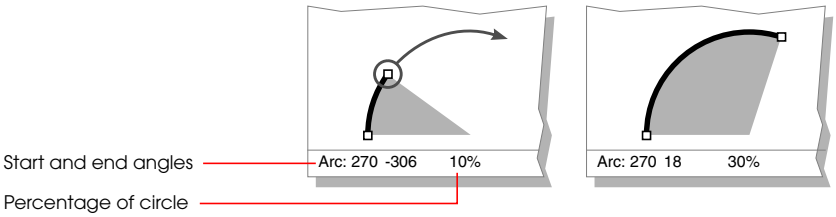

Drag reshape handle or control point.

To reshape an arc

The easiest way to reshape an arc is to drag its endpoints.

You can also reshape an arc by specifying its start and end angles (measured clockwise from 12 o'clock). For details, see "Specifying the start and end angles of an arc," next.

1. **Select the arc.**
2. **Choose Reshape from the Graphics menu.**
   Reshape handles appear on the object, replacing the selection handles.
3. **Drag a reshape handle.**
   As you drag a reshape handle, the start and end angle of the arc, and the percentage of a circle that the arc represents, appear in the status bar.

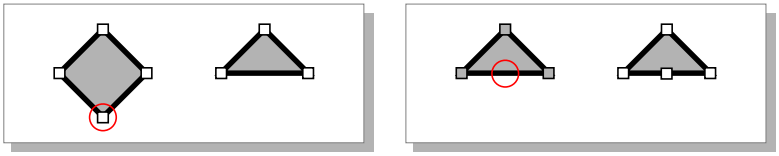


SPECIFYING THE START AND END ANGLES OF AN ARC

To specify the start and end angles, select the arc and choose Object Properties from the Graphics menu. Then type new Start Angle and End Angle values in the Object Properties dialog box and click Set.

To add or remove corners

You can add sides and corners to a line, polyline, or polygon by adding reshape handles, and you can remove sides and corners by removing reshape handles.



Removing a handle

Adding a handle

You can also add or remove reshape handles on a curve to change the number of points that define the curve.

1 **Select the line, polyline, polygon, or curve.**

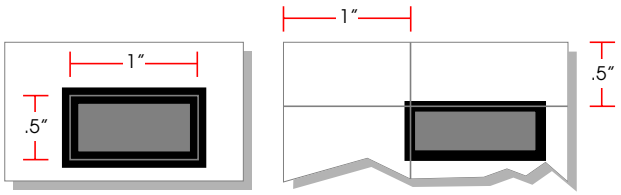
2 **Choose Reshape from the Graphics menu.**

3 **Middle-click.**
To add a corner, middle-click the object's border where you want the corner. To remove a corner, middle-click it.

MEASURING OBJECTS

As you arrange and resize objects in an illustration, you may want to know an object's dimensions and exact position.

The size of an object is the size of the rectangle that encloses its path. The position is the distance from the top and left edges of the page or graphic frame.



Object size Object position

To measure an object

You can measure an object by using the mouse or a dialog box.

- **With Snap off, select the object, point on one of its handles, and hold down the left mouse button.**
  The dimensions appear in the status bar. If you move the mouse by mistake and resize the object, immediately choose Undo from the Edit menu.
- **Select the object and choose Object Properties from the Graphics menu.**
  The width and height of the object appear in the Size area of the Object Properties dialog box.

To see the position of an object

You can inspect the position of a stationary object, or of an object you are moving with the mouse.

- **To inspect the position of a stationary object, select the object and choose Object Properties from the Graphics menu.**
  For all objects (except equations and text lines), the distance from the upper-left corner of the page or graphic frame to the object's topmost and leftmost point appears in the Offset From area of the Object Properties dialog box.

  For equations and text lines, the distance from the upper-left corner of the page or graphic frame to the alignment point at the baseline of the text line or equation appears in the Alignment Point Offset From area.

  When the object is rotated, the values in the dialog box reflect the location of the unrotated object.

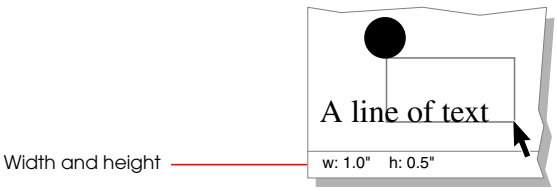
- **To inspect the position of an object as you move it, look in the status bar.**
  The distance between the object and the upper-left corner of the page or graphic frame appears in the status bar. When rulers are visible, guidelines in the rulers also show the position of the object.

To measure any distance on the page

You can measure the distance between objects on a page.

1. **Point where you want to start measuring.**
2. **Hold down Shift-Control and drag until the selection border encompasses the area you want to measure.**
   Holding down Shift-Control forces a selection border to appear when you drag.

   The dimensions of the selection border appear in the status bar. In the example, the important dimension is height, the distance of 0.5 inch between the circle and the baseline of the text.



15

ANCHORING GRAPHICS

Using frames to anchor graphics to text

CREATING AN ANCHORED FRAME 15-4

To create an anchored frame 15-4

To position an anchored frame at the insertion point 15-5

To position an anchored frame in a column of text 15-6

To position an anchored frame outside a column 15-9

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To move an anchored frame 15-19

To resize an anchored frame 15-20

To change an anchored frame's drawing properties 15-20

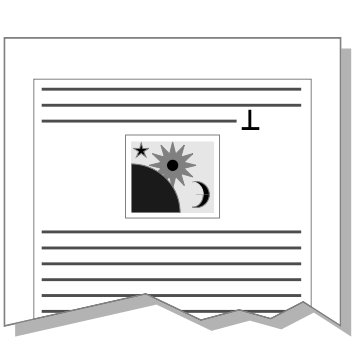
15 ANCHORING GRAPHICS

When you create an illustration that is related to specific text, you can put the illustration in an anchored frame—a graphic frame that is anchored to the text. Then, when you edit the text, the frame and its contents move along with the text automatically.

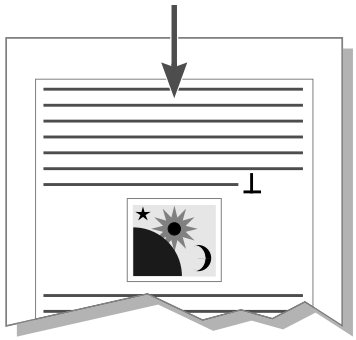
Anchored frames move with the text

A graphic frame is an object that can contain other objects. It can contain graphics you draw, clip art you copy from another document, imported graphics, and text.

When you anchor a graphic frame to a specific text passage, FrameMaker inserts an anchor symbol at the insertion point. The frame—and everything in it—moves with the anchor symbol, so you don't have to reposition graphics when you edit the document.



Before inserting text

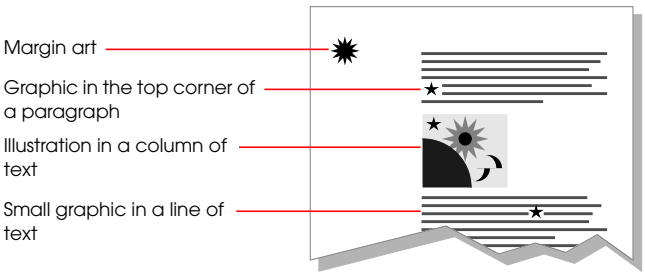


The frame moves down when you insert text above the anchor symbol.

You choose the anchoring position

You can use an anchored frame for small graphics that appear in line with paragraph text or for art that appears between columns or in the page margin. You can also use an anchored frame for an illustration in

a column of text—below the line that contains the anchor symbol, at the top of the column, or at the bottom. An anchored frame positioned at the top or bottom of the column moves only when an anchor symbol moves to another column.



You can even position an anchored frame in the top corner of a paragraph with the paragraph text running around the graphic.

If you want an illustration to stay at a specific place on the page—for example, a logo on letterhead stationery—don't use an anchored frame at all. Instead, draw, paste, or import the illustration directly onto the page, without placing an insertion point in the text. Then drag the illustration where you want.

Anchored frames are typical FrameMaker objects

You can copy and paste anchored frames, and you can resize them by dragging them with the mouse. You can even drag some anchored frames to a different position. In this way, they are like the objects you create with the FrameMaker drawing tools.

Anchored frames have drawing properties such as border width, pen pattern, and fill pattern. You can make the frames visible by changing these properties. Visible frames can serve as borders or backgrounds for their contents.

In this chapter

This chapter shows you how to create and position anchored frames, fill them with text and graphics, and edit them.

CREATING AN ANCHORED FRAME

When you create an anchored frame with the Anchored Frame command, you specify its size and position. You can position it at the insertion point or in four positions in the column—at the top of a paragraph (with the text running around the frame), just below the line that contains the insertion point, at the top of the column, and at the bottom of the column. You can also position it outside a column of text.

You can also specify other properties that depend on the frame's position. For example, when the frame is placed in the line at the insertion point, you can specify its distance from the baseline of the text. When the frame is in a column of text, you can specify its alignment.

An anchored frame is also created—automatically—when you paste or import a graphic at an insertion point. You can keep the properties assigned to the frame, or you can change them.

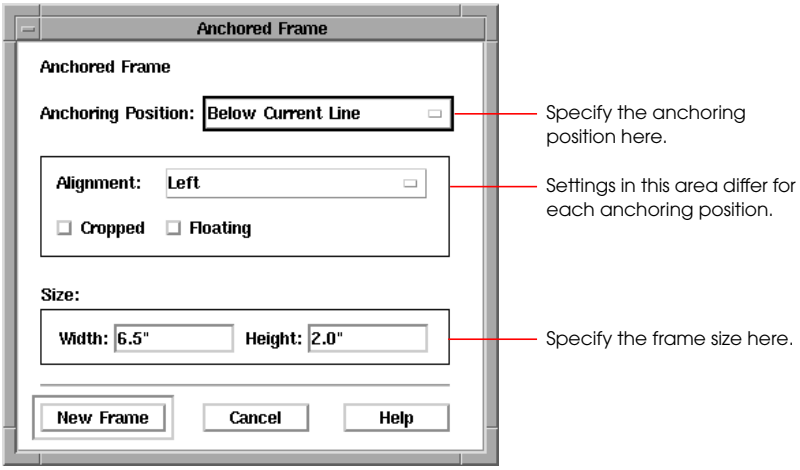
You can create an anchored frame in a text frame or in a table cell (which FrameMaker treats as a text frame), but not in a text line.

To create an anchored frame

When you create an anchored frame, you specify its position relative to the insertion point. You also specify several other properties of the frame. You can change any of the properties, including the frame's position, at any time. For details, see "Editing an anchored frame" on page 15-17.

1. Click in text where you want to place the anchor symbol (⊥).
2. Choose Anchored Frame from the Special menu.

3 **Choose the frame's anchoring position and specify its size.**



The properties that appear in the Anchored Frame dialog box depend on the anchoring position. For details, see the following instructions.

4 **Click New Frame.**
An anchor symbol (⊥) appears at the insertion point when Text Symbols is on in the View menu.

To position an anchored frame at the insertion point

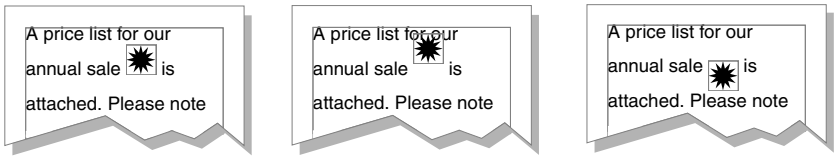
You position an anchored frame at the insertion point when you want to insert it in line with paragraph text—for example, to hold a small graphic such as a picture of the keycap (Enter). When you put a space on either side of the anchored frame, the frame moves along from one line to another as you edit the document, as if it were a word (rather than being attached to the preceding or following word).

When an anchored frame is positioned at the insertion point, you can adjust the frame's position up or down relative to the baseline.

Positioning an anchored frame is one of the steps in creating it. For the entire procedure, see "To create an anchored frame" on page 15-4.

1 **In the Anchored Frame dialog box, choose At Insertion Point from the Anchoring Position pop-up menu.**

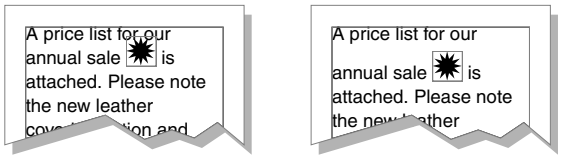
2 **Type the vertical position of the frame in the Distance above Baseline text box.**
When you type `0` (zero), the bottom of the frame is aligned with the baseline of the text. Positive numbers move the frame up; negative numbers move it down.



Zero distance | Positive distance | Negative distance

WHEN THE FRAME OBSCURES TEXT

The frame may obscure text in the line above or below. If it does, turn off fixed line spacing to allow the line height to change with the contents of the line. For details, see "To choose the spacing between lines" on page 4-18.



Fixed line spacing is on. | Fixed line spacing is off.

SHRINKWRAPPING AN ILLUSTRATION

To shrink an anchored frame to the dimensions of its contents and place it in the line at the anchor symbol, select the frame or an object in the frame and press Esc m p. To enlarge a frame and place it below the line that contains the anchor symbol, select the frame or an object in it and press Esc m e.

To position an anchored frame in a column of text

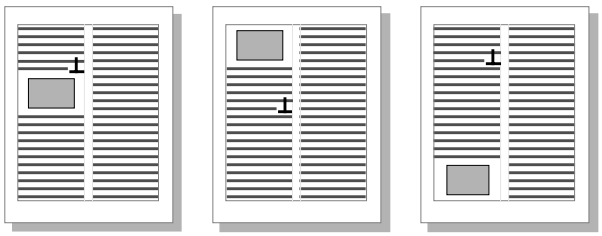
You position an anchored frame in a column of text when you want to insert it below the current line, at the top of the column, or at the bottom. You can choose the frame's horizontal alignment in the column—left, center, right, side closer to the binding edge, or side farther from the binding edge.

You can prevent a wide frame from extending beyond the edge of the column by cropping the frame. And you can let the frame float to the next column that can hold it if the frame and its anchor symbol won't fit in the same column.

You can also position an anchored frame at the top of a paragraph, with the paragraph text running around the frame—for example, to set a small graphic or a drop cap at the beginning of the paragraph. For information, see "To run text around an anchored frame" on page 15-13.

Positioning an anchored frame is one of the steps in creating it. For the entire procedure, see "To create an anchored frame" on page 15-4.

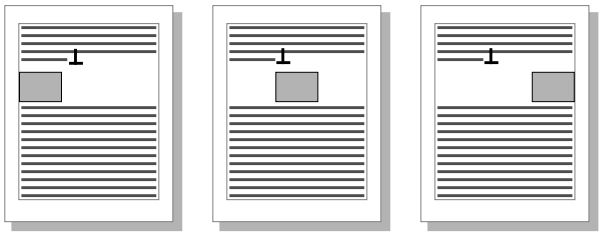
1 **In the Anchored Frame dialog box, choose Below Current Line, At Top of Column, or At Bottom of Column from the Anchoring Position pop-up menu.**



Directly below the anchor symbol | At the top of the column | At the bottom of the column

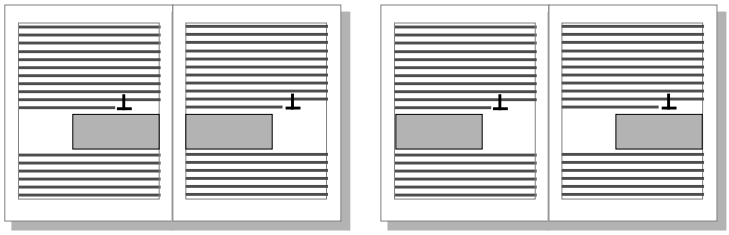
For information on the placement of top-of-column and bottom-of column anchored frames in multicolumn layouts, see "Anchored frames in multicolumn layouts" on page 15-9.

2 **Choose the alignment from the Alignment pop-up menu.**



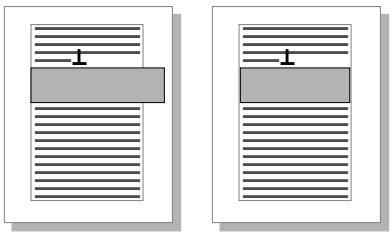
Left | Center | Right

For a double-sided document, you can also choose Side Closer to Binding or Side Farther from Binding.



Side Closer to Binding | Side Farther from Binding

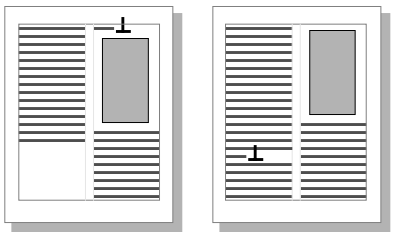
3 **To allow a wide frame to extend beyond the edge of the column of text, turn off Cropped.**



Cropped off Cropped on

When the frame is in a multicolumn text frame, it may straddle the columns. For details, see "Anchored frames in multicolumn layouts" on page 15-9.

4 **To allow a frame to float to the next column that can hold it, turn on Floating.**



Floating off Floating on

When Floating is off, both the frame and anchor move to the first column that can hold them. White space remains at the bottom of the column.

When Floating is on, the anchor doesn't move, but the frame floats to the next column that can hold it. Text from the next column fills the space.

ANCHORED FRAMES AND RUN-IN HEADS

When you want to place an anchored frame below a line that contains a run-in head, place the anchor symbol in the body paragraph, not in the run-in head. Otherwise, the anchored frame obscures the text below the run-in head.

To position an anchored frame outside a column

When you position an anchored frame outside a column of text in a text frame, you can choose one of several positions: on the left or right side of the column, on the side closer to or farther from the page edge, or on the side closer to or farther from the binding in a double-sided layout.

You can adjust the frame's position up, down, left, and right.

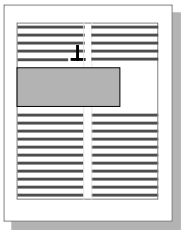
The positions are always relative to the sides of the column, so the frame may appear between columns on a multicolumn page. For information on positioning

ANCHORED FRAMES IN MULTICOLUMN LAYOUTS

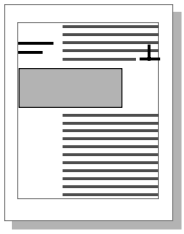
An anchored frame in a multicolumn text frame can straddle columns, and its position may be affected by straddle paragraphs.

Anchored in a straddle paragraph When a frame is anchored in a straddle paragraph, the frame straddles columns just as the paragraph does.

Wider than a column An uncropped anchored frame that extends into a second column of the body area straddles columns in the body area. A frame that extends into the side-head area straddles the side-head area as well.



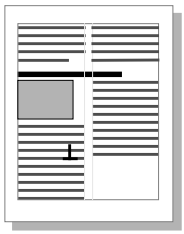
Frame straddles all columns.



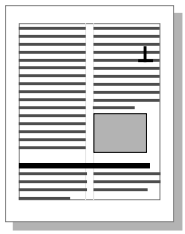
Frame straddles side-head area and all columns.

A cropped anchored frame straddles columns only when it's anchored in a straddle paragraph.

Top and bottom of column When the anchor symbol for a top-of-column anchored frame appears below a straddle paragraph, the frame appears in the column just below the straddle paragraph rather than at the top of the column.



Anchored at top of column



Anchored at bottom of column

A bottom-of-column anchored frame is positioned similarly when the anchor symbol appears above a straddle paragraph.

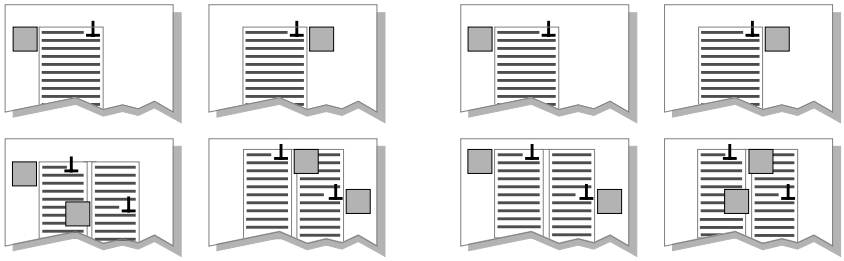
You can force the anchored frame to appear at the top or bottom of the column (above or below a straddle paragraph) by making the frame straddle the columns. To do so, turn off Cropped in the Anchored Frame dialog box and resize the anchored frame until it extends into another column. For more information, see "To position an anchored frame in a column of text" on page 15-6 and "To resize an anchored frame" on page 15-20.

an anchored frame so it always appears in the page margin, even in a multicolumn document, see "Positioning anchored frames in the page margins" on page 15-12.

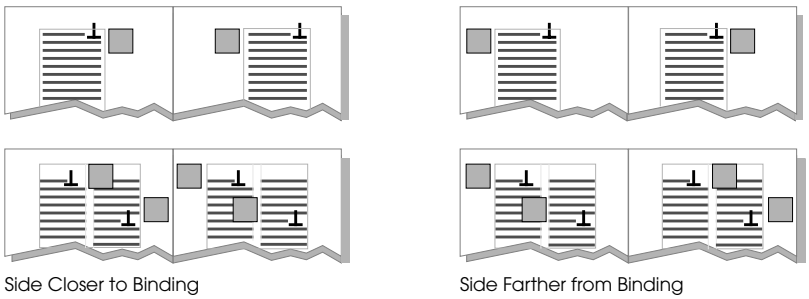
Positioning an anchored frame is one of the steps in creating it. For the entire procedure, see "To create an anchored frame" on page 15-4.

1 **In the Anchored Frame dialog box, choose Outside Column from the Anchoring Position pop-up menu.**

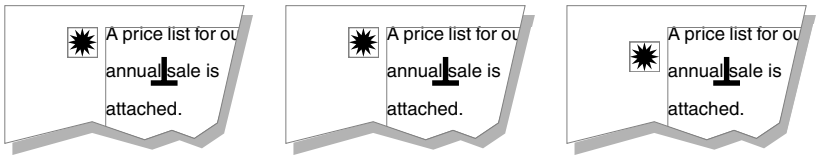
2 **Choose one of the settings from the Side pop-up menu.**



For a double-sided document, you can also choose Side Closer to Binding or Side Farther from Binding.



3 **Specify the vertical position of the frame in the Distance above Baseline text box.**
When you type `0` (zero), the bottom of the frame is aligned with the baseline of the text. Positive numbers move the frame up; negative numbers move it down.



Zero distance above baseline | Positive distance above baseline | Negative distance above baseline

You can't position the anchored frame above the top or below the bottom of the text frame. If the setting would place the anchored frame above or below the text frame, FrameMaker puts it as high or as low as possible. If you edit the text so that the anchor symbol moves away from the top or bottom of the text frame, FrameMaker adjusts the anchored frame's position accordingly.

4 **Specify the horizontal position of the frame in the Distance from Column text box.**
When you type `0` (zero), the edge of the anchored frame is aligned with the edge of the text column. Positive numbers move the anchored frame away from the column; negative numbers move it into the column.

Zero distance from column | Positive distance from column | Negative distance from column

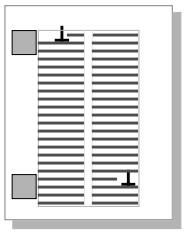
MAKING ROOM FOR ANCHORED FRAMES

When an anchored frame positioned between two columns is wider than the gap between columns, you can widen the gap. For information, see "To change the number of columns" on page 18-9 and "To change the number of columns on an individual page" on page 19-13.

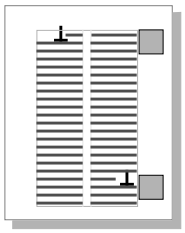
When you can't widen the gap, you can move the anchored frame completely inside the text column. For details, see "Moving a frame into a column" on page 15-19.

POSITIONING ANCHORED FRAMES IN THE PAGE MARGINS

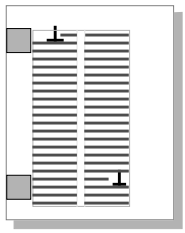
You can position anchored frames so they always appear in the page margins, even in a multicolumn layout in which they might otherwise appear between columns. To do so, choose the Outside Text Frame anchoring position in the Anchored Frame dialog box. Choose a side for the frame and specify other settings, and then click New Frame. The positions in the margin are relative to the sides of the text frame.



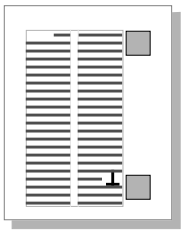
Left Side of Text Frame



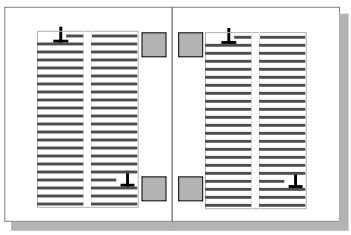
Right Side of Text Frame



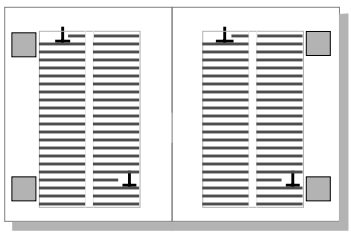
Side Closer to Page Edge



Side Farther from Page Edge



Side Closer to Binding



Side Farther from Binding

In a single-column layout, the Outside Text Frame setting has the same effect as the Outside Column setting.

To run text around an anchored frame

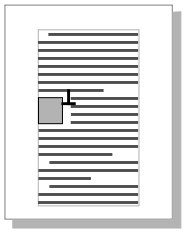
You can position an anchored frame at the top of a paragraph, with the paragraph text running around the frame—for example, to set a small graphic or a drop cap at the beginning of a paragraph.

When you run text around an anchored frame, you can choose one of these positions: on the left or right side of the column or on the side closer to or farther from the binding in a double-sided layout. The anchored frame is always aligned vertically with the top edge of the text in the paragraph.

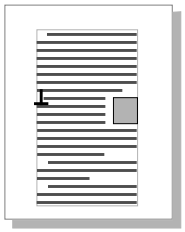
Positioning an anchored frame is one of the steps in creating it. For the entire procedure, see "To create an anchored frame" on page 15-4.

1 **In the Anchored Frame dialog box, choose Run into Paragraph from the Anchoring Position pop-up menu.**

2 **Choose one of the settings from the Alignment pop-up menu.**

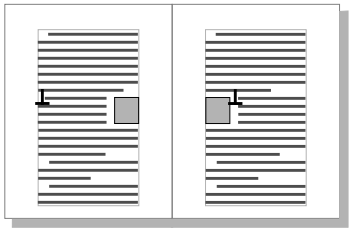


Left Side of Text Frame

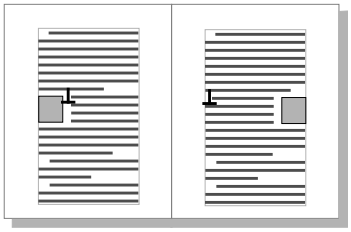


Right Side of Text Frame

For a double-sided document, you can also choose Side Closer to Binding or Side Farther from Binding.



Side Closer to Binding

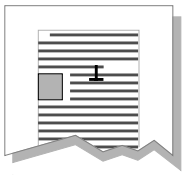


Side Farther from Binding

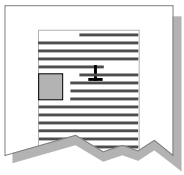
3 **Specify the gap between the frame and the paragraph text in the Gap text box.**

INDENTS AND RUNAROUND TEXT

When an anchored frame is set to Run into Paragraph, FrameMaker aligns the frame with the paragraph's left indent when it appears at the left side of the paragraph, and with the right indent when it appears at the right side. When the paragraph has a first-line indent, the anchored frame does not change the position of the indent.



Graphic extends beyond the first-line indent.

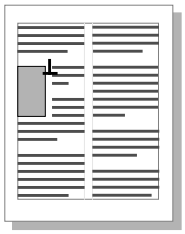


Larger first-line indent

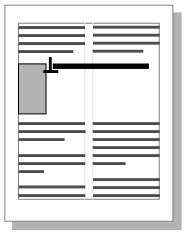
When you want to preserve a first-line indent, change the first-line indent setting for the paragraph. For details, see "To indent a paragraph" on page 4-13.

TALL ANCHORED FRAMES

When an anchored frame set to Run into Paragraph is taller than the paragraph, FrameMaker runs text from subsequent paragraphs around the frame unless the paragraph that contains the anchor symbol is a straddle paragraph.



Frame spanning two paragraphs



Tall frame in a straddle paragraph

To create an anchored frame automatically

When you import or paste a graphic into text, FrameMaker creates an anchored frame automatically to anchor the graphic to text. The frame always appears centered below the current line. Once the frame is created, you can change its properties. For details, see "Editing an anchored frame" on page 15-17.

- **Paste an object into text at the insertion point.**
  Cut or copy the object, click in text where you want to insert the anchor symbol, and choose Paste from the Edit menu.
- **Import a graphic into text at the insertion point.**
  Click in text where you want to insert the anchor symbol, choose Import>File from the File menu, and select the graphic file you want to import. For details, see "Importing and changing a graphic" on page 16-4.

FILLING AN ANCHORED FRAME

You often put several objects in an anchored frame—imported images, graphics you draw, and text frames or text lines.

To select an anchored frame

You need to select an anchored frame in order to paste or import objects into it and in order to edit it. You can also use these steps to select unanchored graphic frames.

1. **If the frame's border isn't visible, choose Borders from the View menu.**
2. **Click the frame's border.**

To put graphics in an anchored frame

You can draw graphics in an anchored frame just as you draw elsewhere, and you can move, paste, and import graphics into an anchored frame. You can also use these methods to put graphics in unanchored graphic frames.

- **To draw an object directly in the graphic frame, use one of the drawing tools on the Tools palette.**
  For information, see "Drawing objects" on page 13-7.

  If you start drawing the object outside the frame, the object will be on the page and not anchored to text.
- **To move an object into a graphic frame, drag the object until the pointer is within the frame's borders.**
  The object jumps into the frame when you drag across the frame's border.

- **To paste an object into a graphic frame from the FrameMaker Clipboard, select the frame and choose Paste from the Edit menu.**
- **To import a graphic into a graphic frame, select the frame and choose Import>File from the File menu.**
  For information on importing graphics, see "Importing and changing a graphic" on page 16-4.

IF A GRAPHIC DOESN'T MOVE WITH THE ANCHORED FRAME

If a graphic looks as though it's in the anchored frame, but it doesn't move with the frame as you edit the surrounding text, the graphic is probably *in front of* the frame rather than *in* the frame—perhaps because you pasted it on the page rather than in the frame. Drag the graphic completely away from the frame and then drag it back into the frame.

To put text in an anchored frame

You can put single lines of text or text frames in a graphic frame. You use text lines for single-line callouts. You use text frames for multiline callouts, paragraphs of text, and any other text that you want to wrap automatically from line to line. You also use text frames when you want to insert variables, cross-references, or markers in the text, when you want to include the text in a generated list, and when you want to make the text conditional.

You can also use these methods to add text to unanchored graphic frames.

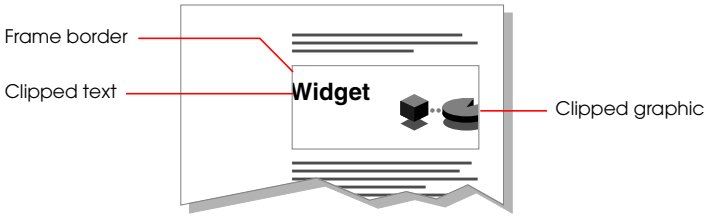
- **To add text in a text line, use the Text Line tool on the Tools palette.**
  For details, see "To add a text line" on page 13-25.
- **To add text in a text frame, use the Text Frame tool on the Tools palette.**
  For details, see "To add a text frame" on page 13-26.

ADDING A FIGURE TITLE

You can position a figure in an anchored frame and then use a text frame inside the anchored frame for the figure title. But you'll probably find it easier to position and number the title consistently if you put the figure in a single-cell table and then set up the table title as a figure title. For more information, see "To add a title to a graphic" on page 13-28.

To prevent an anchored frame from clipping its contents

An anchored frame's contents are clipped when they extend into or beyond the frame's border.



You can avoid clipping in several ways.

- **When there's room outside the anchored frame, make the frame larger.**
  If a frame and its contents are clipped by the edge of a column of text, you can turn off cropping in the Anchored Frame dialog box. For details, see "To position an anchored frame in a column of text" on page 15-6.
- **When there's room inside the anchored frame, move the object away from the edge of the frame.**
  For details, see "To move an object" on page 14-4.
- **When the contents are clipped only by the width of the border, use the Tools palette to make the anchored frame's border narrower or to change the pen pattern to None.**
  For details, see "To change a graphic property" on page 13-19.

EDITING AN ANCHORED FRAME

You can change an anchored frame's settings for anchoring position and size at any time.

Anchored frames are objects like the rectangles you draw with the Tools palette, and you can manipulate them as you do other objects—for example, duplicate, delete, move, or resize them. You can also make an anchored frame visible by changing its pen or fill pattern to a visible pattern, and you can change the line width and line style of its border.

To change an anchored frame's settings

You can change any of the settings you used to create the frame—anchoring position, size, and so on.

1. **Select the frame.**
2. **Choose Anchored Frame from the Special menu.**
3. **Change the settings in the Anchored Frame dialog box and click Edit Frame.**

To duplicate or delete an anchored frame

You duplicate or delete an anchored frame just as you duplicate or delete other objects.

- **To duplicate an anchored frame, copy the frame, click in text where you want to insert the duplicate, and choose Paste from the Edit menu.**
  When you copy an anchored frame, FrameMaker puts the frame (and any objects it contains) on the FrameMaker Clipboard.

  When you paste the frame, FrameMaker places the anchor symbol at the insertion point.
- **To delete an anchored frame, select the frame and press Delete.**
  The anchored frame isn't placed on the Clipboard.

To move a frame's anchor symbol

You can move the anchor symbol to change where a frame is anchored. When you do, the frame is anchored to the anchor symbol's new location. In some cases—for example, when the frame is positioned at the top or bottom of a column of text—the frame may not change position even though the anchor symbol moves.

1. **Select the frame.**
   You don't need to select the anchor symbol.
2. **Choose Cut from the Edit menu.**
   When you cut an anchored frame, FrameMaker puts the frame (and any objects it contains) on the FrameMaker Clipboard.
3. **Click in text where you want to insert the anchor symbol.**
4. **Choose Paste from the Edit menu.**
   When you paste the frame, FrameMaker places the anchor symbol at the insertion point.

To move an anchored frame

You can move a frame anchored outside text frames, outside columns of text, or at the insertion point without changing the location of the anchor symbol.

When a frame is anchored outside the text frame or outside the column, you can't move it above the top or below the bottom of the text frame.

- **For quick but approximate repositioning, drag the frame.**
- **For more precise repositioning, move the frame in small increments with the arrow keys.**
  For details, see "To move an object" on page 14-4.
- **For greatest precision, specify the location of the frame with the Anchored Frame command on the Special menu or with the Object Properties command on the Graphics menu.**
  For details on using the Object Properties command, see "To specify the exact position of an object" on page 14-5.

MOVING A FRAME INTO A COLUMN

When you move a frame into a column (either by changing the Distance from Text Frame setting in the Anchored Frame dialog box or by dragging the frame), the text in the column doesn't adjust to accommodate the frame. To adjust the text in the column, use the Run into Paragraph setting to move the frame completely inside the column and to run the text around the frame automatically. For details, see "To run text around an anchored frame" on page 15-13. Alternatively, you can change the paragraph indents to make room for the frame. For details, see "To indent a paragraph" on page 4-13.

ROTATING A FRAME

You can rotate a frame in 90-degree increments. For details, see "To rotate an equation or graphic frame" on page 14-16.

To resize an anchored frame

You resize an anchored frame just as you resize other objects.

- **To resize the frame quickly but approximately, select the frame and drag one of its handles.**
- **To resize the frame precisely, specify its size with the Object Properties or Scale command on the Graphics menu.**

To change an anchored frame's drawing properties

An anchored frame has properties like other objects. You can change its fill pattern, its color, and the pen pattern, line width, and line style of its border.

1. **Select the frame.**
2. **Choose the properties you want on the Tools palette.**
   For details, see "To change a graphic property" on page 13-19.

16

IMPORTING GRAPHICS

Using graphics created in other applications or captured from the screen

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16 IMPORTING GRAPHICS

You can import graphics into a document as well as create them with FrameMaker drawing tools. The imported graphics can be created in another application, digitized with a scanner, or captured from the screen with FrameMaker.

Imported graphics behave like objects you draw

You can import bitmaps, Encapsulated PostScript (EPS) files, Desktop Color Separation (DCS) files, and graphic insets. Whatever its format, once you import the graphic it becomes a single object you can work with just as you work with an object you create with the FrameMaker drawing tools. You can move the graphic, resize it, anchor it to text, or group it with other imported or internally created objects. And you can cut, copy, and paste the imported graphic, using the same techniques you use when you work with a simple object such as a rectangle.

MacPaint bitmap

You can import PostScript files into a text frame. The PostScript code appears on the screen, but the image appears in the printed document (on a PostScript printer).

FrameMaker includes filters you can use to import other graphic formats. Your site may have additional filters. If the filter you use

produces an appropriate format, you can treat the imported graphics as a collection of editable FrameMaker objects.

Color and gray-scale images are treated as bitmaps

Bitmaps, gray-scale images, and color images are usually created with a paint program or from a graphic that has been digitized with a scanner. They are also produced by screen capture. Because bitmaps, gray-scale images, and color images are all imported in the same way, this chapter uses the term *bitmap* for all of them.

A true bitmap is a grid of black-and-white dots. Color and gray-scale images are also composed of dots, with each dot assigned a color or a shade of gray. FrameMaker displays color images in color on a color monitor.

Vector graphics can be black and white, gray scale, or color

A vector graphic contains mathematical descriptions of the objects that make up the graphic. As a result, it retains its crispness and clarity when you resize it in FrameMaker, and it is printed at the resolution of your printer. For example, files in PICT or Windows Metafile format can contain vector graphic information.

You can import a graphic by copying or by reference

When you import a graphic by copying, the graphic becomes part of the document. When you import by reference, FrameMaker maintains a link to the graphic file and updates the document with the current graphic each time the page is redisplayed.

Some imported graphics can be edited with a graphic inset editor

A graphic inset is a graphic imported from a specially modified application—a graphic inset editor. You can start an inset editor from within FrameMaker, create the graphic inset, and then insert it in your document. When you want to modify the inset, you can jump to the editor, change the inset, and then display the updated inset in the document.

You can capture screens with FrameMaker

You can use the FrameMaker Capture command to capture any part of your workstation's screen—in monochrome, gray scale, or color. Then you can import the captured screen just as you import any bitmap.

In this chapter

This chapter shows you how to import a graphic and change its scale, find referenced graphic files, and view an imported graphic's name. It also shows you how to work with graphic insets and to capture screen images.

Chapter 13 describes the drawing tools you can use to create graphics within FrameMaker documents. Chapter 17 describes printing color graphics and creating process color separations. The online manual *Using Frame Products on Multiple Platforms* describes the graphic formats you can import into FrameMaker documents.

IMPORTING AND CHANGING A GRAPHIC

You can import a graphic file into a FrameMaker document by copying or by reference. When you import a graphic file by copying it, FrameMaker stores a copy of the graphic in the document. When you import a graphic file by reference, FrameMaker stores only the graphic's pathname in the document. For a discussion of the advantages and disadvantages of both methods, see "Import by copying or by reference" on page 16-7.

After you import a graphic file, you can change its scale or even replace it with a different graphic. And, as with any other object in FrameMaker, you can move it, copy it, flip it, and so on.

You can import bitmaps, Encapsulated PostScript (EPS) files, Desktop Color Separation (DCS) files, and graphic insets.

For a list of graphic formats you can import, see the online manual *Using Frame Products on Multiple Platforms*. For information on EPS formats, see "Encapsulated PostScript" on page 16-5. For information on DCS files, see "DCS graphics" on page 16-9.

To import a graphic

You can import a graphic into an anchored or unanchored graphic frame, into a rectangle acting as a border, or right onto a page. For example, if you want the graphic to move with text as you edit the document, import the graphic into an anchored frame. If you want the graphic to stay where you put it—for example, the logo of a letterhead—import it onto the page and position it where you want it.

When you import a graphic, you sometimes specify an import filter based on the graphic's format. When you import a bitmap, you also specify its scale in *dots per inch* (dpi). The larger the dpi value, the smaller the graphic is on the page.

1. **Indicate where you want to place the graphic.**
   To place it in a graphic frame, select the frame or put an insertion point in a text frame where you want to create an anchored frame.

   To place it directly on a page, click in the page margin; don't click on any object or in any text frame on the page.

   To replace an imported graphic or rectangle, select the object you want to replace.

2. **Choose Import>File from the File menu.**

ENCAPSULATED POSTSCRIPT

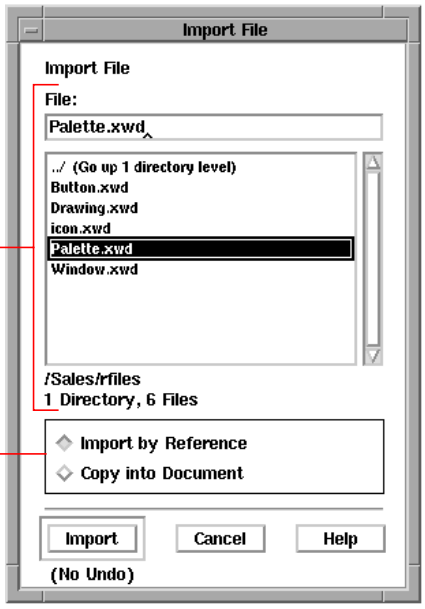
An Encapsulated PostScript (EPS) file uses the PostScript page description language. Each EPS file contains PostScript code for printing the image, and may also contain a preview image for viewing on the screen. If an EPS file does not contain a preview image, or if the platform does not support the format of the preview image, it appears on the screen as a gray box.

In Windows, the EPS file's preview image appears correctly on the screen when it is in TIFF or Microsoft Windows MetaFile format. On the Macintosh, the preview image appears correctly when it is in TIFF or QuickDraw PICT format.

EPS Interchange (EPSI) files are designed for cross-platform use. They contain a bitmap preview image and can be imported and displayed on the screen by Windows, Macintosh, and UNIX versions of FrameMaker.

The UNIX version of FrameMaker cannot import an EPS file saved in DOS/Windows EPS format because this format contains binary data in the header and in the preview image. To import a Windows EPS file successfully on UNIX, save the EPS file without a preview image or header, or save it as an EPSI file. For details on removing the preview and header from an EPS file, see the online manual *Using Frame Products on Multiple Platforms*.

3 **Select the graphic file you want to import and the import method.**



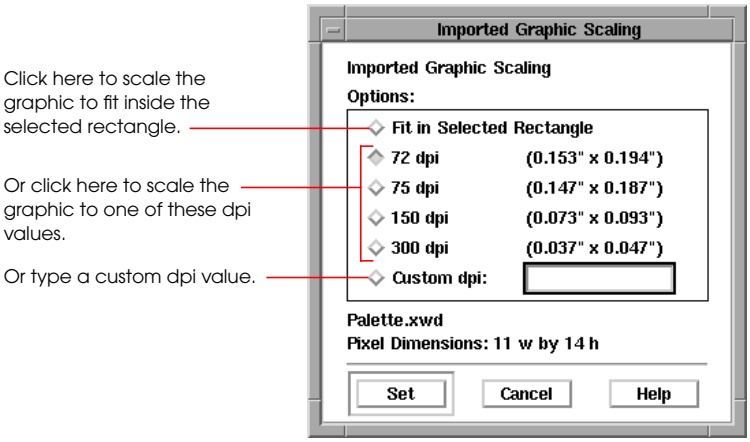
For information on the Import by Reference and Copy into Document settings, see "Import by copying or by reference" on page 16-7.

4 **Click Import.**

5 **If the Unknown File Type dialog box appears when you click Import, select an import filter in the scroll list and click Convert.**
When you import a bitmap, the dialog box shown with the following step appears, and you continue with that step.

Otherwise, the imported graphic appears in the document and you're finished. When you import the graphic directly on the page, and the graphic overlaps a text frame, text runs around the graphic. For information on running text around a graphic, see "To run text around a graphic" on page 13-30.

6 **In the dialog box that appears if you're importing a bitmap, choose a scaling option and click Set.**



The measurements next to the dpi values show the size of the resulting image at the various resolutions.

IMPORT BY COPYING OR BY REFERENCE

Copying a graphic into a document keeps the document and its graphic together, making it easy to copy them from one location to another. However, copying a graphic into a document increases the document size. In addition, if you make changes to the graphic file, you must reimport the graphic to update the document with the latest version.

If you import a graphic file by reference, FrameMaker stores only the pathname to the graphic file in the document. Each time you open the document, FrameMaker locates the graphic file on the disk and displays it in the document. If you make changes to the graphic file, FrameMaker updates the document with the latest version of the graphic each time the page is redisplayed.

Importing by reference conserves disk space. It lets you use the same graphic in several places and updates all occurrences of that graphic.

A few graphic file formats are not compatible across platforms. If you need to display a graphic on another platform, but the graphic's format isn't supported there, import the graphic by copying it into the document. FrameMaker saves the graphic with the document, and also uses a filter to add the graphic in FrameImage format (for bitmap graphics) or FrameVector format (for vector graphics), which can be displayed on all platforms. For more information on FrameImage and FrameVector formats, see the online manual *Using Frame Products on Multiple Platforms*.

When you choose to fit the graphic in the selected rectangle, FrameMaker scales the graphic so the larger of its width and height just fits in the rectangle. When you click Set, FrameMaker replaces the rectangle with the imported graphic.

When you import the graphic directly on the page, and the graphic overlaps a text frame, text runs around the graphic. For information on running text around a graphic, see "To run text around a graphic" on page 13-30.

SUGGESTED SCALING OPTIONS

For the best printed results, choose a dpi value that divides evenly into the resolution of your printer. For example, if you have a 300-dpi printer, import a bitmap at 75, 100, 150, or 300 dpi. If you print to a high-resolution device, such as a 1270 dpi or 2540 dpi printer, you can also choose a dpi value that divides into the resolution of your printer leaving only a small remainder. For example, many screen captures in this manual are imported at 141 dpi.

PROBLEMS DISPLAYING IMPORTED GRAPHICS

If the graphic appears as a gray box and an error message appears in the window in which you started FrameMaker, you probably don't have enough memory allocated for images. For information on changing the memory allocation for images, see the online manual *Changing Setup Files*.

If color images appear in black and white on a color monitor, change the resource `Maker.colorImages` to `True` or restart FrameMaker with the `+colorImages` command-line option. When you display color images in color, their colors change depending on whether the window is active. For details, see the online manual *Changing Setup Files*.

If a black-and-white image appears inverted, use the `fminvert` script to invert the image. For details, see "fminvert" on page B-12.

To change a bitmap's scale

If you import a bitmap, you can make it larger or smaller by changing its dpi value.

1. **Select the bitmap and choose Object Properties from the Graphics menu.**
2. **In the Object Properties dialog box, click Set dpi.**
3. **In the Imported Graphic Scaling dialog box, select a new dpi value and click Set.**

For information on choosing a bitmap scale, see "Suggested scaling options" on page 16-8.

SHORTCUTS

You can also scale a bitmap by resizing it with the mouse or by choosing Scale from the Graphics menu. To prevent the bitmap from being distorted, maintain its proportions when you resize it. If you resize the bitmap with the mouse, Shift-drag a corner handle. If you use the Scale command, specify a scale factor.

DCS GRAPHICS

DCS is a standard used by applications such as Adobe Photoshop to allow the printing of process-color graphics using a high-end PostScript prepress system.

A DCS graphic comprises five files, all of which must be present: a main file that contains the preview image, and a file for each of the four color separations. The filenames depend on the application that created the files. The main file might include the word Main or Master in its name. In Photoshop, the main file is the only one without a filename extension; each separation file has an extension that indicates its color. For more information, see the documentation for the application that created the DCS graphic.

To import a DCS graphic, you import only the main file. You can import it by reference or by copying. When you import it by copying it into the document, the document size increases dramatically.

Always keep the main file and its separation files in the same directory, and don't rename any of the files. Otherwise, FrameMaker won't be able to find the separation files.

Unlike other imported graphics, you can't apply a color to a DCS graphic using the Tools palette. FrameMaker always uses the colors specified in the separation files.

To replace a graphic

If a graphic changes and you imported it by copying, or if you just want to substitute one graphic for another, you can replace the existing graphic. FrameMaker places the new graphic in the same location as the old one.

1. **Select the current graphic.**
2. **Import the new graphic.**
   When the Imported Graphic Scaling dialog box appears, the dpi value of the current graphic is automatically selected. You can keep the same dpi value or choose another.

To import PostScript code

You can import PostScript code in a text frame to create special effects. Unlike when you use an EPS file with a preview image, you don't see a representation of the printed image on the screen. However, when you print the file on a PostScript printer, FrameMaker prints the image that the PostScript code describes rather than printing the code as text in the text frame.

1. **Draw a text frame to hold the PostScript code.**
   Use the Text Frame tool on the Tools palette. For details, see "To add a text frame" on page 13-26. Depending on the PostScript code, you may need to draw the text frame at the lower-left corner of the page. For details, see "How FrameMaker prints the PostScript code" on page 16-11.
2. **Type, paste, or import the PostScript code into the text frame.**
3. **Choose Customize Layout>Customize Text Frame from the Format menu.**
4. **In the Customize Text Frame dialog box, turn on PostScript Code and click Set.**
   You can select the text frame as an object, but you can no longer put an insertion point in the frame.

EDITING THE POSTSCRIPT CODE

To edit the code in a PostScript code text frame, you must first select the text frame and use the Customize Layout>Customize Text Frame command on the Format menu to turn off PostScript Code. After you edit the code, use the Customize Layout>Customize Text Frame command to turn it on again.

REFERRING TO EXTERNAL POSTSCRIPT FILES

You can refer to external PostScript files in a PostScript code text frame. To do this, place the following command at the beginning of a line in a PostScript code text frame:

```
#include "filename"
```

where *filename* represents the pathname of the PostScript file.

You must type a full pathname to ensure that FrameMaker can find the include file, unless the file is in the directory from which you started FrameMaker.

HOW FRAMEMAKER PRINTS THE POSTSCRIPT CODE

When you print the document, FrameMaker sets up the PostScript stack for the code in the text frame. It pushes the text frame's lower-left page-relative coordinates, width, and height onto the PostScript stack before the imported PostScript code is stored in the PostScript file. FrameMaker also resets the origin (0,0) to the lower-left corner of the text frame. If the text frame that contains the PostScript code isn't located at the lower-left corner of the page, the image may print off the page. The PostScript code must control its own scaling and clipping.

To see how FrameMaker sets up the stack before it executes the code, use the Print command to print the document to a file. You can then examine the PostScript code for the entire document.

If a PostScript code text frame contains a PostScript error, the rest of the document may not print, or may print incorrectly.

SAMPLE POSTSCRIPT CODE

For some examples of PostScript code you can place in a PostScript code text frame, see the sample document `SpecEffects`, available from the Frame electronic bulletin board service (BBS). For details, see "To reach the Frame electronic bulletin board" on page A-4.

MANAGING GRAPHICS IMPORTED BY REFERENCE

When you open a document that contains a graphic file imported by reference, FrameMaker looks for the graphic file with the pathname that was specified when the file was imported, and then displays the graphic in the document. For information on the pathname, see "How FrameMaker locates imported graphic files" on page 16-12.

FrameMaker may not be able to find the graphic for several reasons.

- The document was moved to a new location, but the graphic files weren't.
- The graphic file was removed or moved to a new location.
- The graphic file was renamed.
- The directory containing the graphic file was renamed.

If FrameMaker can't find the graphic file it's looking for, you can specify its new location. You can also skip that file and continue opening the document.

At other times, a document may contain an imported file with a name you can't remember. As long as the file was imported by reference, you can look up its filename.

HOW FRAMEMAKER LOCATES IMPORTED GRAPHIC FILES

The pathname that FrameMaker stores for a graphic file imported by reference is usually relative. That is, it shows the location relative to the directory of the document that contains the imported graphic. For example, `rfiles/Palette` is a relative pathname indicating that `Palette` is in the `rfiles` subdirectory of the document's directory. However, if FrameMaker has to traverse the root of the file system when building the pathname, it uses an absolute pathname that begins at the root (`/`). For example, `/usr/sales/rfiles/Palette` is an absolute pathname.

Because FrameMaker stores relative pathnames whenever possible, it will continue to find the graphic if you move the document and graphic files to a different directory—as long as you keep the files in the same relative locations. And if you save the document in a different directory, FrameMaker adjusts the pathnames accordingly.

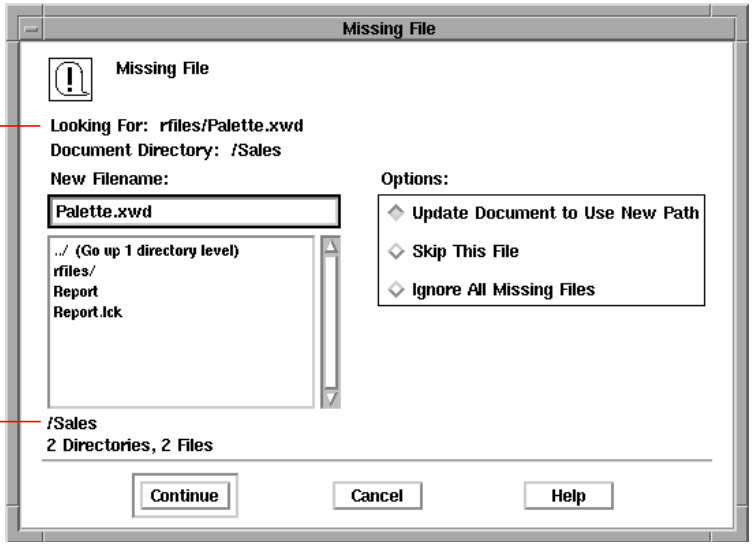
To organize graphic files

You'll find it easier to maintain your graphic files and the FrameMaker documents that contain them if you follow a few simple guidelines for organizing the files.

- **Keep all graphic files for a document in one directory.**
  It's easier to move or copy files in a single directory than to move or copy files scattered in several directories.
- **Put graphic files in the same directory as the document or in a directory below the document directory, and import them by reference.**
  If you move the document directory (and its subdirectories) to another location, FrameMaker can still find the graphic files when you open the document.
- **Use a filename extension to indicate the graphic file type.**
  For example, you could use the extension `.eps` for Encapsulated PostScript files. You may even want to create different directories for different graphic file types.
- **Give graphic files descriptive names.**
  Documents are much easier to maintain when imported graphics have filenames such as `filemenu.eps` rather than `screen1.eps`.
- **Consider the file-naming conventions of each computer platform on which you use your FrameMaker documents.**
  For example, the Macintosh doesn't allow colons in filenames, Windows 3.1 and earlier versions allow filenames of up to eight characters with a three-character extension, and spaces can cause problems on UNIX platforms. For more information, see the online manual *Using Frame Products on Multiple Platforms*.
- **Put graphic files that may be used in several documents in a central directory, and import them by reference.**
  If a graphic file is changed, all documents that reference the graphic are updated.

To locate a graphic FrameMaker can't find

When you open a document that contains graphic files imported by reference, FrameMaker looks for all the referenced graphic files. If FrameMaker can't find a graphic file, it displays a dialog box.



At this point, you can tell FrameMaker where to find the file, or you can decide to skip the graphic and proceed with opening the document.

1 **Indicate whether you want to display the graphic.**

Purpose	Action	Notes
Find and display the graphic	Use the scroll list to select it and click Update Document to Use New Path.	FrameMaker creates a new path to the file.
Skip the graphic file	Click Skip This File.	FrameMaker continues to look for other graphic files imported by reference.
Skip other graphic files if FrameMaker can't find them	Click Ignore All Missing Files.	Use this option if you copied a document (but not the graphic files) to another location and you just want to edit its text.

When you click Update Document to Use New Path, FrameMaker continues to use the new path while opening the document to try to find other missing files. That way, if you move your graphic file directory, you have to tell FrameMaker the new path only once.

When you choose to skip the file, the skipped graphic appears as a gray rectangle in the document. The next time you open the document, FrameMaker tries to find the file again.

2 **Click Continue.**

To view an imported graphic's filename

At times, you may want to know the name of a graphic file imported by reference. For example, you may need to recapture a screen image and want to give it the same name as the existing image.

1 **Select the graphic and choose Object Properties from the Graphics menu.**
The graphic's pathname appears in the dialog box.

2 **Click Cancel.**

CREATING A LIST OF IMPORTED GRAPHICS

You can create a list of all the imported graphics in a document. For information, see "Generating a list of references" on page 22-9.

WORKING WITH GRAPHIC INSETS

A *graphic inset* is a graphic created in a special application—a *graphic inset editor*—and then inserted in a FrameMaker document. You use the inset editor to modify the graphic inset as well as to create it. In either case, you can start the editor from within FrameMaker

A graphic inset has one or more facets—representations of the image. One facet might be used by the graphic inset editor, a second might be used to display the image, and a third might be used for printing. For example, an inset may have a bitmap facet for viewing and a PostScript facet for printing.

In general, you work with graphic insets just as you do with other imported graphics—you can cut, copy, and paste them. This section gives a general understanding of how to work with graphic insets. For more specific information, see the documentation for your inset editor.

Graphic inset editors are available from a number of sources. For information, see the *FrameConnections™ Catalog*. For information on obtaining this catalog, see "To find out about a third-party product or service" on page A-8.

To create a graphic inset

FrameMaker knows the name and location of the graphic inset editors available to you. For example, your site could have a drafting application set up as an inset editor so you can move in and out of the editor, generating technical illustrations for a specification being written in FrameMaker. For information on the inset editors you can use, see your system administrator. For information on configuring your system to use inset editors, see the online manual *Changing Setup Files*.

1. **Choose Graphic Inset from the Special menu.**
   If only one inset editor is available, an alert appears that asks whether you want to start the editor. If several inset editors are available, the Graphic Inset Editors dialog box appears.
2. **In the Graphic Inset Editors dialog box, select an editor in the scroll list and click Start.**
   If the inset editor is already running, the editor window appears in front of other windows.

   If the editor isn't running, FrameMaker asks whether you want to start the editor. Click OK to start the editor.
3. **Use the inset editor to create the graphic inset.**
   For more information, see the documentation for your inset editor.
4. **Indicate where you want to place the graphic inset in a FrameMaker document.**
   To place it in a graphic frame, select the frame or put an insertion point in a text frame where you want to create an anchored frame.

   To place it directly on a page, click in the page margin—don't click any object or in any text frame on the page.

   To replace an imported graphic or rectangle, select the object you want to replace.
5. **Choose the command in the inset editor that places the graphic inset in a FrameMaker document.**

To edit a graphic inset

After pasting or importing a graphic inset into a document, you can use the graphic inset editor to change the inset.

1. **Double-click the graphic inset.**
   If the corresponding inset editor is already running, the editor window appears in front of other windows and displays the graphic inset.

   If the editor isn't running, FrameMaker asks whether you want to start the editor. Click OK to start the editor.

2 **Use the inset editor to modify the graphic inset.**

3 **Choose the command in the inset editor that places the graphic inset in a FrameMaker document.**

CAPTURING A SCREEN IMAGE

You can capture an image of any rectangular area of your workstation's screen and store it in X11 X Window Dump (xwd) image format. For example, if you're using FrameMaker to write a manual for a software application, you may want the manual to include illustrations of the software—menus, dialog boxes, the results of operations, and so on. After capturing the images, you can import them into a FrameMaker document.

You can capture images on both monochrome and color workstations. On a color workstation, FrameMaker creates a color image. You can convert a color image to black and white before importing it. For more information, see "xwd8to1" on page B-13.

To capture an image

Before you capture a portion of your workstation's screen, you first specify the file in which you want to store the image. Then you indicate the rectangular area you want to capture. You can edit the resulting graphic file with a paint program that supports the xwd format.

1 **Position the image you want to capture so that no other objects touch it or are behind it.**

Because you may not find it easy to capture the exact edge of the image, providing a clean background makes screen captures look better. If the object you want to capture is movable, move it over an empty window or a blank page in a FrameMaker document. If the object is unmovable, you can crop stray bits out of the captured image. For details, see "To crop or mask a captured image," next.

2 **Choose Utilities>Capture from the File menu.**

3 **In the Capture dialog box, specify a filename and directory for the bitmap.**

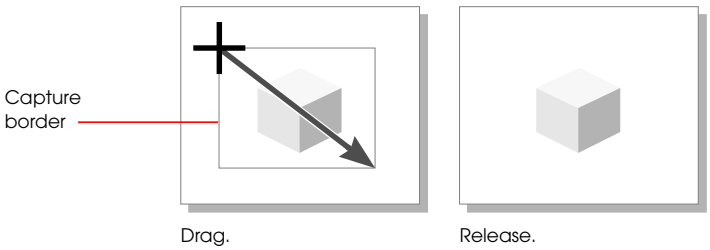
4 **Click Capture.**

After a few moments, the pointer changes to ┼.

For guidelines on naming and organizing filenames for screen images, see "To organize graphic files" on page 16-13.

5 **Position the pointer at one corner of the image.**

6 **Drag across the image until the capture border surrounds the image.**
As you drag, FrameMaker displays the outline of a capture border. Pixels under the border are included in the bitmap. When you release the mouse button, FrameMaker displays a message telling you the screen image has been captured.



7 **Click Continue.**
If you didn't capture exactly the image you want, simply repeat the procedure.

USING THE COLOR MAP OF ANOTHER APPLICATION

When you capture an image in an application's window, you probably want to use the color map for that application rather than for FrameMaker. To do this, you can specify a time interval to allow you to move the pointer to the application's window—thus switching the color map—before the screen is frozen for capture. To specify the time interval, which is normally zero, edit the resource `Maker.captureDelayTime`. For information on editing resources, see the online manual *Changing Setup Files*.

To crop or mask a captured image

If a captured image has stray bits around the edges, you can remove them.

1 **Capture the image as close to its edges as possible.**

2 **Create a new blank FrameMaker document to create a blank background.**

3 **Import the image onto the blank page.**
Use a dpi value that matches the resolution of your screen, so the imported image looks exactly the same as the original.

4 **Turn off borders.**

5 **Draw objects with white fill and no pen pattern on top of the parts you want to remove.**

6 **Capture the image.**
Make sure the zoom setting is 100 percent, so the imported image looks exactly like the original.

17

COLOR

Using and printing spot and process colors

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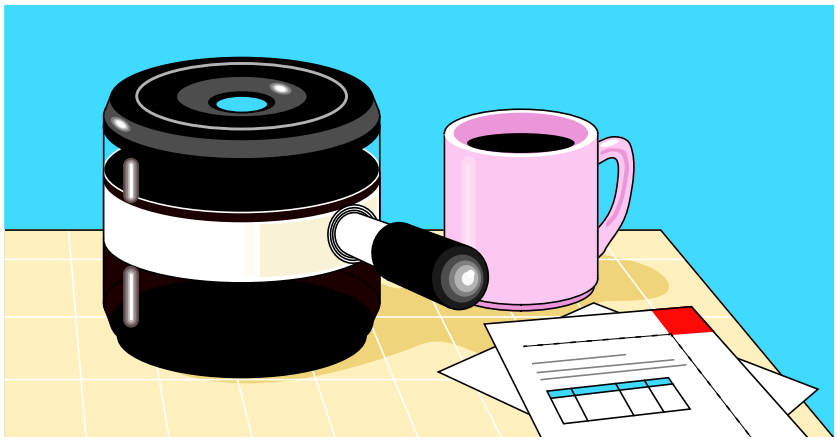
17 COLOR



Color adds excitement to any document. With FrameMaker, it's very easy to apply color to text and objects.

You define the colors you want to use

You can create colors and give them any name you want. FrameMaker provides three color models to choose from—CMYK, RGB, and HLS—and includes PANTONE® colors to help you define colors. Each of these color models has a different purpose. For example, you use CMYK for process printing and RGB for online viewing. And you use PANTONE colors for spot color printing.

After you define the colors, you can assign them to text and objects in a document. You can even include a color as part of character and paragraph formats.

You can see color views

You can define up to six views for checking the color assignments on the screen. A view lets you look at some colors but not others. After defining a view, you can use it again at any time.

You can print color separations

If you're sending your document to a commercial print shop, you can print process color and spot color separations. When printing process color separations, FrameMaker prints four separate sheets (one separation each for cyan, magenta, yellow, and black) for each page. The commercial print shop uses the separations (which are printed on a black-and-white printer) to create printing plates. On the press, each plate is printed with the appropriate ink color. The colors on the page are produced as mixtures of the four separation colors. When printing spot color separations, FrameMaker prints one plate for each spot color whenever it appears in a document.

You can also print composite pages that show all the colors on one page as they appear on the screen. Composite pages are printed in color on a color printer and in black or gray scale on a black-and-white printer.

Clean color printing requires proper registration

Because each color separation is run through the printing press separately, each color must print correctly in relation to the other colors. This relationship is called registration. With FrameMaker, you can adjust individual objects for proper registration by using overprinting that lets one colored object print over another one.

If registration is bad when printing colors, gaps can appear between colors.

Registration is corrected by overprinting the objects.

In this chapter

This chapter explains how to assign colors to text and objects, how to define and view colors, and how to print color documents.

ASSIGNING AND DEFINING COLORS

You can assign color to text or objects. Before you start assigning and defining colors, take a few moments to think about how you will use color. For a few tips, see "Planning to use color" on page 17-4.

For example, you may want to assign a color to chapter or table headings. The colors you assign are mixtures of the colors in the model you're using.

The available color models are:

- CMYK (cyan, magenta, yellow, black): used by commercial print shops
- RGB (red, green, blue): screen colors, used primarily for creating online hypertext documents
- HLS (hue, lightness, saturation): traditional color model used by artists

You can use PANTONE colors (PANTONE MATCHING SYSTEM®) to define colors that are mixed in precise formulas that print shops can match. You usually use PANTONE colors for spot colors, but FrameMaker can provide process color approximations for PANTONE colors.

FrameMaker stores colors separately for each document. You can create new colors in a document or change the makeup of existing colors. If you import an EPS image with its own PostScript color definitions, those definitions are added to the document. You can also use the color definitions from another FrameMaker document. For information on using color definitions from another document, see "Importing formats into a document" on page 21-12.

PLANNING TO USE COLOR

As you plan to use color, consider these tips:

- Early in the design process find out if your commercial print shop has any special requirements. Your printer may be able to suggest ways you can use FrameMaker to ease the production process and reduce color printing costs.
- Become familiar with the range of colors available on your monitor and printing devices. Not all monitors can display all colors, nor can all printers print all colors.
- Consult a professional designer. The advice of a designer can turn a good book design into an excellent one.
- Always use character or paragraph formats to assign color to text. This ensures that similar paragraphs are the same color and makes it easier to change colors.

To assign colors to text and objects

The method you use to assign a color differs for text and objects. Any color in a Color pop-up menu can be applied to FrameMaker text or objects. FrameMaker supplies a set of standard colors that you can add to. For information on adding colors, see "To create a new color" on page 17-6.

- **Use a paragraph format, character format, or Color pop-up menu to assign a color.**

To assign a color to	Use
Paragraphs	A format from the Paragraph Catalog
A word or phrase in a paragraph	A format from the Character Catalog
A text line	A format from the Character Catalog, the Color pop-up menu in the Object Properties dialog box, or the Color pop-up menu on the Tools palette
Objects or imported graphics	The Color pop-up menu on the Tools palette or the Color pop-up menu in the Object Properties dialog box
Text in a table	The method for assigning color to paragraphs or to a word or phrase in a paragraph as described above
Cells in a table	The Color pop-up menus in the Custom Ruling and Shading dialog box or in the Table Designer
Change bars	The Color pop-up menu in the Change Bar Properties dialog box
Equations or elements in an equation	A format from the Character Catalog

If the Paragraph Catalog or the Character Catalog doesn't contain the format you need, you can create one. For information about creating a format that contains color, see Chapter 5, "Format Catalogs."

ASSIGNING COLOR TO A TEXT FRAME

If you want to tint the background of a text frame as if it were a rectangle, Control-click the text frame to select it. Then use the Tools palette to change its fill pattern to a visible pattern and to assign a color.

You can achieve the same effect by placing a tinted rectangle behind a text frame that has its fill pattern set to None.

ASSIGNING COLOR TO AN IMPORTED GRAPHIC

If you want to tint an imported black-and-white or gray-scale image, assign a color to it just as you assign a color to an object created with the FrameMaker drawing tools. When you print the object using spot color separations, the image is printed on the plate for the color you assigned it.

To create a new color

You create colors by specifying the color levels in the model you're using. New colors are added to all the FrameMaker Color pop-up menus and to scroll lists.

You can also create a color by choosing a PANTONE color. For details, see "To define PANTONE colors" on page 17-8.

1 **Choose Color>Definitions from the View menu.**
The Color Definitions dialog box appears.

2 **If you want to change the color model, click a button in the Color Model area.**
You can choose the color model you want to use to define colors for a document. For information about the color models, see "Which color model to use" on page 17-6, "Color levels in CMYK and RGB models" on page 17-22, and "Color levels in the HLS model" on page 17-23.

The Color Definitions dialog box changes to reflect the new color model.

WHICH COLOR MODEL TO USE

Choose one of the color models to get the kinds of color results you want. If you're using only PANTONE colors (to print spot colors), choose any model. FrameMaker uses automatic color matching to approximate the PANTONE colors in the model you choose.

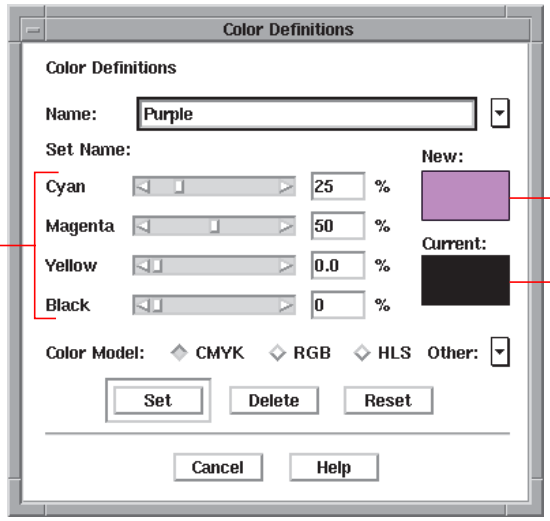
CMYK Use the CMYK model when you want to create color separations for four-color process printing. Commercial print shops can print most colors from a combination of cyan, magenta, yellow, and black (CMYK) color components. Each color component is printed on a separate plate, in a different concentration, depending on how much is needed to create the desired color.

RGB Use the RGB model when you are creating colors that will be seen on a monitor (for online documentation, for example). RGB colors are created by mixing red, green, and blue light.

HLS The HLS model is most like the one artists use to mix colors and is used in many application programs' color wheels for picking colors. Use this model if you are familiar with color wheels. *Hue* is the color's general look (red, green, yellow, blue, and so on). *Lightness* refers to the lightness or darkness of a color. *Saturation* is a color's clarity (how little gray is in the color).

3 **In the Name text box, type a name for the color.**
The pop-up menu to the right of the text box lists the colors already defined for the document.

4 **Provide values for the new color.**
The dialog box will vary depending on the color model you're using. The example shown here is for the CMYK model.



As you change color values, if you're using a color monitor, the New color square changes to reflect the new settings. If you're using a monochrome monitor, all colors—except for white and very light colors—display as black. For more information on color levels, see "Color levels in CMYK and RGB models" on page 17-22 and "Color levels in the HLS model" on page 17-23.

5 **Click Set.**
The new color is added to the document and to the pop-up menu next to the Name text box.

6 **If this is the only color or the last color you want to create, click Done.**
If you want to create additional colors, repeat steps 2 through 5, once for each color you want to create, before clicking Done.

You can also alter and delete colors before clicking Done. Clicking Done doesn't apply a color to a currently selected object.

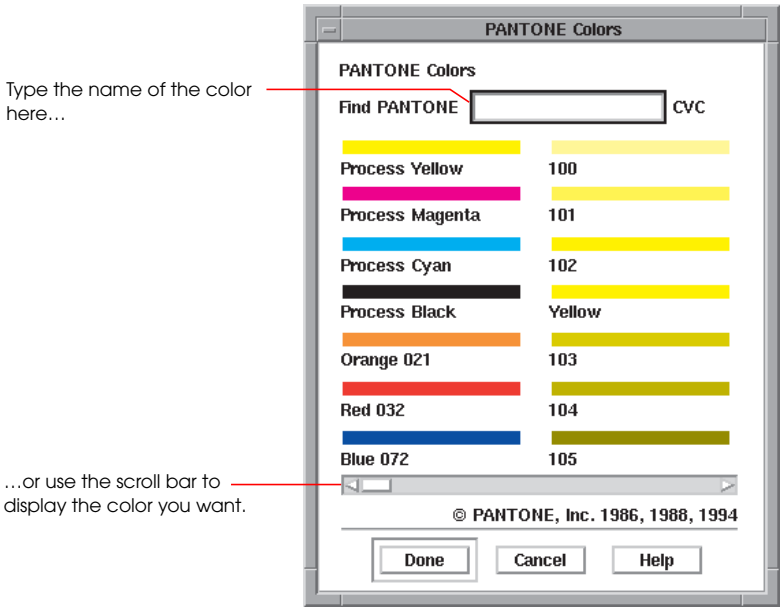
NAME COLORS BY FUNCTION

If you're creating a color for a specific purpose, name the color accordingly to avoid confusion when assigning colors to objects. For example, rather than name the color for callout rules or headings *sky blue,* you could name it *callout* or *heading*. However, avoid creating multiple names for the same color. For more information, see "Inconsistent color names" on page 17-19.

To define PANTONE colors

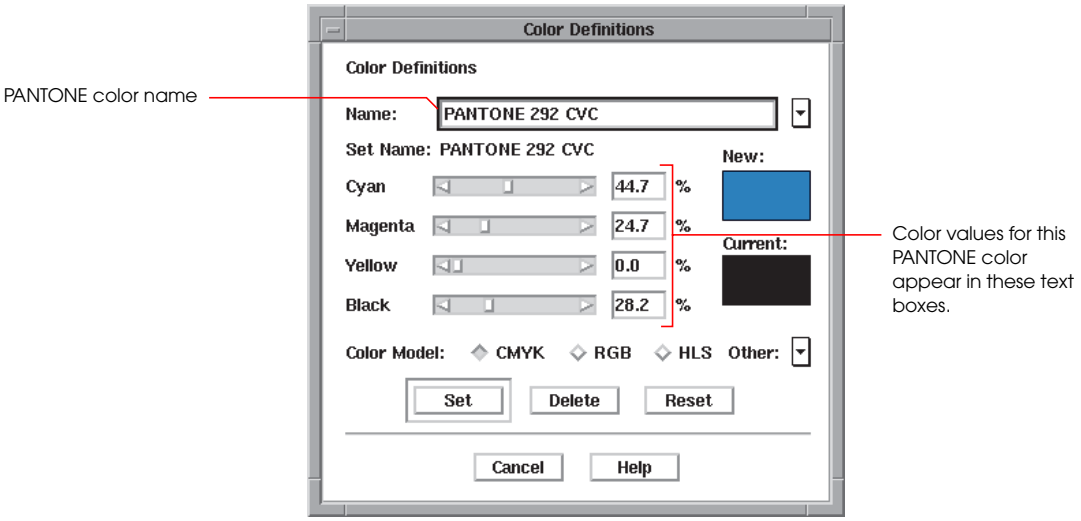
Use the PANTONE MATCHING SYSTEM for spot colors. PANTONE colors are created with specific formulas. As long as you don't edit the definition of a PANTONE color, commercial print shops can precisely match the formula represented by the color name.

1. **Choose Color>Definitions from the View menu.**
2. **In the Color Definitions dialog box, choose PANTONE from the Other pop-up menu.**
3. **In the PANTONE Colors dialog box, select the color you want to define.**
   Use the scroll bar at the bottom of the dialog box to scroll to the color you want to define. You can also type the name of the color in the text box. When you type the name, the dialog box scrolls to the page that contains the color and selects it.



You may want to use a PANTONE Color Reference Manual (swatch book) to help you choose exactly the color you want.

4 **Click Done.**
The PANTONE color name appears in the Name text box in the Color Definitions dialog box. It also appears as the Set Name below the Name text box. The color values for the color model you're using appear in the color value text boxes.



5 **If you want to assign a different name to the color, type the name in the Name text box.**

6 **Click Set.**
The new color is added to the document and to the pop-up menu next to the Name text box.

7 **If this is the only color or the last color you want to create, click Done.**
If you want to create additional colors, repeat steps 2 through 6, once for each color you want to create, before clicking Done.

You can also alter and delete colors before clicking Done. However, if you alter the color values of a PANTONE color, FrameMaker removes the PANTONE color name from the Name text box and the Set Name area in the Color Definition dialog box. Clicking Done doesn't apply a color to a currently selected object.

PANTONE COLOR ACCURACY

When printing PANTONE colors, remember that PANTONE Color computer hard copy simulations used in this product are four-color process simulations and may not match PANTONE-identified solid color standards. Use PANTONE Color Reference Manuals for accurate color.

PANTONE Color simulations are only obtainable on licensed hardware when driven by qualified Pantone-licensed software packages. Contact Pantone, Inc. for a current list of qualified licensees. Pantone, Inc. assumes no responsibility for color inaccuracies on nonlicensed output devices. © Pantone, Inc., 1986, 1992.

To alter a color

You can change the mixture that makes up a color. When you change a color, any objects currently assigned that color are updated. FrameMaker won't let you change the base colors (cyan, magenta, yellow, black, white, red, green, and blue), PANTONE colors, or any colors used by imported EPS files.

1. **Choose Color>Definitions from the View menu.**
2. **In the Color Definitions dialog box, choose the color you want to change from the pop-up menu next to the Name text box.**
   You can also type the name of the color in the Name text box. The values for that color appear in the color level text boxes.
3. **Specify new values in the color level text boxes.**
   As you enter values, if you're using a color monitor, the New color square changes to reflect the new settings. The Current color square shows the color as it originally appeared. If you're using a monochrome monitor, all colors—except white and very light colors—display as black. For more information on color levels, see "Color levels in CMYK and RGB models" on page 17-22 and "Color levels in the HLS model" on page 17-23.

   To return to the original color definition, click Reset.
4. **Click Set.**
   The changes are applied to the document.
5. **If this is the only color or the last color you want to alter, click Done.**
   If you want to alter other colors, repeat steps 2 through 4, once for each color you want to alter, before clicking Done. You can also create and delete colors before clicking Done. Clicking Done applies all these actions to any text or objects using the affected colors.

To delete a color

When you delete a color, FrameMaker asks whether you want to assign black to objects currently using that color. FrameMaker won't let you delete the base colors (cyan, magenta, yellow, black, white, red, green, and blue) or any colors used by imported EPS files.

1. **Choose Color>Definitions from the View menu.**
2. **In the Color Definitions dialog box, choose the color you want to delete from the pop-up menu next to the Name text box.**
   You can also type the name of the color in the Name text box. The values for that color appear in the color level text boxes.
3. **Click Delete.**
   The new color is deleted from the document and from the pop-up menu next to the Name text box. FrameMaker displays an alert if the deleted color is assigned to any text or objects in the document.
4. **If this is the only color or the last color you want to delete, click Done.**
   If you want to delete other colors, repeat steps 2 and 3, once for each color you want to delete, before clicking Done.

   You can also create and alter colors before clicking Done. Clicking Done applies all these actions to any text or objects using the affected colors.

VIEWING COLORS

A color view specifies which colors are visible. For example, if your document has black and a spot color, you could have one view in which both colors are visible, one view in which only black is visible, and one view in which only the spot color is visible. This feature is especially helpful if you are doing color work on a monochrome monitor.

Both colors visible Only black visible Only spot color visible

If you want to check that all headings use the correct color, you can set up a view that turns off the color in question. Any headings still visible when that view is displayed are not assigned the correct color.

To display a view

To check the color assignments in a document, you can turn on any one of the six defined views.

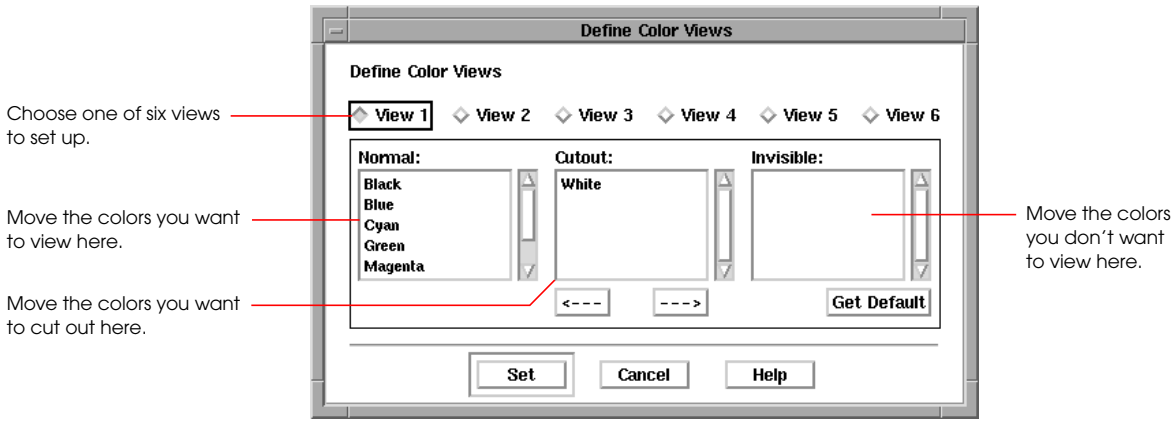
1. **Choose Color>Views from the View menu.**
2. **In the Define Color Views dialog box, turn on the view you want to display and click Set.**

To set up a view

For each view you set up, you specify which colors you want to display, which to display as cutouts, and which not to display at all. Displaying a color as a cutout makes the color appear cut out (white) where it overlaps text or objects in a different color.

You may want to view cutout separations when you're working on a monochrome monitor. By cutting out a color when it appears in the foreground of overlapping objects, you can better see which colors are assigned to which objects. You can print cutout separations to create knockouts—separations in which text and objects in one color are omitted when they overlap a different color.

1. **Choose Color>Views from the View menu.**
2. **Select a view number and move the color names to the appropriate scroll lists.**



To move a color between scroll lists, select the color and click an arrow, or double-click the color. To move all colors from one scroll list to another, select a color in the list and Shift-click an arrow.

To return a view to the default settings, click Get Default at any time.

Colors in the Normal list appear on your monitor when you select the view. A color in the Cutout list makes a color appear white when it overlaps text or objects in a different color. Colors in the Invisible list do not appear in the view. If you are using a monochrome monitor, all colors, including white, will be black when visible. (White is normally cut out, but it appears as black to indicate where white ink would be used.)

Consider leaving View 1 unmodified; that is, leave all colors (except white) in the Normal scroll list. When you draw an object in a color that is invisible in the current view, FrameMaker automatically switches to View 1.

3 **If this is the only view or the last view you want to set up, click Set.**
If you have additional views to set up, repeat step 2, once for each view you want to set up, before you click Set. When you click Set, the currently selected view is displayed.

PRINTING COLORS

If you have overlapping color objects in your document, you may need to adjust the objects for proper registration before you print color separations. You can turn on overprinting, which allows a colored object (most often a dark one) to print on top of another colored object or background, or you can create a trap and overprint only along the border of two adjoining objects.

You can print a composite for each page of a document, or you can print color separations. A composite page contains all the colors that are displayed in the current FrameMaker view of the document. (For information on changing a document's color view, see "Viewing colors" on page 17-11.) Printing a composite page on a color printer produces color pages. When you print a composite page on a black-and-white printer, you can print all colors as shades of gray or as black.

There are several ways to print color separations. Each color you separate requires a commercial printer to produce a printing plate for the separation. This can be costly, so you want to consider how to print your documents with the fewest number of separations. For example, if your commercial printer were using a six-stage press, you could print four-color process separations and two

spot colors. If your printer were using a four-stage press, you could use four-color process separations to simulate the spot colors.

Color-separated plates contain black objects where colored ones should appear. These objects appear as shades of black to indicate percentages of color saturation. For an illustration of how color separations print, see "Separated process colors" on page 17-14.

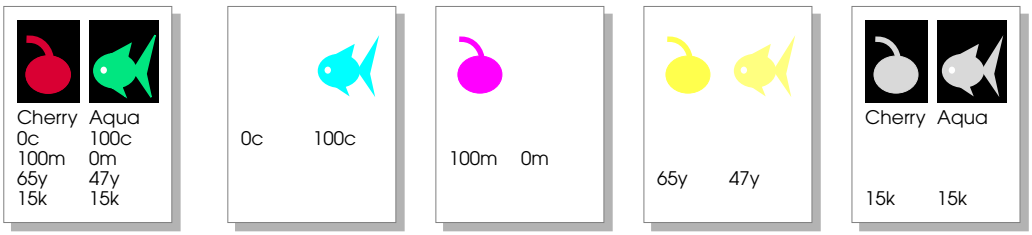
This example shows the separations for a two-color document.

Composite print that contains black and a spot color

Separated plate with only black images printed

Separated plate with only spot color images printed

SEPARATED PROCESS COLORS



Composite plate

Cyan separation

Magenta separation

Yellow separation

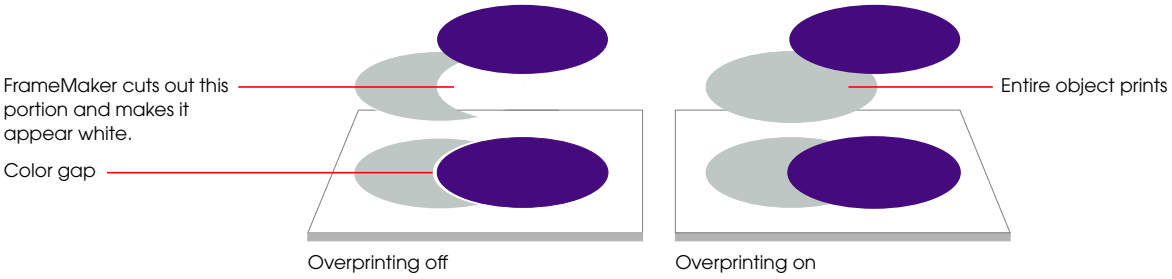
Black separation

The first illustration shows a sample of a printed composite page, displaying all the colors as you see them on the screen. The next four illustrations represent those colors separated into their CMYK components. To illustrate the point, we printed these samples in color and added each object's color component percentage. However, when printed in FrameMaker, the objects would actually print as shades of black, without the numbers underneath the objects. The shades of black consist of grids of dots of varying sizes—the larger the dots, the darker the shade. This grid is a halftone screen. For more information on halftone screens, see "To change halftone screen settings" on page 17-21.

For general printing instructions, see “Printing a document” on page 2-37.

To overprint an object

When one colored object overlaps another, FrameMaker normally cuts out the overlapped portion so that it appears white. When printing these objects, you may see a small gap between colors. If you like, you can apply overprinting to the top object so that the overlapped portion does not get cut out, thereby eliminating the possibility that a color gap appears when the document is printed.



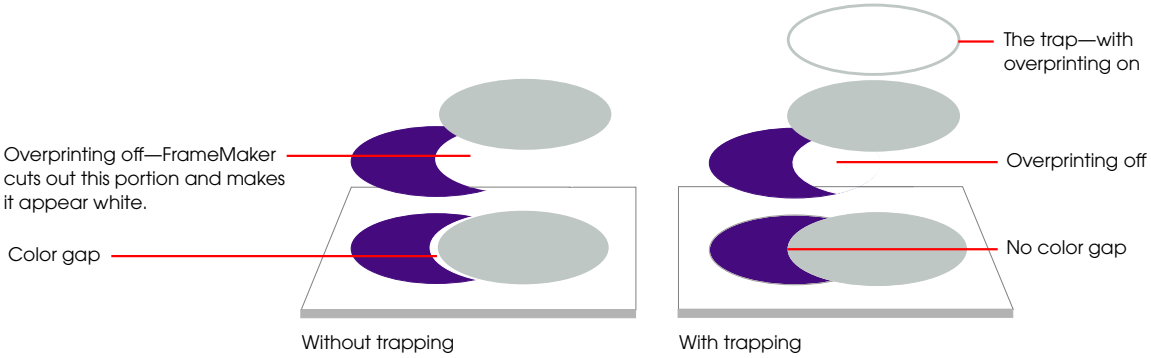
For example, you might want to set a text frame or text line to overprint when printing small dark type on a light background.

If overprinting produces unacceptable color results where the objects overlap, you can apply trapping instead. For more information, see “To trap an object,” next.

1. **Select the object on top.**
2. **Choose Overprint from the Graphics menu.**
3. **In the Overprint dialog box, click Overprint and click Set.**
   If you later move the object over a different background, you may want to turn overprinting off by clicking Don’t Overprint.

To trap an object

Overprinting to prevent a color gap may produce unacceptable color results, especially when the object that would otherwise be cut out is darker than the overprinting object. If this happens, you can turn overprinting off for the object and apply a *trap* to the object. A trap is a line bordering the object on top that is just wide enough to fill the color gap and overprint the other object along the border of its cutout.



1. **Create a border for the object on top.**
   Duplicate the object, setting its fill to None, and assign a pen color to match the object. For details on duplicating objects, see "To delete or duplicate an object" on page 14-6. For details on setting fill and pen properties, see "To change a graphic property" on page 13-19.
2. **Set the border width.**
   The width of the trap depends on several factors: the size and contour of the object, the type of printing paper, and the accuracy of the printing press. Consult your commercial printer for information on suitable line widths for trapping. For details on setting the border width, see "To change a graphic property" on page 13-19.
3. **Select the border and choose Overprint from the Graphics menu.**
4. **In the Overprint dialog box, click Overprint and click Set.**

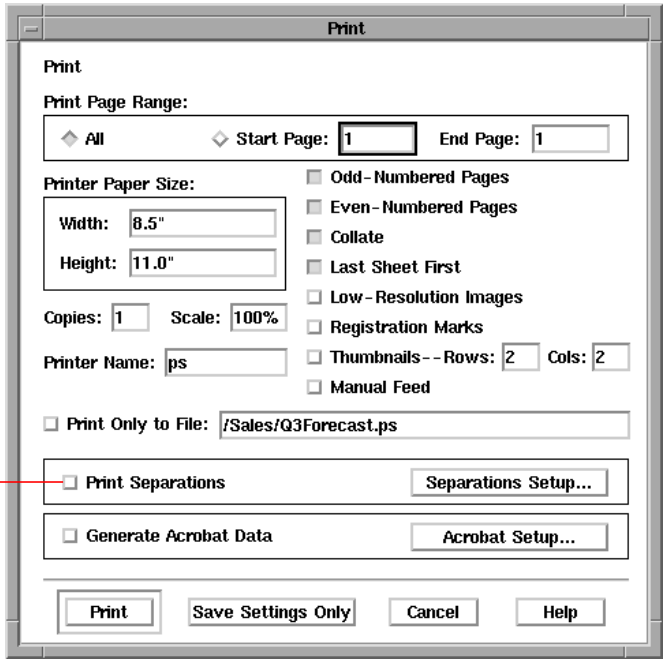
To print composite pages

Composite pages contain all the colors that are displayed on the screen. (For information on changing the displayed colors, see "Viewing colors" on page 17-11.) Composite pages are printed in color on a color printer and in black or gray scale on a black-and-white printer.

If you have an imported color graphic in your document and you want to print it on a color printer, assign it the color Black. The graphic prints in its original color.

1 **Choose Print from the File menu.**

2 **Make sure Print Separations is off.**



Turn off Print Separations.

3 **Set up the remaining print options as necessary and click Print.**

For information on the other printing options, see "To customize printing" on page 2-39.

HOW COLORS ARE PRINTED ON COMPOSITE PAGES

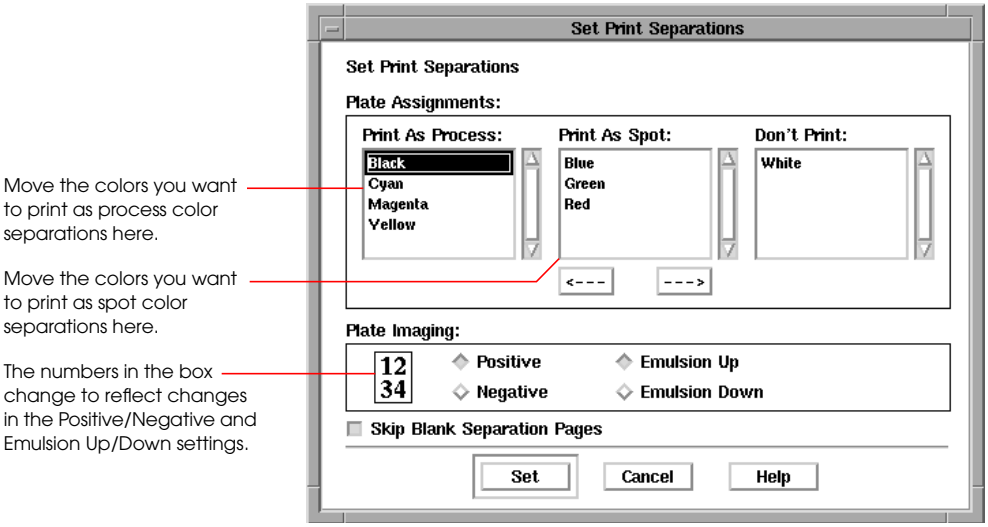
If you're using a color printer to print composite pages, colors print as defined. If you're using a black-and-white printer, you can choose to print colors in black or in shades of gray. To print colors in black, edit the beginning of the `ps_prolog` file. The `ps_prolog` file, located in the `FMHOME/fminit` directory, contains instructions for changing the print settings. Changes to the file take effect immediately. To make changes without affecting other users, save a copy of the file with your changes to your personal `fminit` directory (`~/fminit/ps_prolog`).

To print color separations

When you print color separations, you choose which colors you want to print as spot colors, which to print as process colors, and which not to print at all. Text and objects are printed in black for each separation, and the color name of each separation is printed outside of the registration marks.

Before printing color separations, make sure you have not set colors to print as 100% black or 100% white. If colors are set to print as 100% black or 100% white, FrameMaker won't print separations. For details, see "To customize printing" on page 2-39.

1. **Choose Print from the File menu.**
   The Print dialog box appears.
2. **Turn on Print Separations.**
3. **Click Separations Setup.**
4. **Move the color names to the appropriate scroll lists.**



To move a color between scroll lists, select the color and click an arrow, or double-click the color. To move all colors from one scroll list to another, select a color in the list and Shift-click an arrow.

FrameMaker prints four plates that contain the CMYK component for each color listed in the Print As Process scroll list, even if you defined the color in a model other than CMYK. FrameMaker prints one plate for each color in the

Print As Spot scroll list. If you put Black in the Print As Spot scroll list, FrameMaker prints two plates with black on them—one for the black spot color items, one for the black component of the process colors. Colors in the Don't Print scroll list do not appear on any printed plate, but they may appear cut out on other plates.

If you move colors that have different names but identical color definitions to the Print As Spot scroll list, FrameMaker creates redundant separations, one for each color you print. For information on avoiding redundant separations, see "Inconsistent color names" on page 17-19.

5 **Select Positive or Negative, select an Emulsion setting, and click Set.**
These settings relate primarily to files that are printed to film. It is possible that your commercial printer may want different settings for separations. Make sure you ask your printer for the settings you need to use.

Printing plates as Negative images causes all black text and objects to print white and all white areas to print black.

Printing Emulsion Down causes the plates to print as mirror images of their normal appearance.

6 **Set up the remaining print options as necessary and click Print.**
For information on the other printing options, see "To customize printing" on page 2-39.

INCONSISTENT COLOR NAMES

FrameMaker prints one separation for each color name. However, the items included in the separation are determined by their color values, not by the color name. For that reason, if a document contains two differently named colors with the same values, FrameMaker prints two identical separations, one for each color name, and both colors will print on each separation.

To avoid creating such redundant separations, name colors consistently across applications. For example, if you import an EPS graphic with a spot color into a document, make sure that the color's name is consistent with the name defined for it in the document. Otherwise, the imported color's name is added to the document and FrameMaker creates a separation for the color.

If a document contains inconsistently named colors, print duplicate separations and then manually remove one of them.

IMPORTED GRAPHICS

When you print a composite (showing all colors on the same page) on a color printer, all imported graphics appear on the page as they do on the screen.

The following table lists the imported graphics for which FrameMaker can print separations.

Graphic format	Separate?	Comment
CMYK TIFF	Yes	Non-CMYK TIFF graphics do not separate.
DCS	Yes	
EPS line art	Yes	
Bitmapped image in EPS	Varies	FrameMaker can print separations only if the images can be separated with Adobe Separator.
Other (for example, PICT, WMF)	No	FrameMaker prints the graphic as a composite image in the separation plate that matches its color.

You can also print colors in EPS files as spot colors if the colors were named in the application that created the EPS file.

SKIP BLANK PAGES

Printing color separations can be expensive, depending on the size of the job and the type of printer being used. If you are printing with registration marks on, you may not want to print sheets that contain only the marks and no text or objects.

To keep FrameMaker from printing these blank sheets, turn on Skip Blank Separation Pages in the Set Print Separations dialog box.

To ensure that FrameMaker prints exactly the same number of sheets for each page, turn off Skip Blank Separation Pages.

To change halftone screen settings

Process color separations are printed using grids of black dots for each color—the larger the dots, the darker the shade of black in which the color is printed. The halftone screen settings control how close together the dots appear (the frequency in lines per inch), the orientation of the grid (the screen angle), and the dot shape.

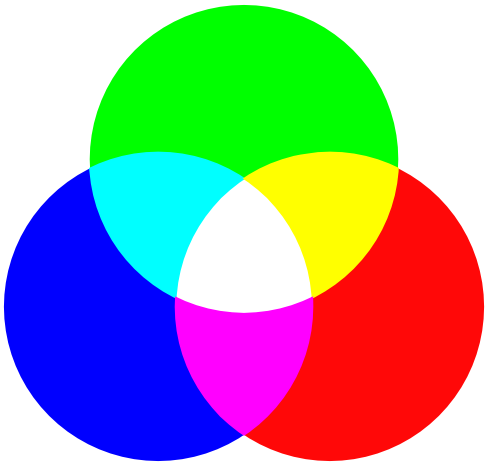
- **To change the halftone screen settings, edit the beginning of the `ps_prolog` file.**
  The `ps_prolog` file, located in the `FMHOME/fminit` directory, contains instructions for changing the print settings. Changes to the file take effect immediately. To make changes without affecting other users, save a copy of the file with your changes to your personal `fminit` directory (`~/fminit/ps_prolog`). For more information, consult your printer documentation and your commercial printer.
- **To make changes without affecting other users, save a copy of the file with your changes to your personal `fminit` directory.**

COLOR LEVELS IN CMYK AND RGB MODELS

Colors are created differently in each of the FrameMaker color models.

CMYK Colors in the CMYK model are added to each other. Levels of 0 to 100 percent in any of the text boxes indicate the concentration of color of that component. When you add the levels of color, you can have a result of over 100 percent. High percentages of cyan, magenta, and yellow produce dark colors; middle-range percentages produce muted or grayed colors; low percentages produce light colors.

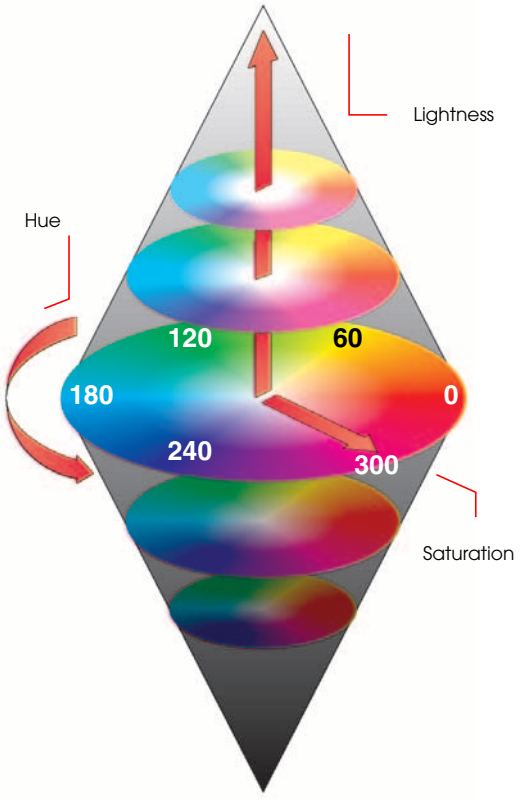
RGB Red, green, and blue are combined in varying amounts to create colors. Maximum amounts of the colors (100 percent each) create white; minimum amounts (0 percent each) create black. Lighter colors require a high level for the primary color and low levels for the other colors.



RGB model

COLOR LEVELS IN THE HLS MODEL

HLS Hues (in paint terms, *pigment*) are organized around a color circle. For example, 0 degrees is red, 60 degrees is yellow, 120 degrees is green, 180 degrees is cyan, 240 degrees is blue, 300 degrees is magenta. Lightness varies with the amount of white in a color. Black is 0 percent lightness; white is 100 percent. Saturation varies depending on how pure the color is. 100 percent saturation is the brightest color you can get; 0 percent saturation shows no color (the color looks gray—how gray it looks depends on the percentage of lightness). To specify pure color, enter levels of 100 percent saturation, 50 percent lightness, and the degree of the hue you want.



HLS model

PART IV

Page and Template

Design

18

BASIC PAGE DESIGN

Designing pages and adding headers and footers

CHANGING THE BASIC PAGE LAYOUT 18-5

To change the page size 18-5

To make a document single- or double-sided 18-6

To change margins 18-7

To change the number of columns 18-9

CREATING HEADERS AND FOOTERS 18-10

To display master or body pages 18-10

To create or modify header and footer text frames 18-11

To enter header or footer text 18-12

To add page numbers and dates 18-13

DETERMINING HOW PAGES ARE NUMBERED 18-14

To set up page numbering 18-14

To add or delete empty pages at the end of a document 18-15

ALIGNING TEXT IN COLUMNS 18-16

To balance the text across columns 18-16

To feather text to the bottom of text frames 18-17

To synchronize baselines along a grid 18-19

18 BASIC PAGE DESIGN

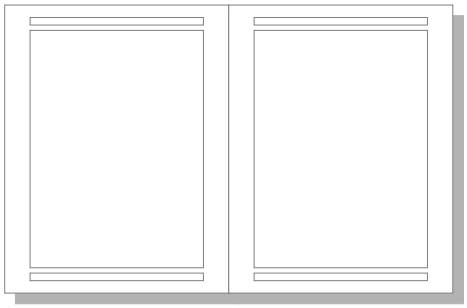
You set up a page design when you first create a document, and you can change the design at any time as you work in the document.

FrameMaker manages page design

FrameMaker uses master pages to keep track of the document's page design. A double-sided document has at least two master pages, one for each side. A single-sided document uses the right master page only. When you add text and illustrations to your document on body pages, FrameMaker adds body pages as necessary and automatically uses the page design from the correct master page.

You make simple layout changes from body pages

All documents have these layout components: page size, margins, the number of columns on each page, and whether the document is single-sided or double-sided. If your document, whether single-sided or double-sided, has a symmetrical layout, and if it uses no master pages other than the standard left and right pages that FrameMaker provides, you can change the layout while working on body pages; FrameMaker automatically makes the changes to the appropriate master and body pages.

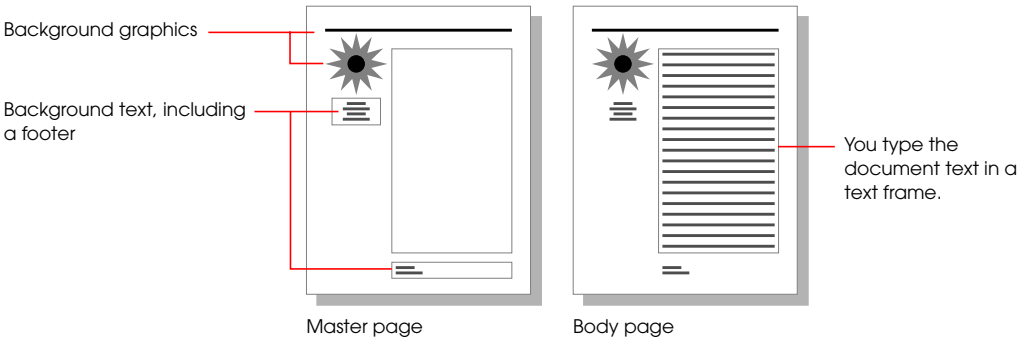


This document, for example, has one column, an 8-1/2 x 11-inch page size, and 1-inch margins on all sides. It is double-sided, with headers and footers at 1/2 inch.

If you make the components complicated, or if you require other design components such as headers and footers, you work with the components directly on the master pages.

You work with headers and footers on master pages

The headers and footers you create on master pages are background text. Every time FrameMaker displays a body page, it displays background text and graphics from the corresponding master page along with the text frame in which you type.



You determine how pages are numbered

Another part of setting up a document's basic page design is specifying the page numbering scheme. Normally, FrameMaker uses Arabic numerals, but you can choose a different numbering style. You can also change a document so it starts with a page number other than *1*.

Text flows from frame to frame

In a FrameMaker document, each page normally contains a single-column text frame or multiple columns in a single text frame. The text flows from the first page to the last because FrameMaker connects the text frames automatically. You make the text frame connections yourself only with documents in which you need to weave several text flows together—for example, to continue a front-page newsletter article on the back page, skipping over other articles on the intervening pages.

Text in multicolumn layouts can be balanced

When text doesn't fill the text frame in a multicolumn layout, you can have FrameMaker balance the amount of text that appears in each column on the page. You can also align text in adjacent columns by feathering or synchronizing. Feathering adds vertical space to move text to the bottom of each column. Synchronizing aligns the baselines of body paragraphs along an invisible text frame grid.

Unfeathered, unsynchronized columns

Feathered columns

Synchronized columns

In this chapter

This chapter shows you how to specify the basic page design for a document—for example, page size, margins, the number of columns on each page, and whether the document is single-sided or double-sided. It also explains how to set up headers and footers and page numbering. Finally, it describes how to align text in columns for a balanced appearance.

Chapter 19, "Custom Page Design," explains how to create the layout directly on a master page—for example, a layout with asymmetrical margins. It explains how to create and use a custom master page for a special page such as the first page of a document or a rotated page. And it explains how to create a one-time-only layout on a body page—for example, how to widen the side-head area for a longer heading or change the height of the text frame to fit an extra line of text on the page.

Chapter 20, "Flow Design," explains how to design documents that require more than one text flow, such as multilingual documents and some newsletters.

CHANGING THE BASIC PAGE LAYOUT

You make basic page layout changes directly from a body page. You can change a document's page size, make it single-sided or double-sided, change the margins, or change the number of columns. Whenever you make one of these basic changes, FrameMaker automatically updates both the left and right master pages. At the same time, it also updates the layout of any body pages currently using those master pages. If your document uses another master page—for example, for the first page of the document—you change its layout directly. For details, see Chapter 19, "Custom Page Design."

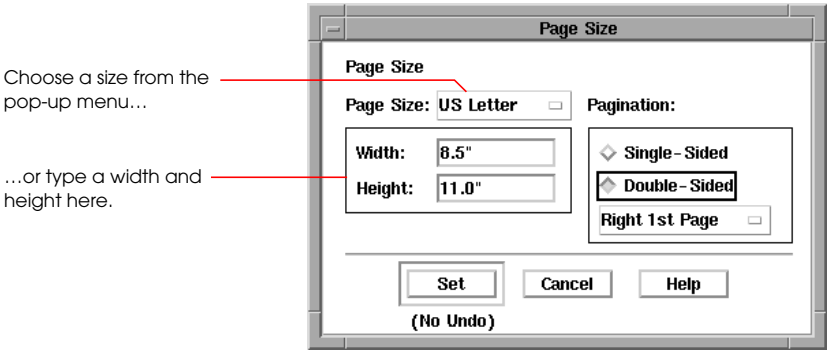
FrameMaker updates both the left and right master pages with the same change because it presupposes a symmetrical layout. But if the layout is asymmetrical when you initiate the change (for example, with a different number of columns or different inside or outside margins on the left and right master pages), FrameMaker warns you before making the change that the asymmetry may be lost. If you want to retain the asymmetry, change the layout directly on the master pages. For more information, see Chapter 19, "Custom Page Design."

If any of the body pages being updated when you change the basic layout contain layout overrides, you get a chance to prevent the updates. For details, see "To override the master page layout on a body page" on page 19-20.

To change the page size

When you change a document's page size, you can choose from a variety of standard page sizes, or you can specify a custom size.

1. **Choose Page Layout>Page Size from the Format menu.**
2. **Specify the page size.**



When you choose a size from the pop-up menu, FrameMaker displays the correct dimensions in the Width and Height text boxes. When you type dimensions in the text boxes, FrameMaker displays the correct size in the pop-up menu. If the dimensions you type aren't a standard size, Custom appears in the pop-up menu.

3 **Click Set.**

Before changing the page size, FrameMaker runs a series of checks to make sure the new size is compatible with existing text frames and graphics. If any problems are detected, FrameMaker displays an alert suggesting what to do.

SPECIFYING CUSTOM PAGE SIZES

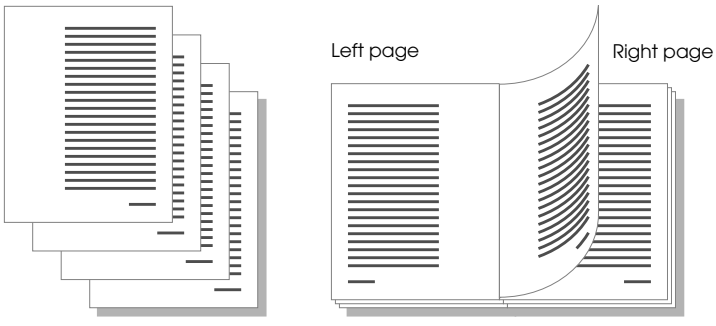
The custom page size you specify can be very small, depending on the document's margin settings, or as large as 216 inches by 216 inches (approximately 548 by 548 centimeters).

PAGE SIZE AND EXISTING TEXT FRAMES

When you change the page size, FrameMaker changes the size of the text frame to maintain the current page margins. FrameMaker also resizes the column or columns to fit within the new text frame's dimensions. If the document has any custom master pages, FrameMaker won't let you resize the document to a size that can't accommodate text frames on those master pages.

To make a document single- or double-sided

You can change a single-sided document to double-sided or a double-sided document to single-sided.

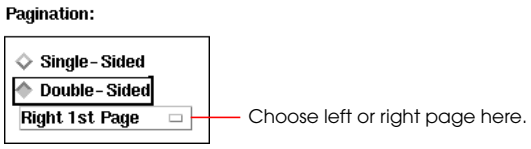


Single-sided document Double-sided document

When you set up a double-sided document, you tell FrameMaker whether the first page is a left or a right page.

1 **Choose Page Layout>Page Size from the Format menu.**

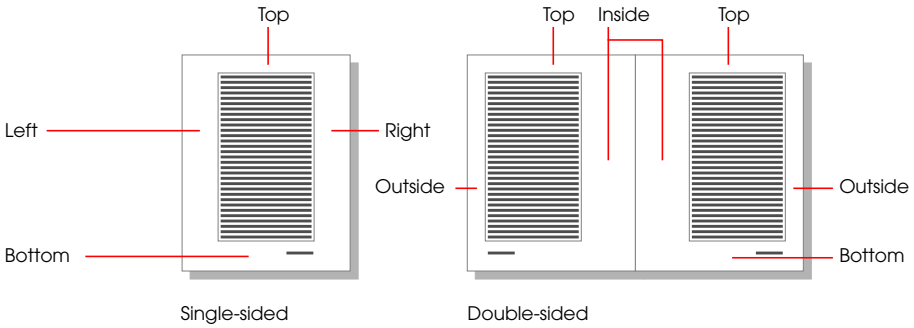
2 **In the Page Size dialog box, click Single-Sided or Double-Sided in the Pagination area.**
For a double-sided document, choose whether the first page should be a left or a right page.



3 **Click Set.**

To change margins

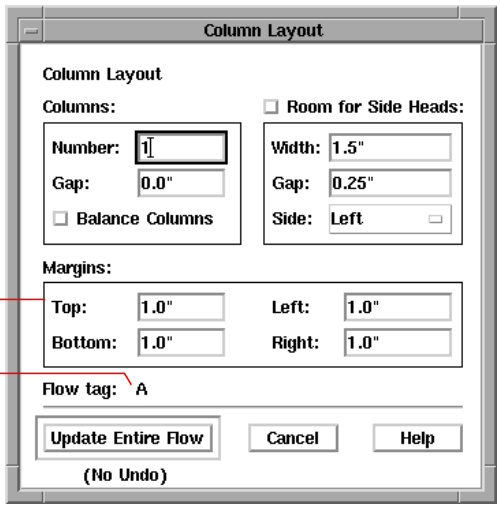
The margin is the distance between the page edge and the text frame. For a single-sided document, you set margins for the top, bottom, left, and right sides of the text frame. For a double-sided document, you set the top, bottom, inside, and outside margins for a symmetrical look.



1 **Put the insertion point in the main text flow or click in the page margin.**

2 **Choose Page Layout>Column Layout from the Format menu.**

3 **In the Margins area, type the margins in the text boxes.**



In a typical multicolumn layout—one with a single text frame that contains columns of equal width—adjusting the margins and the gap (space) between columns determines the individual column width. When the multicolumn layout is created with multiple single-column text frames, you change the page margins by resizing the text frames directly on the master pages. For details, see "To change the margins on an individual page" on page 19-12.

4 **Click Update Entire Flow.**

INCLUDING GUTTERS

If the document is going to be bound or kept in a binder, you may want to make the inside margin slightly larger than the outside. This inside gutter space allows extra room for the binding while keeping the margins looking balanced. For example, the pages of a double-sided document might have 1-inch top and bottom margins, a 1-inch outside margin, and a 1.25-inch inside margin.

ASYMMETRICAL MARGINS

You set up asymmetrical left and right margins in a double-sided document by changing the text frames directly on the master pages. For example, you could make the text frames on both the left and right pages appear on the right side of the page, leaving an area of white space on the left. For information on working with master pages, see Chapter 19, "Custom Page Design."

To change the number of columns

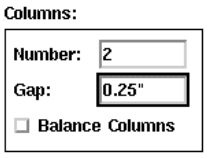
A text frame can contain one or more columns of text. All columns in the frame are the same width and are separated by a uniform gap. When you initially set up a multicolumn document, it has one text flow; text flows down each column in a text frame starting with the leftmost column, and then from one text frame to the next.

For information on creating more than one text flow, see Chapter 20, "Flow Design."

1 **Put the insertion point in the main text flow or click in the page margin.**

2 **Choose Page Layout>Column Layout from the Format menu.**
The Column Layout command affects the layout of the left and right master pages, and of all body pages that use their layouts.

3 **In the Columns area of the Column Layout dialog box, type the number of columns and the gap.**
The *gap* is the space between columns.



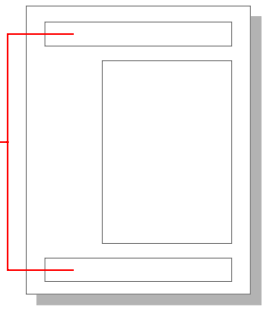
4 **Click Update Entire Flow.**
To change the number of columns for an individual text frame rather than for all the frames in a flow, choose Customize Layout>Customize Text Frame instead of Page Layout>Column Layout in step 2 above and follow a similar sequence.

CREATING UNEQUAL-WIDTH COLUMNS OR GAPS

You can create a multicolumn layout that contains columns (or gaps between columns) of differing widths. For details, see "Creating columns with different widths or gaps" on page 19-13.

CREATING HEADERS AND FOOTERS

When you create a new, blank document, FrameMaker creates background text frames for headers and footers on the left and right master pages. To make it easy for you to add centered and right-aligned information in headers and footers, FrameMaker automatically adds center and right tab stops at the center of the text frame and at the right margin, respectively.



You set up the headers and footers by displaying the master pages and typing text in these background text frames. You create header and footer text just as you create any other FrameMaker paragraph. You can apply paragraph and character formats, add and move tab stops, and add graphics such as a line above or below the text. You can also add system variables in headers and footers for such things as the page number or the current date. In addition, you can change the size and placement of the header and footer text frames to suit your needs.

To display master or body pages

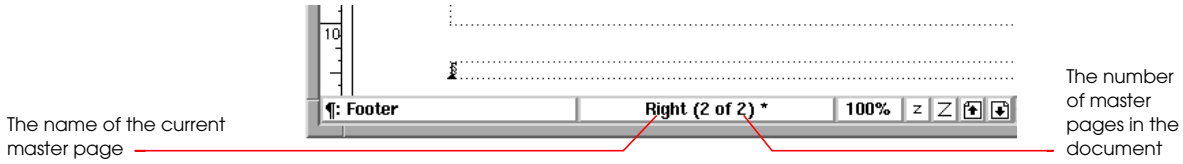
When working with master pages, you need to move back and forth between them and the body pages.

- **To display the master page used by the current body page, choose Master Pages from the View menu.**

  To facilitate working on master pages, FrameMaker displays frame and column borders.

- **To return to the most recently displayed body page while master pages are visible, choose Body Pages from the View menu.**

- **To view the document's other master pages while a master page is visible, click the Next Page and Previous Page buttons or use the scroll bar.**

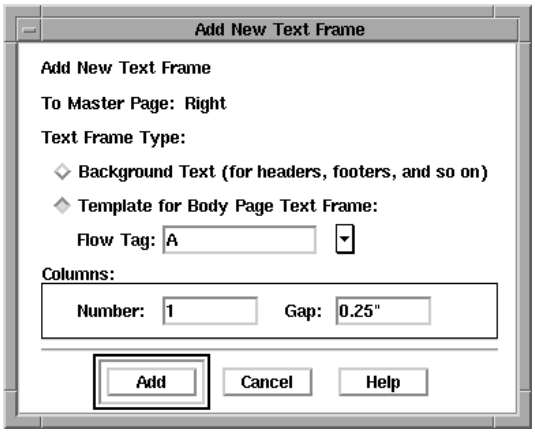


To create or modify header and footer text frames

You set up headers and footers as background text on each master page in a document. The master pages of FrameMaker templates and blank paper templates already have header and footer text frames that you can resize or move. You can draw background text frames for additional header and footer information or for other background text. If you modify these background text frames on a master page, FrameMaker automatically updates any body pages using that master page.

- **To create a header or footer text frame, draw a text frame on a master page.**
  You draw a text frame with the Text Frame tool. For details, see "To add a text frame" on page 13-26.

  After you draw the text frame, FrameMaker displays the Add New Text Frame dialog box.



Choose Background Text and click Add. The text frame created, like all text frames for background text on master pages, is untagged. For details, see "To add background text on a master page" on page 19-6.

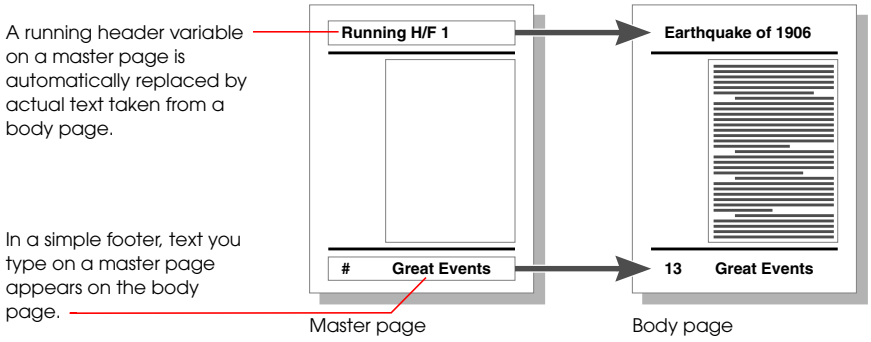
- **To resize a header or footer text frame on a master page, select the text frame and drag a handle.**
  Control-click to select a text frame.

  For information on resizing objects, see "To resize an object" on page 14-17.
- **To move a header or footer text frame on a master page, select the frame and drag it to a new location.**
  Control-click to select a text frame.

  For information on moving objects, see "To move an object" on page 14-4.

To enter header or footer text

You can create simple headers and footers by typing text in the header and footer text frames on the master pages. You can also create running headers and footers that display information about the page they're on and that can change from page to page.



1. **Click in the header or footer text frame on the master page.**
2. **If necessary, tab to the location where you want to type the text.**
3. **Type the text.**

CREATING RUNNING HEADERS AND FOOTERS

In running headers and footers, the text changes from page to page. For example, in this book the header shows the current chapter title and the first-level heading on the corresponding body pages. To create running headers and footers, you insert system variables in background text frames on master pages. For details, see Chapter 12, "Variables."

To add page numbers and dates

You can specify items such as the current page number, the document's total page count, and the current date in a header or footer. FrameMaker displays a system variable in the header or footer on the master page and replaces it with the correct value on each body page using that master page.

1 **On the master page, click in the header or footer where you want to add the page number or date.**

2 **Choose what you want to insert from the Format>Headers & Footers submenu.**

What you want to insert	What you choose	Explanation
Current page number	Insert Page #	You can also include text in the page numbering to produce numbering such as *page 1*. For information on choosing the numbering style (numeric, Roman, or alphabetic), see "To set up page numbering" on page 18-14.
The highest page number in a document	Insert Page Count	You can also use page count with the page number and text you type to produce numbering such as *page 3 of 4*.
Today's date in short form (for example, 6/25/95)	Insert Current Date	FrameMaker updates the date whenever it redraws the page—for example, when scrolling, zooming, or redisplaying the page.
A different variable	Other	Choosing Other displays the Variable dialog box. For information on inserting variables, see Chapter 12, "Variables."

CUSTOMIZING PAGE NUMBERS

You can mix text with the page numbering variables for numbering—for example, *page 1*—by typing `page` followed by a space and then choosing Insert Page #. You can produce a number such as *page 3 of 4* by typing `page` followed by a space, choosing Insert Page #, typing a space followed by `of` and another space, and then choosing Insert Page Count.

DETERMINING HOW PAGES ARE NUMBERED

A document's basic page design includes its page numbering style. By default, FrameMaker uses numeric style (1, 2, 3, ...), starting with page *1*. You can choose a different numbering style (Roman or alphabetic), and you can start the document with a page number other than *1*. You can also tell FrameMaker to add or delete empty pages at the end of a document.

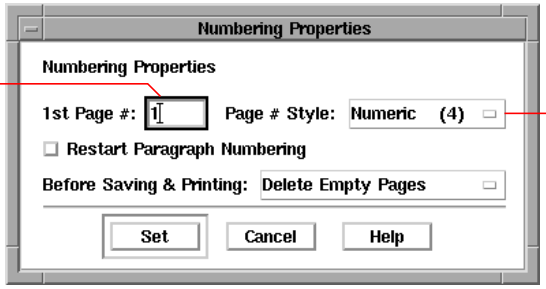
To set up page numbering

You usually include page numbers in a document's headers or footers. You can choose numeric, Roman, or alphabetic page numbers. Roman and alphabetic numbering can be in lowercase or uppercase letters.

All body pages in a document use the same numbering style. You can, however, use different numbering styles from document to document in a book.

1 **Choose Document>Numbering from the Format menu.**

2 **Type a page number in the 1st Page # text box.**



Type the number of the first page here.

Page # Style pop-up menu

Normally, a document starts with page *1,* but you can specify any number.

3 **Choose a style from the Page # Style pop-up menu and click Set.**

The Page # Style pop-up menu shows a sample of each numbering style.

NUMBERING PAGES IN BOOKS

If you're setting up page numbering in a book, use the Set Up File command in the book window rather than use the Document>Numbering command on the Format menu. That way, FrameMaker numbers the pages correctly each time you update the book. For information on setting up page numbering in a book, see "Controlling page and paragraph numbering" on page 24-12.

You must still specify the page numbering style for each document separately in the Numbering Properties dialog box.

To add or delete empty pages at the end of a document

You can specify that you want a document to have an even or an odd number of pages. If necessary, FrameMaker adds a blank page at the end of the document to achieve the correct pagination.

Conversely, after you edit a document, it may have unwanted blank pages at the end, left there because you either deleted or reworked text. You can specify that FrameMaker should delete these empty pages whenever you save or print the document. FrameMaker deletes a blank page only if it uses the left or right master page, if it doesn't contain the start of a flow, and if it has no layout overrides; otherwise, FrameMaker assumes it's a page you want to keep and does not delete it. For information on layout overrides, see "To override the master page layout on a body page" on page 19-20.

FrameMaker also assumes it's a page you want to keep if the page contains an empty paragraph but is otherwise blank.

- **To automatically add a blank page at the end of a document if necessary, use the Make Page Count Even or Make Page Count Odd settings in the Numbering Properties dialog box.**
  Choose Document>Numbering from the Format menu to display the Numbering Properties dialog box. From the Before Saving & Printing pop-up menu, choose Make Page Count Even or Make Page Count Odd. Then click Set.

  If the document is part of a book, use the Set Up File command in the book window to set up the starting page side of each file. For information on setting up documents in a book, see "Setting up a book" on page 24-4.

- **To automatically delete empty pages at the end of a document, use the Delete Empty Pages setting in the Numbering Properties dialog box.**
  Choose Document>Numbering from the Format menu to display the Numbering Properties dialog box. From the Before Saving & Printing pop-up menu, choose Delete Empty Pages. Then click Set.

  If the document is part of a book, FrameMaker may add an empty page again when the book is updated, depending on the setup information for the documents in the book. For details, see "To specify the numbering properties" on page 24-13.

ALIGNING TEXT IN COLUMNS

There are three ways to align text in the columns of a multicolumn layout so that the text has an even appearance—by balancing, feathering, and synchronizing.

In the simplest method, balancing, FrameMaker distributes text evenly across the columns of a text frame that isn't full of text.

When you feather text in a flow, FrameMaker adjusts the spacing between lines and paragraphs so the last line of text in each column reaches the bottom of the column. You specify the maximum amount of space FrameMaker can add.

When you synchronize text in a flow, the first lines of body paragraphs snap to an invisible grid in the text frame. Synchronizing text makes body paragraphs line up whenever they appear side by side in columns.

Balancing is a text frame property, but you usually turn it on or off for an entire flow. Feathering and synchronization are both flow properties. If feathering and synchronization are both on for a flow, feathering takes precedence over synchronization. However, the first line in each column is synchronized.

To balance the text across columns

In a layout that uses a multicolumn text frame, you can balance the text across columns that aren't full of text—for example, columns on partly empty pages that precede forced page breaks and on the last page of a document.

Balancing off Balancing on

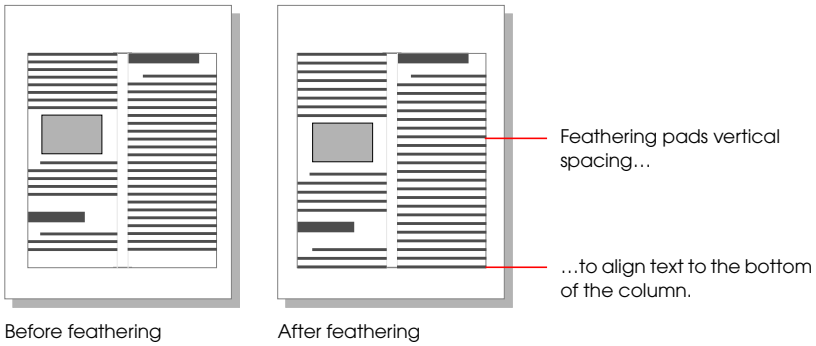
1. **Put the insertion point in the main text flow or click in the page margin.**
2. **Choose Page Layout>Column Layout from the Format menu.**
3. **In the Columns area of the Column Layout dialog box, turn on Balance Columns.**

4 **Click Update Entire Flow.**

To balance text for an individual text frame rather than for all the frames in the flow, choose Customize Layout>Customize Text Frame rather than Page Layout>Column Layout in step 2 above and follow a similar sequence.

To feather text to the bottom of text frames

When FrameMaker feathers (vertically justifies) text, it first adds space between paragraphs, up to a limit that you set. If more adjustment is necessary, it adds space between lines, up to another limit that you set.

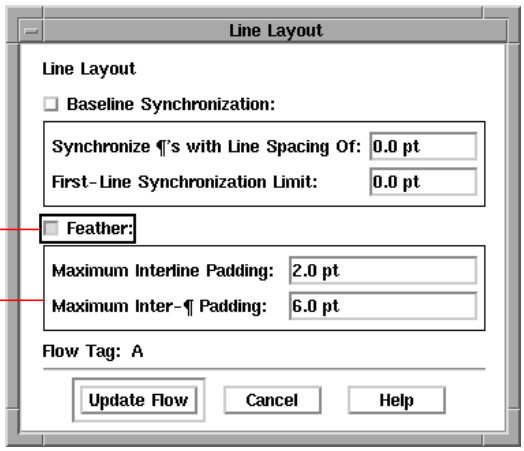


When text is feathered, FrameMaker may take longer to display pages, due to the time required to compute the position of feathered text. For this reason, you may want to turn on feathering only when you finish editing a document.

FrameMaker does not feather the text in a text frame in which text runs around graphics.

1 **Click in the flow you want to feather and choose Page Layout>Line Layout from the Format menu.**

2 **Turn on Feather.**

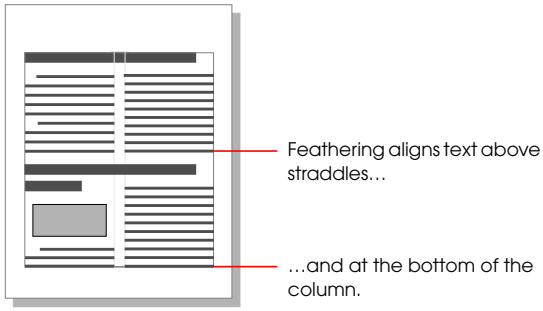


3 **In the Feather area, type the maximum amount of space FrameMaker can add between lines (Interline Padding) and between paragraphs (Inter-¶ Padding).**
FrameMaker won't exceed the padding limits you set. If it's not possible to feather text in a column without exceeding the limits, FrameMaker does not feather that column.

4 **Click Update Flow.**

FEATHERING AND STRADDLES

In a multicolumn text frame that contains straddles—paragraphs, tables, or anchored frames—FrameMaker adds vertical space to align the last baselines of text in adjacent columns above each straddle.



IF THE LAST LINE SEEMS TOO HIGH

When FrameMaker feathers, it leaves room for the largest possible descender in the largest font size used in the line, even if no character with such a large descender actually appears. If the last line in a column still seems too high, check to see whether the column contains a nonprinting character (such as an anchor symbol) in a font that's larger than the surrounding text.

To synchronize baselines along a grid

When you synchronize (align) paragraphs in a flow, FrameMaker creates an invisible grid in each text frame and aligns the baseline of the first line of each specified paragraph to the grid.

Before synchronizing After synchronizing

FrameMaker also aligns the first line after an anchored frame and tries to align the first line in each column. Because headings in large fonts often appear at the tops of columns, you need to specify a first-line synchronization limit. FrameMaker won't synchronize the first line in a column if its font size is larger than the limit.

You can synchronize baselines even when the text appears in side-by-side text frames—for example, in some newsletter-type layouts. For information, see "Synchronizing baselines in a newsletter" on page 18-20.

1. **Check the paragraph formats of the paragraph types you want to synchronize to make sure they all have the same default font size and line spacing.**
   Fixed line spacing should be on.
2. **Click in the flow you want to synchronize and choose Page Layout>Line Layout from the Format menu.**
3. **In the Line Layout dialog box, turn on Baseline Synchronization and turn off Feather.**

4 **In the Synchronization area, type the line spacing you want to use for the text frame grid in the Synchronize ¶'s text box.**
Use the same line spacing as the paragraphs you want to synchronize. Otherwise, FrameMaker won't synchronize the paragraphs with the text frame grid.

5 **Type the largest font size to align at the top of a column in the First-Line Synchronization Limit text box.**
For details, see "First-line synchronization limit" on page 18-21.

6 **Click Update Flow.**

FIRST GRID LINE

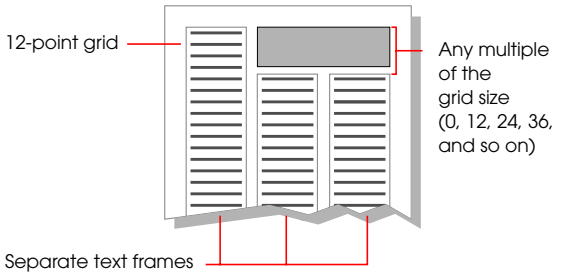
Because there are no descenders above the first line in a column, the first grid line is positioned from the top of the column a distance equaling two-thirds of the specified line spacing.

SYNCHRONIZING BASELINES IN A NEWSLETTER

When you produce a newsletter that contains articles that flow continuously from the first page to the last, each page of the newsletter contains several text frames—one for each column of text. When the tops of adjacent text frames start at the same position on the page, the invisible text frame grids line up nicely. When text frames start at different positions, however, you may need to adjust their tops to line up their grids.

To line up the grids, resize adjacent text frames so that the distance between their tops is evenly divisible by the grid.

For example, if the grid is 12 points, you can start a text frame 144 points (12 times 12 points), or 2 inches, from the top of an adjacent text frame.



You can use the Snap grid to correctly position the text frames. Specify a Snap grid equal to the text frame grid. Then resize the text frames until their tops snap to any grid location. For more information on the Snap grid, see "Setting up the drawing environment" on page 13-4.

For more information on laying out newsletters with FrameMaker, see Chapter 20, "Flow Design."

FIRST-LINE SYNCHRONIZATION LIMIT

The first-line synchronization limit controls whether the baseline of a heading is placed on the first grid line when the heading falls at the top of a column, even when the heading's default font is larger than the grid can accommodate. To place the baseline of a heading on the first grid line, FrameMaker lets the heading extend above the top of the column as shown on page 18-19. FrameMaker won't synchronize font sizes larger than the limit you set.

For example, suppose the line spacing for body paragraphs is 12 points, the column grid is 12 points, and the headings are 18 points. If you want the headings to be aligned when they appear at the top of a column, specify 18 as the first-line limit.

19

CUSTOM PAGE DESIGN

Using master pages and reference pages to customize page design

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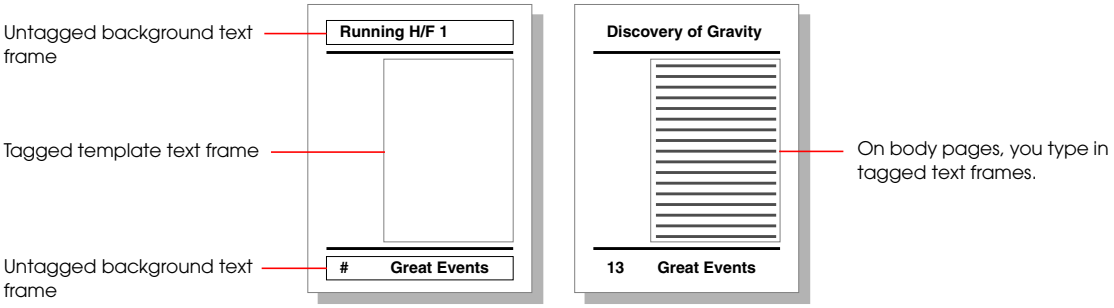
19 CUSTOM PAGE DESIGN

When you create a new document, you start with standard left and right master pages. You can change the page design of the existing master pages, or you can create custom master pages. You use reference pages to store graphics, boilerplate art, and formatting information.

Master pages control column layout

FrameMaker creates body page text frames by copying text frames from the corresponding master page. The text you type on body pages flows from page to page, and each text frame is identified by the name of its flow—by its *flow tag*.



If you change a text frame on a master page, FrameMaker automatically updates all body pages that use that master page.

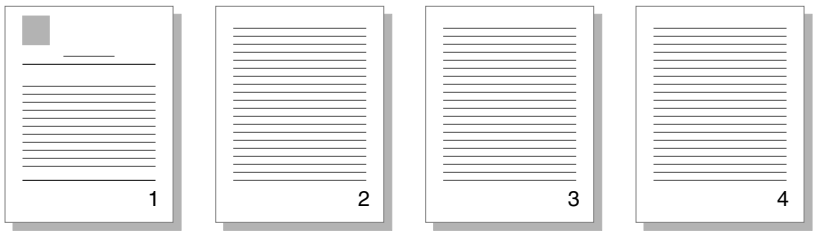
Documents have standard and custom master pages

Every new, single-sided, blank document you create has a master page named Right that is used by all body pages. A double-sided document has two master pages named Left and Right that are used by left and right body pages, respectively. Chapter 18, “Basic Page Design,” shows you how to change the layout of these standard master pages in basic

ways that don't require you to display them. But you can modify them in more elaborate ways by working with them directly.

You can also create your own custom master pages and have FrameMaker use them on the body pages you specify. For example, you may want the first page of the document to look different from the other pages.

A document can use a different layout on the first page.



Or you may need to include a landscape page in a portrait document.

You can override the master page layout

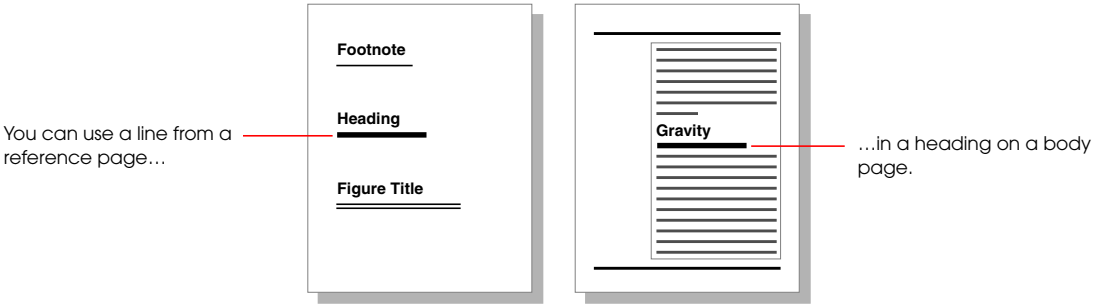
For a unique page design that appears only once in a document, you can change a body page's layout directly—create a *layout override*. Doing this creates a one-time-only page design that doesn't affect the master page or other body pages using the same master page.

You can also choose to assign no master page to a body page. Because it has no master page, this type of body page has no headers, footers, or other background text or graphics.

Graphics can be stored on reference pages

A reference page can contain graphics that you use on body or master pages, allowing you to use one set of graphics consistently throughout a document. Typically, you use these graphics to put a line above or below

paragraphs such as headings and table titles and to put a line between body text and footnotes.



A reference page can contain other items, such as formatting information for tables of contents and indexes, frequently used text and graphics, hypertext commands, and a library of clip art.

In this chapter

This chapter shows you how to change the column layout on master or body pages and how to create custom master pages. It also explains how to use reference pages.

For information on creating headers and footers on master pages, see Chapter 18, “Basic Page Design.” Also see Chapter 18 for information on specifying basic page layouts for single-sided documents and symmetrical layouts for the standard left and right pages of double-sided documents. For information on designing documents that require more than one text flow, such as multilingual documents and some newsletters, see Chapter 20, “Flow Design.”

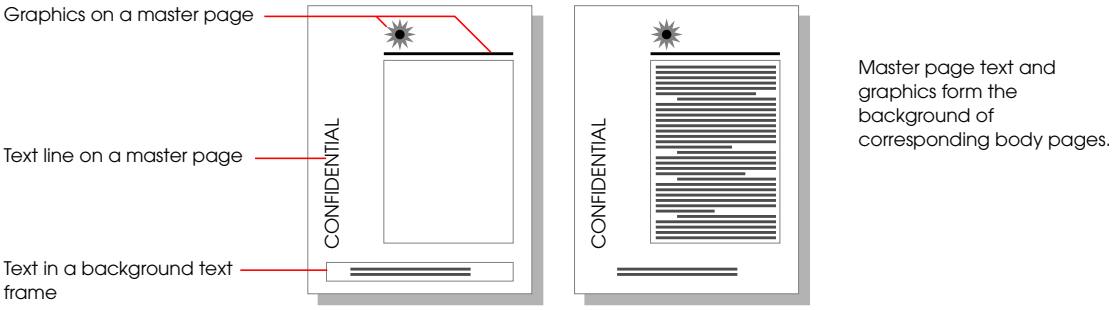
WORKING WITH MASTER PAGES

Master pages can contain two types of text frames. A template text frame contains a *tagged flow*—a flow with a name—and it is used on body pages. You type the document’s text in the corresponding text frames on these body pages.

A background text frame—for example, one for a header or footer—contains an untagged flow. You type text in background text frames on master pages. The text appears as background on corresponding body pages exactly as you typed

it. For more information on flow tags, see "Using flow tags on a master page" on page 19-5.

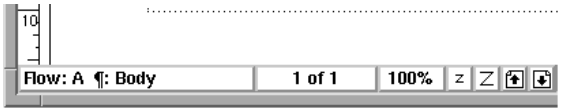
You can draw or import graphics—lines, boxes, or company logos—anywhere on a master page. You can also type individual text lines. Graphics and text lines appear on corresponding body pages exactly as they appear on the master page, as part of the body page's background—for example, as the company logo on your stationery.



USING FLOW TAGS ON A MASTER PAGE

Text flows from one text frame to the next throughout a document. A *text flow* is a series of connected text frames. Most documents have a single text flow, from the first page to the last, in which FrameMaker handles the text frame connections automatically.

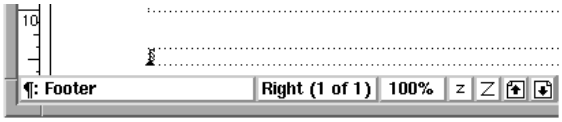
The text frames where you type text on body pages come from the template text frames on master pages. The current text frame's flow tag is displayed in the Tag area of the status bar.



Current text frame is tagged A.

In FrameMaker template documents and in new, blank documents, the tag for the text flow is A. You can create additional flows for multiflow documents such as newsletters and magazines. For details, see Chapter 20, "Flow Design."

Background text frames, such as those for headers and footers, appear only on the master pages and have no flow tags.



Current text frame is untagged.

You can type text in a template text frame on a master page, but the text won't appear on body pages. This allows you to type nonprinting comments on master pages.

To add background text on a master page

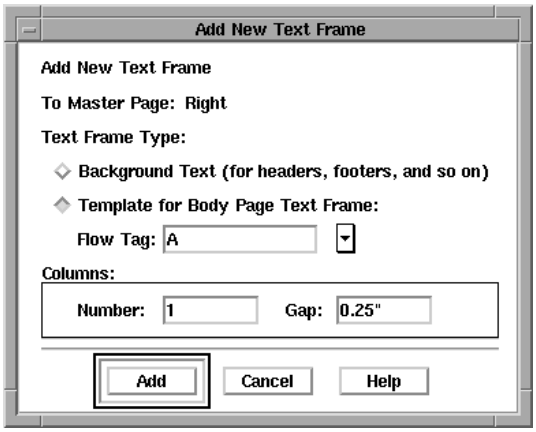
Text you type in a background text frame on a master page appears on corresponding body pages exactly as you type it. As part of basic page design, you create headers and footers as background text. (For details, see "Creating headers and footers" on page 18-10.) You can add other background text on master pages as well. For example, in the FrameMaker fax template, the informational headings are in a background text frame on the master page.

You apply paragraph and character formats to text in background text frames just as you do to text on a body page. When you include a system variable such as a page number or a date in a background text frame, FrameMaker displays the appropriate text on the body pages. For details, see "Creating headers and footers" on page 18-10. For more information on variables, see "Using variables on a master page" on page 19-7.

1 **Display the master page on which you want to add background text.**
Choose Master Pages from the View menu to display master pages.

2 **Draw a text frame.**
Use the Text Frame tool on the Tools palette to draw a text frame. For details, see "To add a text frame" on page 13-26. If you're creating a header or footer, the appropriate text frames may already exist.

If you draw the text frame on a master page, FrameMaker displays the Add New Text Frame dialog box.



3 **In the Add New Text Frame dialog box, click Background Text and click Add.**
The new text frame contains an untagged flow.

4 **Double-click in the text frame to place the insertion point.**

5 **Type the background text in the text frame.**

USING TEXT LINES

You can create single lines of background text by using the Text Line tool on the Tools palette; however, you can't apply paragraph formats or insert variables in text lines. For information on creating text lines, see "Using text with graphics" on page 13-24.

To assign a different master page to body pages

Body pages in a single-sided document use the right master page, and body pages in a double-sided document alternately use the left and right master pages. However, you can assign any master page to any body page at any time. FrameMaker uses the template text frame from the master page on the body page and displays background text and graphics. For information on creating custom master pages, see "Working with custom master pages" on page 19-17.

1 **With a body page displayed, choose Page Layout>Master Page Usage from the Format menu.**

USING VARIABLES ON A MASTER PAGE

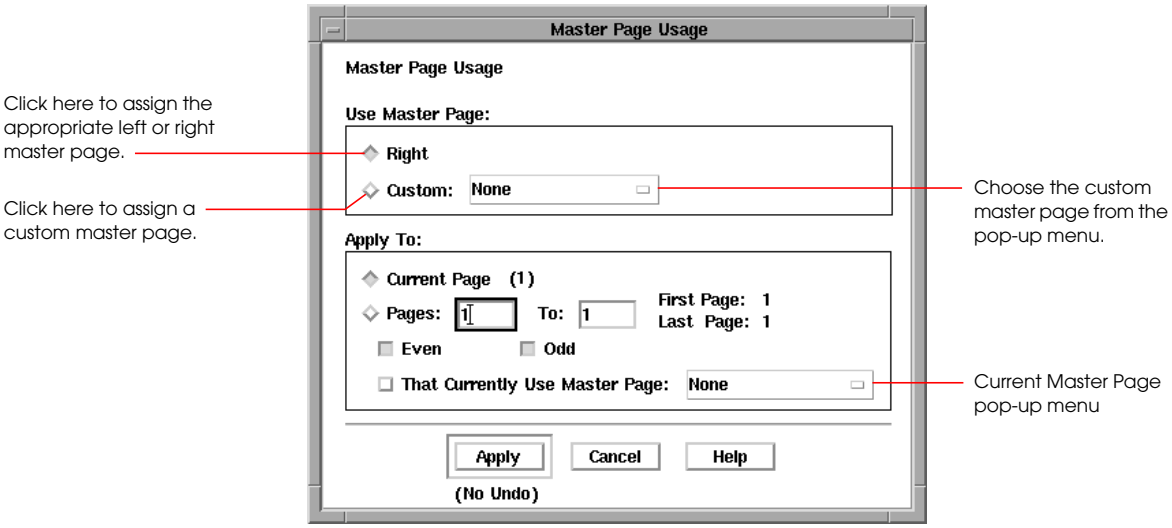
You can use a variable on a master page by inserting it in a background text frame. FrameMaker automatically updates system variables on master pages.

You generally use variables in headers and footers, but you can also insert them in other background text frames. For example, in the FrameMaker fax template, the date is in a background text frame on the master page.

Some variables, such as Filename, appear on a master page as their current value. For variables that change from page to page, the name of the variable (or an abbreviation) appears on the master page, and the current value appears only on the corresponding body pages. For example, the Current Page # variable appears on a master page as a number sign (#), but on a body page it appears as the actual page number.

For information on using variables in headers and footers, see "To add page numbers and dates" on page 18-13. For general information on inserting and using system variables, see Chapter 12, "Variables."

2 In the Use Master Page area, choose the master page you want to assign.



3 In the Apply To area, choose the body pages to which you want to assign the master page.

To assign the master page to	Do this
The currently displayed body page	Click Current Page.
All pages within the range you specify in the text boxes	Click Pages/To.
Only odd or even pages within the range you specify in the text boxes	Turn off Odd or Even as necessary.
Only body pages within the range you specify in the text boxes that currently use a particular master page	Turn on That Currently Use Master Page and choose a page from the Current Master Page pop-up menu.

4 Click Apply.

HOW FRAMEMAKER APPLIES TEMPLATE TEXT FRAMES

When you assign a master page to a body page, FrameMaker updates the column layout of that body page according to the template text flows on the master page. (A template text flow is one that has a flow tag.) For each template text flow on the master page, FrameMaker looks for a flow with the same tag on the body page. If it finds one, it replaces the text frames that contain that flow on the body page with the text frames on the master page. The text in those body page text frames, and the connections between those text frames and the text frames on other pages, are maintained.

Normally, all template flows on the master and body page correspond. However, if the master page contains a template flow not found on the body page, FrameMaker adds the text frames that contain that flow to the body page. If the body page contains a flow not found on the master page, FrameMaker leaves the text frames that contain that flow unchanged. This action could result in overlapping text frames. For information on working with multiflow documents, see Chapter 20, “Flow Design.”

CHANGING AND UPDATING COLUMN LAYOUT

A single-column layout for a page is based on a single text frame. A typical multicolumn layout—one with equal-width columns—is also based on a single text frame. You can create a layout that contains columns with different widths or with different gaps by using several text frames on a page—one text frame for each column of text.

When you change a template text frame on a master page, FrameMaker automatically updates all body pages using that master page. By changing a template text frame on a master page, you can vary the layout of the left and right master pages as well as design your own custom master pages.

When you change a text frame on a body page, you create an override to its master page layout. You can then choose to update the master page and all corresponding body pages, or you can create a new master page. You can also choose to do neither, leaving the override on the page. For information on creating a new master page based on a body page layout, see “To create a custom master page” on page 19-17. For information on creating a one-time-only body page, see “To override the master page layout on a body page” on page 19-20.

You can also change the column layout of the left and right master pages together, creating a symmetrical layout. For details, see “Changing the basic page layout” on page 18-5.

To update body pages with master page changes

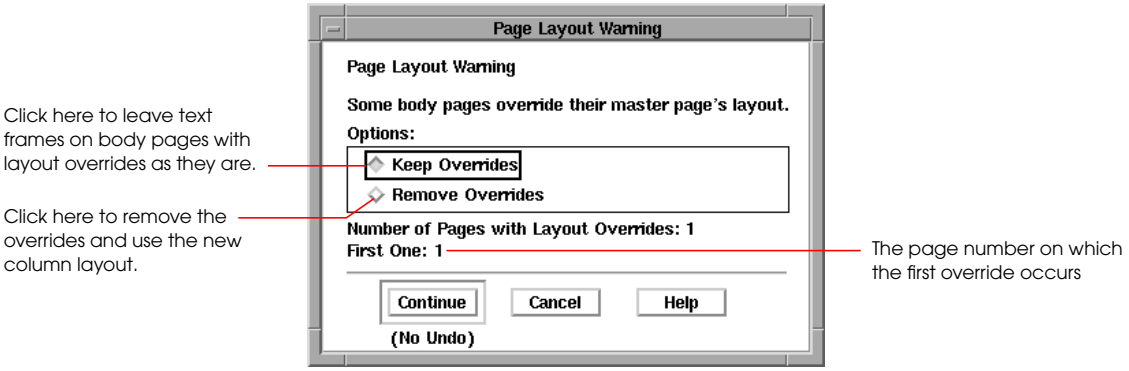
You can change template text frames on more than one master page and have FrameMaker update all corresponding body pages in one step.

Before updating associated body pages with master page changes, FrameMaker checks to see whether any body pages have column layouts that override their master pages—for example, a different number of columns, a different gap between columns, different margins, or different side-head settings. If any body pages have layout overrides, you choose whether you want to keep the overrides. If you choose to keep layout overrides, FrameMaker updates those body pages with the master page's background text and graphics but does not copy the template text frames. For information on layout overrides, see "Creating a one-time-only page layout" on page 19-20.

1 **After making layout changes on master pages, display body pages.**
When you leave the master pages, all body pages associated with changed master pages are automatically updated.

If FrameMaker detects any layout overrides on body pages that use these master pages, it displays an alert that asks how you want to handle them.

2 **If FrameMaker displays an alert, choose whether you want to keep or remove overrides and click Continue.**



To update a master page with body page changes

You can make column layout changes on a body page, but you must update the corresponding master page if you want FrameMaker to update other body pages that use the same master page.

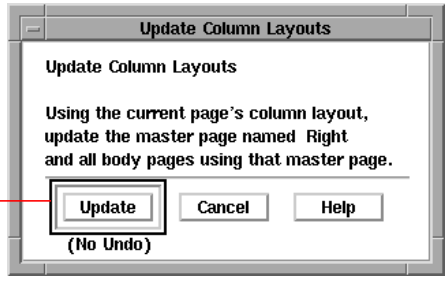
When you choose to update the corresponding master page and the other associated body pages, FrameMaker checks to see whether any body pages have column layouts that override their master pages. If any body pages have layout

overrides (such as a different number of columns, a different gap between columns, different margins, or different side-head settings), you choose whether you want to keep the overrides. If you choose to keep layout overrides, FrameMaker updates those body pages with the master page's background text and graphics but does not copy the template text frames. For information on layout overrides, see "Creating a one-time-only page layout" on page 19-20.

1 **After making layout changes on a body page, choose Page Layout>Update Column Layout from the Format menu.**

A message appears that asks you to confirm the master page and body pages that are to be updated.

Click Update to update the master page and associated body pages.

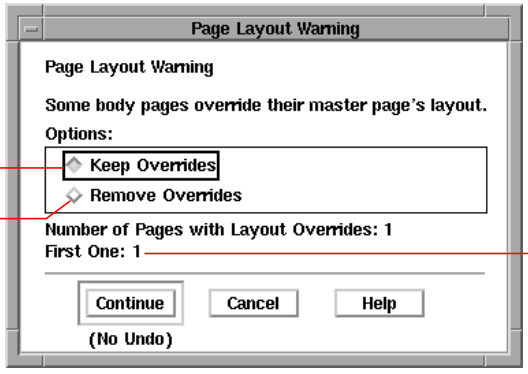


If FrameMaker detects any layout overrides on body pages that use this master page, it displays an alert that asks how you want to handle them.

2 **If FrameMaker displays an alert, choose whether you want to keep or remove overrides and click Continue.**

Click here to leave text frames on body pages with layout overrides as they are.

Click here to remove the overrides and use the new column layout.



The page number on which the first override occurs

To change the margins on an individual page

You change the margins on a body page to customize that page or as a first step in creating asymmetrical page layouts on left and right master pages. For information on changing margins to create symmetrical layouts on left and right pages, see "To change margins" on page 18-7.

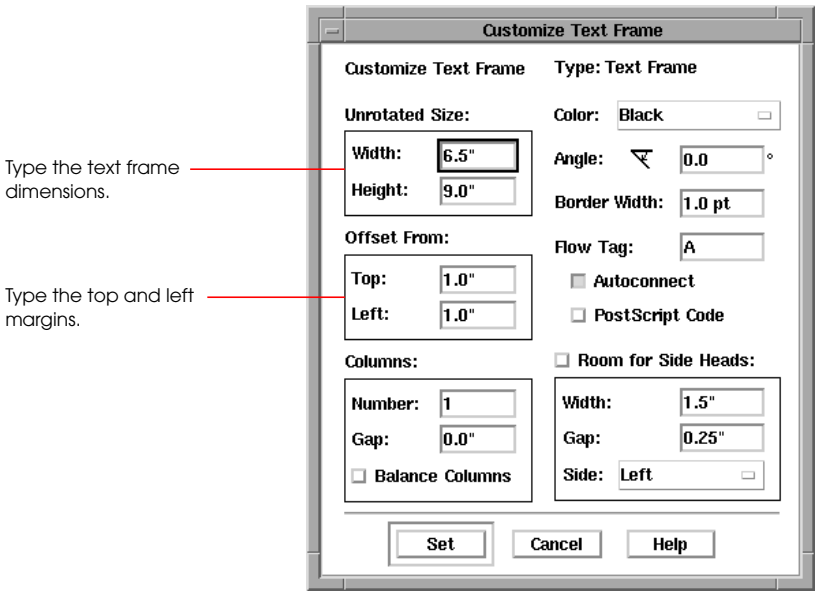
When you change the margins on an individual body page, you choose whether to update the corresponding master page and associated body pages. You can create asymmetrical page layouts by updating. If you don't update, you customize the page. For details on updating, see "To update a master page with body page changes" on page 19-10.

You can also create asymmetrical page layouts by changing the margins of a left or right master page directly. In this case, FrameMaker updates all associated body pages automatically.

1 **Select the text frame that has the margins you want to change.**
To select the text frame, Control-click the frame.

2 **Choose Customize Layout>Customize Text Frame from the Format menu.**

3 **Specify the new size and position.**



The offset from the top of the page is the top margin. The offset from the left side of the page is the left margin. The bottom and right margins are then determined by the text frame's width and height.

4 **Click Set.**

DRAGGING TEXT FRAME EDGES

You can change the margins by selecting a text frame and dragging a resize handle. To select a text frame, Control-click the frame.

When you narrow or widen a multicolumn text frame, the column widths change to fit within the text frame, but the column gap remains the same.

To change the number of columns on an individual page

In a typical multicolumn document—one with equal-width columns—you can change the number of columns and the gap between columns. You can also create columns with different widths or with different gaps. For information, see "Creating columns with different widths or gaps," next.

When you change the number of columns on a master page, FrameMaker automatically updates all associated body pages. When you change the number of columns on a body page, you can choose whether to update the corresponding master page and associated body pages. For details, see "To update a master page with body page changes" on page 19-10.

1 **Select the text frame you want to change.**
To select the text frame, Control-click the frame.

2 **Choose Customize Layout>Customize Text Frame from the Format menu.**

3 **In the Columns area of the Customize Text Frame dialog box, specify the number of columns and (if it's more than one) the gap between adjacent columns.**

4 **Click Set.**

CREATING COLUMNS WITH DIFFERENT WIDTHS OR GAPS

Multicolumn documents with equal-width columns and gaps usually contain one multicolumn text frame for the document text on each page. However, you can also create a multicolumn layout with unequal column widths or gaps. To do so, use one text frame for each column of text and position the text frames to obtain the page margins and column gaps you want.

You can draw the text frames, or you can set up one text frame the way you want it and then duplicate it. For more information, see "To draw a template text frame," next, and "To duplicate a text frame" on page 19-16.

To draw a template text frame

If you want a master page to contain unequal-width columns of text, or if you're setting up the basic layout for a newsletter in which the articles don't flow continuously from the first page to the last, you need to use multiple text frames—one for each column. For example, for a page with two unequal-width columns, you add a second template text frame by drawing it on the master page.

When you draw a text frame on a master page, FrameMaker automatically connects the flows properly by prompting you to choose a flow tag. The new text frame is connected to the text frame in which the flow currently ends, and FrameMaker automatically updates all associated body pages.

For information on drawing a text frame on a body page and on using the text frame as part of the document's text flow, see "Drawing or duplicating a text frame on a body page" on page 19-14.

1. **Display the master page on which you want to draw a new text frame.**
2. **Draw a text frame.**
   Use the Text Frame tool on the Tools palette to draw a text frame. For details, see "To add a text frame" on page 13-26. If you're going to draw more than one text frame, draw them in the order you want them connected.

DRAWING OR DUPLICATING A TEXT FRAME ON A BODY PAGE

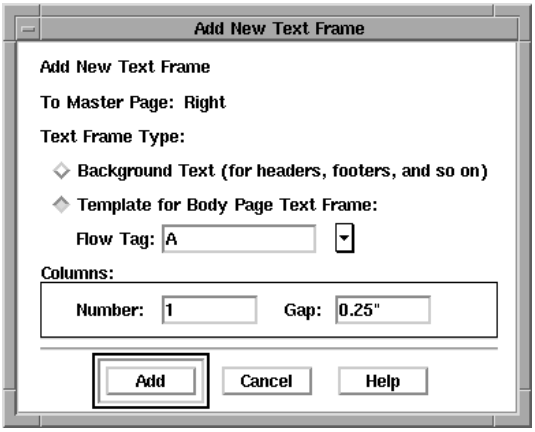
When you draw or duplicate a text frame on a body page, and you want to use the text frame as part of the document's text flow, you need to connect the new text frame to the flow. If the new text frame is the first one in the flow, you also need to turn on Autoconnect.

To turn on Autoconnect for the first text frame in the flow, select the text frame and choose Customize Layout>Customize Text Frame from the Format menu. Then turn on Autoconnect in the Customize Text Frame dialog box and click Set.

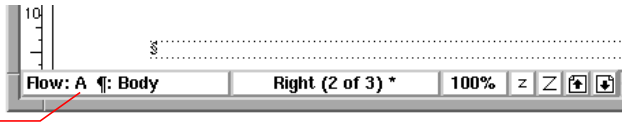
To connect text frames, use the Customize Layout>Connect Text Frames command on the Format menu to connect the text frames. For more information, see "To connect text frames" on page 20-10.

If the text frame you draw or duplicate on a body page is part of the document's text flow, you can choose whether to update the corresponding master page and associated body pages. For details, see "To update a master page with body page changes" on page 19-10.

When you draw the text frame on a master page, FrameMaker displays the Add New Text Frame dialog box.



3 **Click Template for Body Page Text Frame and choose a tag from the Flow Tag pop-up menu.**
Choose the current flow tag unless you're working with a multiflow document. FrameMaker connects the text frame to the text frame in which the flow currently ends.



The Tag area displays the name of the current flow.

For information on creating new flow tags in a multiflow document, see Chapter 20, "Flow Design."

4 **In the Columns area, specify the number of columns and (if it's more than one) the gap between adjacent columns.**
If you're setting up a column layout with unequal-width columns, set the number of columns to 1, because you use a separate text frame for each column.

5 **Click Add.**

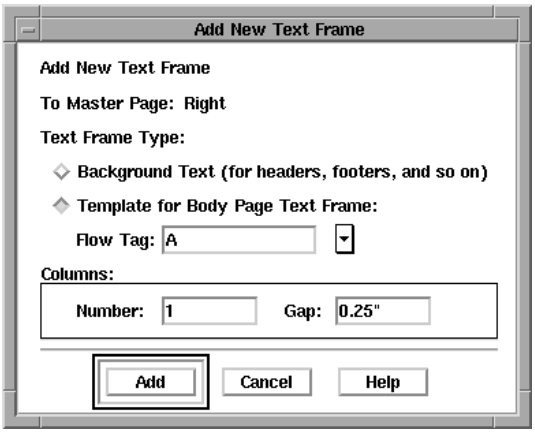
To duplicate a text frame

After you set up a text frame, you can place a copy of it in another location, either on the same master page or on a different one. FrameMaker copies the text frame, any text in it, as well as the properties associated with the text frame (including the flow tag).

If you copy the text frame to a master page, FrameMaker automatically updates all associated body pages.

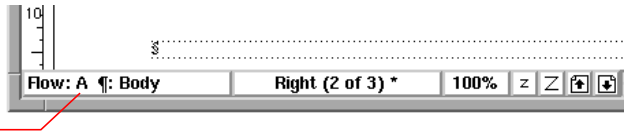
For information on duplicating a text frame on a body page and on using the text frame as part of the document's text flow, see "Drawing or duplicating a text frame on a body page" on page 19-14.

1. **Select the text frame you want to copy.**
   To select the text frame, Control-click the frame.
2. **Choose Copy from the Edit menu.**
3. **Display the page on which you want to duplicate the text frame.**
4. **Choose Paste from the Edit menu.**
   If you paste the text frame on a master page, FrameMaker displays the Add New Text Frame dialog box.



Click Template for Body Page Text Frame, choose a tag from the Flow Tag pop-up menu, and click Add.

Choose the current flow tag unless you're working with a multiflow document. FrameMaker connects the text frame to the text frame in which the flow currently ends.



The Tag area displays the name of the current flow.

For information on creating new flow tags in a multiflow document, see Chapter 20, "Flow Design."

WORKING WITH CUSTOM MASTER PAGES

Your documents may need body pages with layouts that differ from those of the left and right master pages. For example, you may want the first page of a document to look different from remaining pages. For such cases, you create custom master pages.

After you create a custom master page, you change its column layout and add background text and graphics as necessary. For details, see "Changing and updating column layout" on page 19-9 and "To add background text on a master page" on page 19-6. You can also add headers and footers. For details, see "Creating headers and footers" on page 18-10.

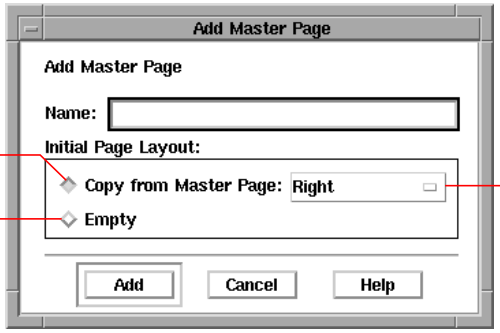
To create a custom master page

You can create a custom master page by starting out with a blank page or by basing the new page on an existing master page. First you create the new master page, and then you customize it to suit your needs. After setting up the custom master page, you can assign it to any body page in the document at any time. A document can have up to 100 master pages. For information on customizing page design, see "Working with master pages" on page 19-4 and "Changing and updating column layout" on page 19-9. For information on assigning master pages to body pages, see "To assign a different master page to body pages" on page 19-7.

1 **Choose Master Pages from the View menu.**
The master page that corresponds to the current body page appears.

2 **Choose Add Master Page from the Special menu.**

3 **Choose the initial page layout.**



Click here if you want to base the new master page on an existing page's design.

Click here if you want to start out with a blank master page.

Choose the master page on which you want to base the new page from the pop-up menu.

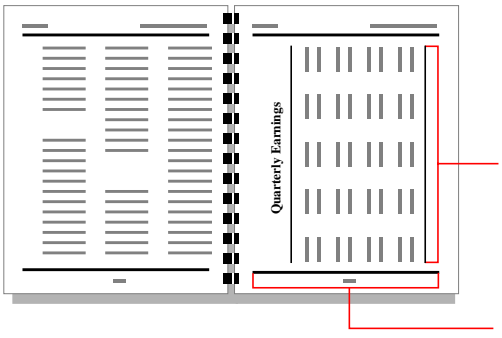
4 **Type a name for the master page in the Name text box and click Add.**

BASING A NEW MASTER PAGE ON A BODY PAGE LAYOUT

You can also create a custom master page by making column layout changes on a body page and then creating a new master page from the body page's layout. With the body page displayed, choose Page Layout>New Master Page from the Format menu. Type a name for the master page in the New Master Page dialog box and click Create.

To create a rotated master page

You can create a custom master page that changes the orientation of a body page. For example, you may need a rotated orientation for a body page with a very wide table.



Body text added after page is rotated

Background text and graphics added before page is rotated

1 **Create a custom master page.**

For details, see "To create a custom master page" on page 19-17.

2 **On the master page, set up any text frames and background text and graphics that you want to display unrotated.**
Headers and footers are background text. You should add them at this point if you want them to have the same orientation (unrotated) as headers and footers on the other master pages. If you want them to be rotated, you can add them later. For information on drawing background text frames, see "To add background text on a master page" on page 19-6.

3 **Choose Customize Layout>Rotate Page Clockwise or Customize Layout>Rotate Page Counterclockwise from the Format menu.**
When FrameMaker rotates the page, part of it will probably be out of view. You can adjust the window size so you can see as much of the page as possible.

4 **Create any text frames and background text or graphics that you want to display rotated.**
If you want to display headers and footers rotated, you should add them at this point.

TYPING IN ROTATED TEXT FRAMES

If you mix rotated and unrotated text frames on a page, you can type in rotated text frames, or you can unrotate the page to make typing faster. To unrotate a page, choose Customize Layout>Unrotate Page from the Format menu. When you are finished, you can rotate the page back to its former orientation.

To rename a custom master page

You may need to rename a custom master page. For example, if you're importing master pages from a template to an existing document, and if you don't want an existing master page to be overwritten, you rename it before importing. You can't rename the left or right master page.

1 **Display the master page you want to rename.**

2 **Click the page name in the status bar.**
FrameMaker displays the Master Page Name dialog box.

3 **Type the new name and click Set.**

To delete a custom master page

If a document no longer uses a custom master page, you may want to delete it. You can't delete the left or right master page or any master page currently assigned to a body page.

1 **Display the master page you want to delete.**

2 **Choose Delete Page from the Special menu.**

CREATING A ONE-TIME-ONLY PAGE LAYOUT

In certain situations, you may need a body page with a layout that appears only once in a document. For example, you can make a text frame longer to fit one more line of text on the page. Or you may want to shrink a text frame to place a graphic directly on the body page. In such cases, you can override a body page's master page layout without affecting other body pages.

You can also choose to assign no master page to a body page. Because it's not associated with a master page, this type of body page has no headers, footers, or other background text or graphics. For example, you may want to include a graphic that is too large to fit within the current top and bottom margins, or you may want the last page of a document to be completely blank.

To override the master page layout on a body page

You can override the master page layout on a body page by changing the column layout directly on the body page. The column layout of a body page with overrides remains unique to that page unless you update the corresponding master page.

1 **Display the body page that has a master page layout you want to override.**

2 **Change the column layout.**

Use any of the methods described in "Changing and updating column layout," beginning with "To change the margins on an individual page" on page 19-12. When you change the column layout, the body page no longer matches its corresponding master page. By not updating the master page, you create a layout override.

UPDATING PAGES WITH OVERRIDES

When you change the template text frames on a master page, FrameMaker detects any layout overrides when it attempts to update body pages. You can choose to retain the overrides or to adopt the new layout. For information on updating body pages with layout overrides, see "To update body pages with master page changes" on page 19-10.

To assign no master page to a body page

You create a one-time-only page layout with no headers, footers, or other background text and graphics by assigning no master page to a body page. For example, if each chapter in a book must have an even number of pages, and if the last page of a chapter contains no body text, you may want that page to be completely blank.

If the body page contains a text frame, the text frame is unaffected.

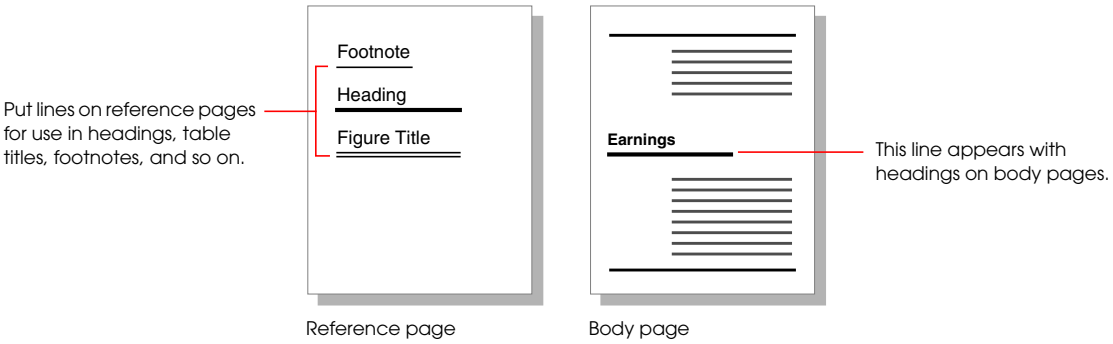
1. **With a body page displayed, choose Page Layout>Master Page Usage from the Format menu.**
2. **In the Use Master Page area of the Master Page Usage dialog box, choose None from the Custom pop-up menu.**
3. **In the Apply To area, choose the pages to which you want to assign no master page.**

To assign no master page to	Do this
The currently displayed body page	Click Current Page.
All pages within the range you specify in the text boxes	Click Pages/To.
Only odd or even pages within the range you specify in the text boxes	Turn off Odd or Even as necessary.
Only body pages within the range you specify in the text boxes that currently use a particular master page	Turn on That Currently Use Master Page and choose a page from the Current Master Page pop-up menu.

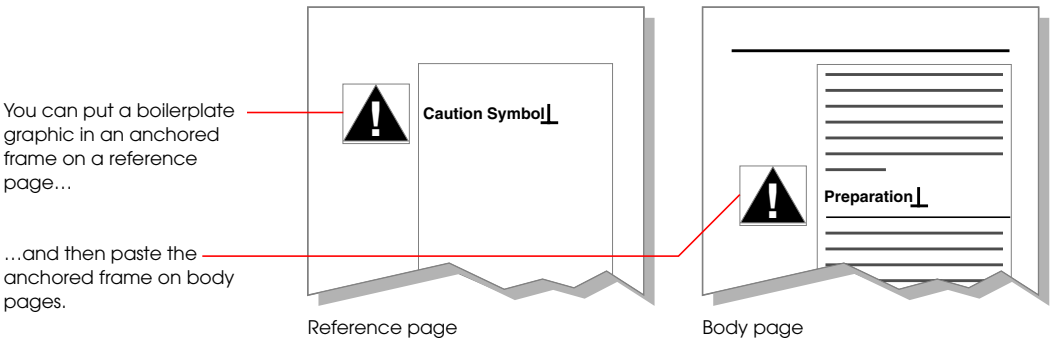
4. **Click Apply.**
5. **Change the existing column layout as necessary.**

WORKING WITH REFERENCE PAGES

You can store frequently used graphics on reference pages and then use them on body pages where they're needed. By setting them up correctly on the reference page, the graphics are always used consistently on body pages. For example, to design a heading with a line below it, you draw the line in a reference frame on a reference page and then include the reference frame as a property of a paragraph format.



Reference pages can also hold boilerplate material or clip art that you want positioned consistently throughout a document. You use boilerplate material or clip art by copying it from the reference page and pasting it on body pages. For example, you can store on a reference page symbols for signaling cautions and notes.



A document normally has at least one reference page with some commonly used graphics already set up. Some templates also have additional reference pages. You can add your own graphics to an existing reference page, and you can create additional reference pages.

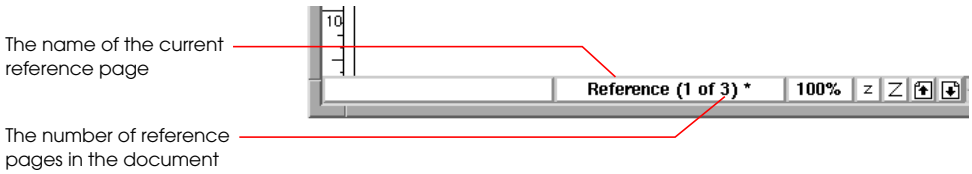
Reference pages can contain formatting information for generated lists and indexes. For information on using reference pages for formatting generated documents, see Chapter 22, "Generated Lists," and Chapter 23, "Indexes."

Reference pages can also contain hypertext commands. For details, see Chapter 27, "Hypertext and View-Only Documents."

To display reference pages

When a reference page is visible, you can click the Next Page and Previous Page buttons or you can scroll to view the document's other reference pages.

- **To display reference pages, choose Reference Pages from the View menu.**



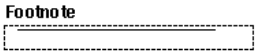
To create a reference page

Every new, blank document has a reference page named Reference with lines for footnotes, table footnotes, and headings already set up. You can create additional reference pages as necessary. A document can have up to 100 reference pages.

1. **Display reference pages.**
2. **Choose Add Reference Page from the Special menu.**
   If the document doesn't currently have any reference pages, the Add Reference Page dialog box appears when you try to display a reference page. Otherwise, the dialog box appears when you choose Add Reference Page.
3. **In the Add Reference Page dialog box, type a name for the reference page in the Name text box and click Add.**

To create a reference frame on a reference page

In order to use a graphic as part of a paragraph format, you put the graphic in a reference frame—an unanchored graphic frame—on a reference page. For example, the reference frame for a footnote line might look like this:



When you select a reference frame on a reference page, its name appears in the status bar after the word *Frame*.

For information on using a reference frame in a paragraph format, see "To put graphic lines above and below a paragraph" on page 4-17.

1 **Draw an unanchored graphic frame on the reference page.**
Use the Graphic Frame tool on the Tools palette to draw an unanchored graphic frame. For details, see "To draw an unanchored graphic frame" on page 13-14.

After you draw the frame, FrameMaker displays the Frame Name dialog box.

2 **Type a name and click Set.**
Give the frame a short, descriptive name you'll recognize later in the Frame Above ¶ and the Frame Below ¶ pop-up menus in the Advanced properties of the Paragraph Designer.

3 **Put the graphic in the frame.**
You can import a graphic file, use the Tools palette to draw a graphic, or combine drawn and imported graphics.

4 **Adjust the frame's size and shape if necessary.**
When you use a reference frame above or below a paragraph on a body page, the whole frame appears on the body page, not just the graphic inside it. The height of the frame affects the position of text above and below the frame.

5 **Type the frame's name above the frame.**
Typing the name is strictly for your convenience in helping you identify the frame quickly. Use the Text Line tool on the Tools palette to type the name. For information on using the Text Line tool, see "To add a text line" on page 13-25.

Note that typing a different name here does not rename the reference frame. For information on renaming the frame, see "To rename a reference frame," next.

To rename a reference frame

You can change the name of a reference frame if its use in the document changes.

1 **Select the reference frame you want to rename.**

2 **Click the frame's name in the status bar.**
FrameMaker displays the Frame Name dialog box.

3 **Type the new name and click Set.**
If you rename a reference frame used in a paragraph format, you need to update the format so that it uses the new frame name. For information on using a reference frame in a paragraph format, see "To put graphic lines above and below a paragraph" on page 4-17.

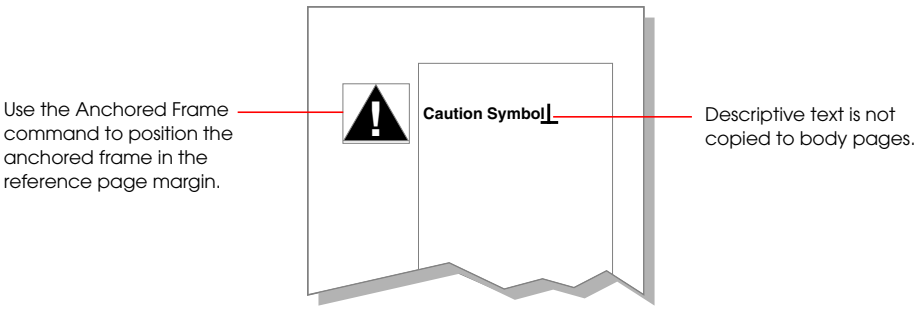
You should also type the new name in the text line above the reference frame.

To set up boilerplate graphics

You can set up boilerplate graphics—for example, margin symbols—in anchored frames on a reference page. When you copy the graphics to body pages, they appear correctly positioned in their anchored frames.

1 **Create a reference page with the same column layout as the type of body page on which you want to display the graphic.**
Doing this ensures that the graphic is positioned correctly when you copy it to body pages. To set up the column layout, you can copy the text frame from a body page and paste it on the reference page. You can also draw a text frame on the reference page and then use the Customize Layout>Customize Text Frame command on the Format menu to change its layout.

2 **On the reference page, set up the anchored frame exactly as you want to display it on body pages, and put the graphic in the anchored frame.**
You may want to add some text that describes what the symbol is used for.



For information on setting up anchored frames with the Anchored Frame command, see Chapter 15, "Anchoring Graphics."

COPYING THE GRAPHIC TO BODY PAGES

You can quickly copy a boilerplate graphic to a body page. On the reference page, select the anchored frame that contains the graphic and copy it. Then, on the body page, click where you want to anchor the graphic and paste it. The anchored frame is positioned correctly on the body page.

PLACING GRAPHICS DIRECTLY ON A REFERENCE PAGE

The graphics you put on a reference page don't have to be in an anchored frame. You can place graphics directly on reference pages and then copy and paste them anywhere on body pages.

To rename a reference page

You may need to rename a reference page. For example, if you're copying the reference pages from a template to an existing document, and if you don't want a particular reference page to be overwritten, you rename it before copying the pages.

1. **Display the reference page you want to rename.**
2. **Click the page name in the status bar.**
   FrameMaker displays the Reference Page Name dialog box.
3. **Type the new name and click Set.**

To delete a reference page

If you delete a reference page that contains a graphic used in a paragraph format, the graphic no longer appears in paragraphs using that format. When this happens, the Frame Above ¶ or the Frame Below ¶ pop-up menu in the Advanced properties of the Paragraph Designer is set to As Is for the paragraphs.

1. **Display the reference page you want to delete.**
2. **Choose Delete Page from the Special menu.**

20

FLOW DESIGN

Creating newsletters and other multicolumn documents with more than one text flow

SETTING UP FLOWS FOR A MULTIFLOW DOCUMENT 20-4

To set up parallel flows 20-4

To set up the flows for a newsletter 20-6

CONTROLLING THE FLOW OF TEXT 20-7

To change a flow tag 20-9

To keep FrameMaker from generating new pages 20-9

To add a new, unconnected page 20-10

To connect text frames 20-10

To disconnect text frames 20-11

To split a text frame 20-13

To cross-reference text frames 20-14

To track a text flow 20-15

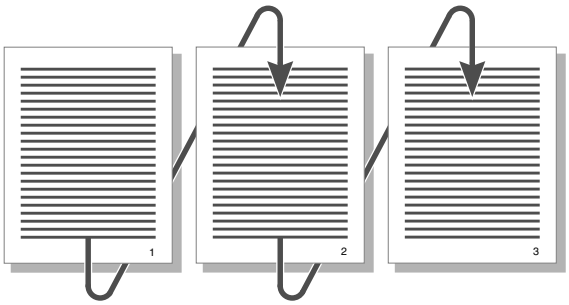
To delete disconnected pages 20-16

20 FLOW DESIGN

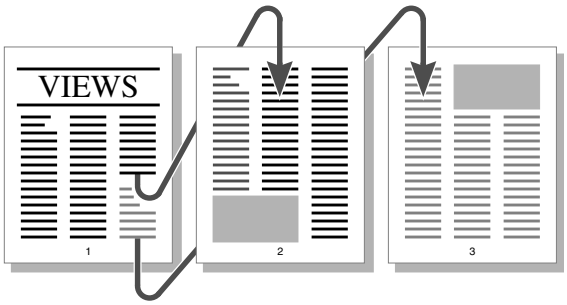
A document can have separate text flows, each with its own text frame connections.

Text frames can be connected to control where text flows

With most books and reports, the text frame on each page is automatically connected to the text frame on the next to form a single text flow running through the entire document. But some documents contain multiple text flows—for example, multilingual documents that contain several side-by-side translations of the same text, or newsletters in which an article that starts on one page continues several pages later.



In a single-flow document, text flows from the bottom of one page to the top of the next.



In a multiflow document, text often starts on one page and continues several pages later.

In these documents, you specify how the text flows by connecting the text frames yourself. In the multilingual example, each translation is in a separate text flow. In the newsletter example, each article has its own text flow.

Because each flow's autonumbering is independent of the numbering in other flows, you can maintain separately numbered lists, headings, figure titles, and so on, for each flow.

Each flow has a tag

A flow tag is the name you give a text flow. When you assign a master page to a body page, FrameMaker uses the master page's tagged text frames on the body page. You can create additional flows on body pages or master pages, depending on the type of multiflow document you're creating.

You can add pages manually to control connections

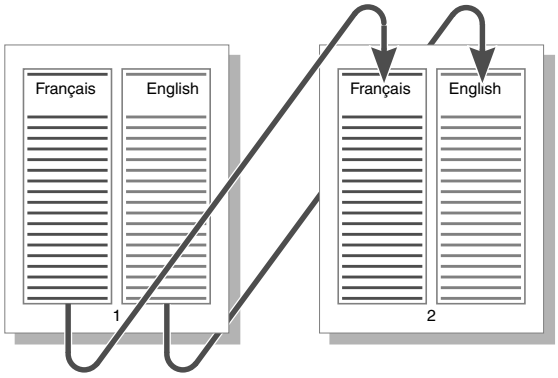
In most single-flow documents, you want FrameMaker to add a new page automatically whenever you fill a text frame with text. The text frame on the first page is automatically connected to the text frame on the new page. In a multiflow document, you can tell FrameMaker not to add a new page when a text frame gets filled. That way, you can add pages yourself and control the connections.

In this chapter

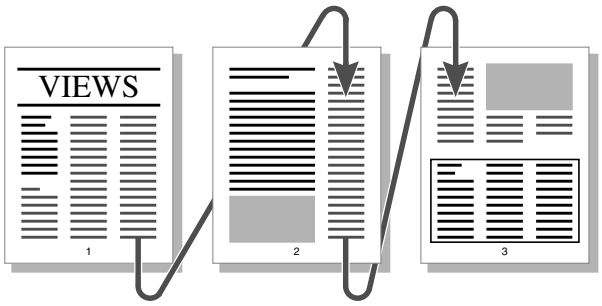
This chapter shows you how to control the flow of text in a multiflow document. Before creating a multiflow document, you should have a good understanding of FrameMaker page layout and master page usage. See Chapter 18, "Basic Page Design," and Chapter 19, "Custom Page Design."

SETTING UP FLOWS FOR A MULTIFLOW DOCUMENT

Some documents use parallel text flows. An example of this type of document is one with two side-by-side flows that contain text in different languages.



A newsletter, on the other hand, may have multiple flows, with some of them running through the entire document.



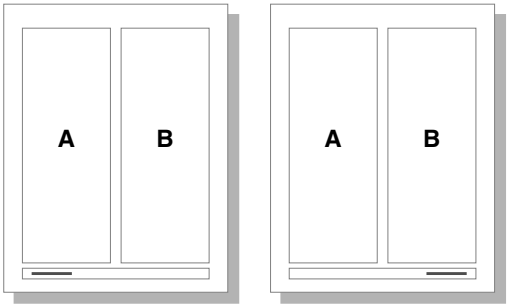
To set up parallel flows

The best way to set up a document with parallel flows is to lay out and connect the text frames on the master pages. Because the text frame connections are the same throughout the document, you don't normally need to make further changes on the body pages.

Set up parallel flows by following these general steps. The rest of this chapter describes the process in more detail.

1 **Set up the separate flows on one of the master pages.**

Use a separate text frame for each flow and assign a different flow tag to each text frame. Also make sure that Autoconnect is on for each flow so that FrameMaker adds a new body page whenever text reaches the end of one of the flows. For information on adding template text frames to master pages, see "To draw a template text frame" on page 19-14 and "To duplicate a text frame" on page 19-16. Instructions for assigning a flow tag and turning on Autoconnect begin on page 20-9.



Left master page Right master page

2 **Repeat these steps for the remaining master pages.**

All master pages should have the same flow tags. Otherwise, FrameMaker won't alternate properly between the left and right master pages when adding body pages. For information on how FrameMaker correctly alternates between the left and right master pages, see "Alternating left and right master pages," next.

3 **Update body pages with the master page changes by displaying body pages.**

ALTERNATING LEFT AND RIGHT MASTER PAGES

When text reaches the bottom of the last text frame in a flow with Autoconnect on, FrameMaker creates a new body page using the appropriate left or right master page. In order to create the new page correctly, the appropriate left or right master page must contain all of the flow tags found on the current body page. If any flow tag is missing, FrameMaker creates the new page with the current body page's master page instead.

To set up the flows for a newsletter

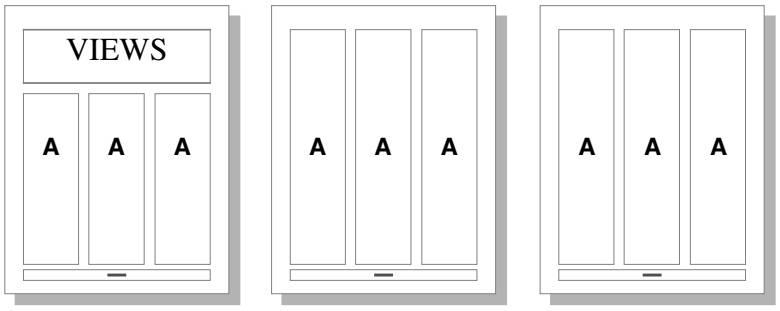
The best way to set up a newsletter that requires nonparallel, multiple flows is to establish a basic layout on the master pages and then define the flows on the body pages. This approach, which applies to any document with multiple, nonparallel flows, gives you the greatest amount of flexibility in determining the way text flows through the document.

When you establish the basic layout, you determine the number and size of columns; each column should be a separate text frame. However, you can resize and delete these text frames on the body pages until they look right to you. The master pages act only as the basic layout grid from which you work.

Set up newsletter-style flows by following these general steps. The rest of this chapter describes the process in more detail.

If you're creating a newsletter that has articles that flow consecutively from the first page to the last, you don't need to use the techniques described in this chapter. For more information, see "Single-flow newsletters" on page 20-8.

1 **On the master pages, specify the basic layout of the document.**
Decide on the basic number of columns for the newsletter, and put that number of single-column text frames on each master page. All of the text frames should be in the same flow. For information on adding template text frames to a master page, see "To draw a template text frame" on page 19-14 and "To duplicate a text frame" on page 19-16.



First master page Left master page Right master page

Use these text frames as the layout grid within which you'll have text flow and place graphics.

2 **Turn off Autoconnect so that FrameMaker won't automatically add pages.**
For instructions, see "To keep FrameMaker from generating new pages" on page 20-9.

3 **Update body pages with the master page changes by displaying body pages.**

4 **On the body pages, create, resize, disconnect, and connect text frames as necessary.**
Don't update the master pages as you make changes on the body pages. When you create a newsletter-type document, the master pages act only as the basic layout grid from which you work.

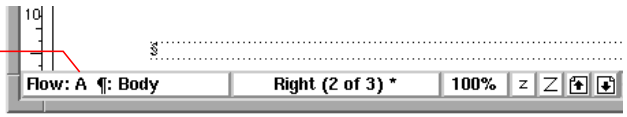
When you disconnect text frames on body pages, you create separate untagged flows. You don't need to tag them because FrameMaker won't create new pages automatically and thus won't need to connect text frames. Instructions for connecting and disconnecting text frames begin on page 20-10.

5 **If you want to synchronize text baselines in the newsletter, make sure the text frames are placed appropriately.**
If the newsletter contains several text flows, you need to synchronize baselines for each flow. For information on synchronizing text baselines, see "To synchronize baselines along a grid" on page 18-19 and "Synchronizing baselines in a newsletter" on page 18-20.

6 **Manually create new unconnected body pages as necessary.**
For instructions, see "To add a new, unconnected page" on page 20-10. Connect text frames between pages as necessary.

CONTROLLING THE FLOW OF TEXT

A flow's basic properties are its flow tag and its Autoconnect setting. (You specify both settings by using the Customize Layout>Customize Text Frame command on the Format menu.) Autoconnect determines whether FrameMaker automatically generates a new page when the flow's text frames are full. In a new, blank document, the main flow is tagged A. When you click in a text frame that contains a tagged flow, the tag appears in the Tag area of the status bar.



You can assign a flow tag to a new text frame or change a flow's tag at any time. You need to assign a tag only once for a flow. After that, connecting a text frame to the flow assigns the tag to the text frame. If you change the flow tag or the Autoconnect setting in one text frame in a flow, the change is made to the entire flow.

In a document with one flow or parallel flows, Autoconnect is usually on to tell FrameMaker to add a new page whenever the flow's text frames are full. The new page takes the column layout of the appropriate master page (left or right), and the text frames on the new page are automatically connected to the text frames on the original pages.

When working on a document with nonparallel, multiple flows, in most cases you'll turn off Autoconnect. This allows you to add a new, unconnected body page wherever you want and to control the connections between it and existing pages.

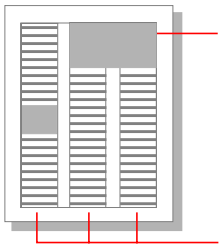
If Autoconnect is off, and if the flow has more text than it can hold in its text frames, the text overflows at the end of the last text frame in the flow. If borders are visible, the bottom border of an overflowing text frame appears as a solid line. Overflowing text is not deleted; it's just hidden from view. As soon as you connect the overflowing text frame to another text frame, the text reappears.

SINGLE-FLOW NEWSLETTERS

If you're creating a newsletter or magazine that has articles that flow consecutively from the first page to the last, you don't need to use the multiple-flow method described in this chapter. Instead, use one text flow for the entire newsletter.

With the single-flow method, you need only one text frame per page, even with a multicolumn newsletter, because one frame can contain several columns. To create multicolumn layouts, use the techniques described in Chapter 18, "Basic Page Design," and in Chapter 19, "Custom Page Design."

Also with the single-flow method, you can place graphics anywhere on the page; text will run around them automatically. And you can make paragraphs, tables, and frames straddle columns.



For information on runaround graphics, see "To run text around a graphic" on page 13-30 and "To run text around an anchored frame" on page 15-13. For information on straddles, see "To create a straddle head" on page 4-34, "Tables that straddle" on page 6-5, and "Anchored frames in multicolumn layouts" on page 15-9.

To change a flow tag

You normally change flow tags on master pages. If two text frames are connected, you need to disconnect them before you can change one of their flow tags. For information on disconnecting text frames, see "To disconnect text frames" on page 20-11.

1. **Click in the text frame that has the flow tag you want to change.**
2. **Choose Customize Layout>Customize Text Frame from the Format menu.**
3. **In the Customize Text Frame dialog box, type a tag for the flow in the Flow Tag text box.**
   You should keep flow tags short—B or C, for example—so they won't obscure other information in the Tag area of the status bar. You can't assign a tag that is already used on the current page.
4. **If you want to keep FrameMaker from adding new pages when columns overflow, turn off Autoconnect.**
5. **Click Set.**

ASSIGNING FLOW TAGS WHEN DRAWING TEXT FRAMES

When you draw or paste a text frame on a master page, FrameMaker displays the Add New Text Frame dialog box. There you can assign an existing flow tag by choosing it from the Flow Tag pop-up menu. To assign a new flow tag, type the name in the Flow Tag text box.

To keep FrameMaker from generating new pages

The Autoconnect setting in the Customize Text Frame dialog box determines whether FrameMaker automatically adds new pages with connected text frames. You can turn off Autoconnect if your document has multiple flows and you need the flexibility to connect text frames in different parts of the document. When Autoconnect is off, FrameMaker does not create new pages for you.

1. **Click in any text frame in the flow.**
2. **Choose Customize Layout>Customize Text Frame from the Format menu.**
3. **In the Customize Text Frame dialog box, turn off Autoconnect and click Set.**

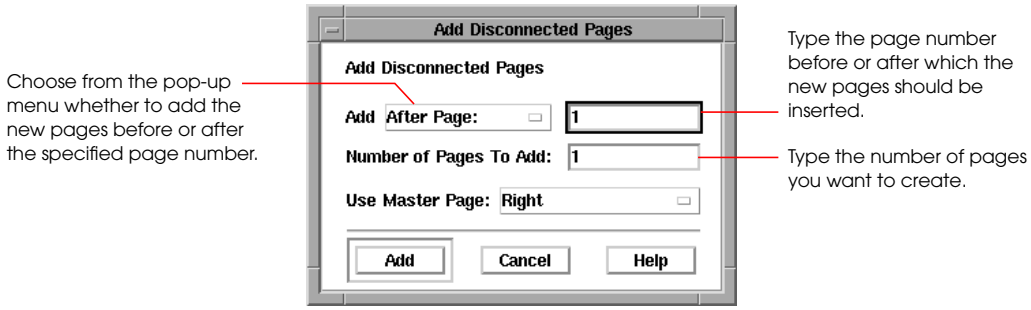
LEAVE AUTOCONNECT ON FOR ONE FLOW OR FOR PARALLEL FLOWS

Work with Autoconnect on if you're working in a document with one main flow or two parallel flows. If Autoconnect is on, FrameMaker creates a new page whenever text in the flow reaches the end of its last text frame.

To add a new, unconnected page

In documents with one main flow or two parallel flows, you don't normally add an unconnected body page; you let FrameMaker add connected pages automatically when necessary. In a multiflow document in which Autoconnect is off, or in other types of specialized documents, you can add new, unconnected body pages. When the text reaches the end of a text frame, you add a new page and connect the text frames as necessary.

1. **From a body page, choose Add Disconnected Pages from the Special menu.**
2. **Choose the location and number of disconnected pages you want to add.**



3. **Choose a master page from the Use Master Page pop-up menu.**
4. **Click Add.**

To connect text frames

When two text frames are connected, the text flows from the end of the first text frame to the beginning of the second. You can connect a text frame on a master page to any other text frame on the same master page, and you can connect a text frame on a body page to any text frame on any body page. You can also connect or disconnect a text frame in the middle of a flow.

When you connect two text frames, FrameMaker assigns the first text frame's flow tag to the second frame. If the first text frame is untagged, the second frame's tag is used. That way, all connected text frames belong to the same flow and have the same tag. If the first text frame contains overflowing text, the text flows into the second frame when you make the connection.

1. **Select the two text frames in the order in which you want text to flow.**
   To select the first text frame, Control-click it. To select the second text frame, Control-Shift click it.

If the text frames are on different pages, the first frame appears to be deselected when you select the second one; however, FrameMaker remembers the first selection.

2 **Choose Customize Layout>Connect Text Frames from the Format menu.**
If the first text frame you selected isn't on a page that's currently visible, FrameMaker displays an alert that asks whether you want to connect to that frame. Click OK.

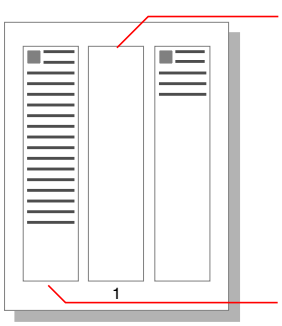
ADDING A TEXT FRAME TO THE MIDDLE OF A FLOW

To add a text frame to the middle of a flow, first select the text frame you want to add and then select the frame that should follow it. Connect these two text frames.

To disconnect text frames

Disconnect text frames when you want to create separate flows—for example, to add an article that needs to start at a specific location in a newsletter. If you need to start a new flow in the middle of a column, you can split the text frame that contains the column in two, and then disconnect the two text frames. For information on splitting a text frame, see "To split a text frame" on page 20-13.

You can disconnect a text frame from the preceding text frame, the following one, or both. You can also remove a text frame from the middle of a flow by connecting the text frames before and after the one you want to remove.



When you disconnect text frames on the same body page, FrameMaker creates separate flows with no flow tags. When you disconnect text frames on different body pages, FrameMaker creates separate flows with the same flow tag. In either case, if you're creating a newsletter-type document where Autoconnect is off for each flow, the flow tags don't matter. FrameMaker won't create new pages automatically and thus won't need to make text frame connections.

Disconnecting text frames does not affect existing text in the frames. When you want to move text to a different text frame, cut and paste it after disconnecting the frames.

1 **Select the text frame you want to disconnect.**

2 **Choose Disconnect Previous, Disconnect Next, or Disconnect Both from the Format>Customize Layout submenu.**

DISCONNECTING TEXT FRAMES AND AUTOCONNECT SETTINGS

Disconnecting text frames affects the Autoconnect settings of both frames. If you disconnect text frames on the same page, Autoconnect is off for both flows. When you disconnect text frames on different pages, Autoconnect is affected as follows:

Text frame disconnected	Flow affected	Autoconnect setting
Previous	Previous	Off
	Current	On
Next	Current	Off
	Next	On
Both	Previous	Off
	Current	Off
	Next	On

For information on changing the Autoconnect setting for a text frame, see "To keep FrameMaker from generating new pages" on page 20-9.

REMOVING TEXT FRAMES FROM THE MIDDLE OF A FLOW

If you want text in a flow to bypass text frames currently in the flow, first select the text frame immediately preceding the text frames you want to remove, and then select the text frame immediately following the text frames you want to remove. Connect those two text frames. The text flow skips over the unselected text frames.

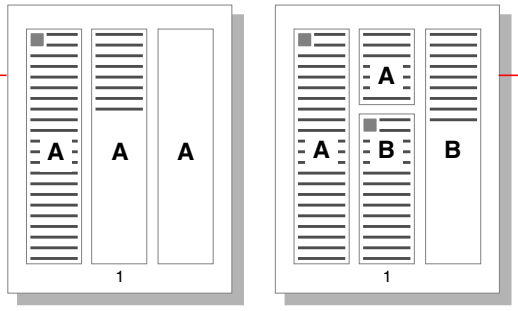
To split a text frame

You can split a text frame in two and then disconnect the two text frames to start a new flow. For example, you may want a new article with its own flow to start in the middle of a text frame.

In a single-flow or parallel-flow document, when you change a text frame on a body page, you should update the corresponding master page. In the case of a multiflow newsletter, where you're doing all of your text frame connections and flow work on body pages, you don't need to update the master page.

If you want to start a new flow in the middle of a column, you can split the text frame in two and disconnect the two text frames.

This page has three text frames, all part of the same flow.



The middle text frame has been split, and the two resulting text frames have been disconnected.

1. **Click in the line above where you want to split the text frame.**
2. **Choose Customize Layout>Split Text Frame from the Format menu.**
   FrameMaker splits the text frame horizontally below the line that contains the insertion point, creating two separate but connected text frames.
3. **Select the bottom text frame and disconnect it from the previous one.**
   If the flow was tagged, FrameMaker removes the flow tag. If Autoconnect was on before you disconnected the text frames, it is now off for both text frames. For information on disconnecting text frames, see "To disconnect text frames" on page 20-11.
4. **Resize the text frames as necessary.**

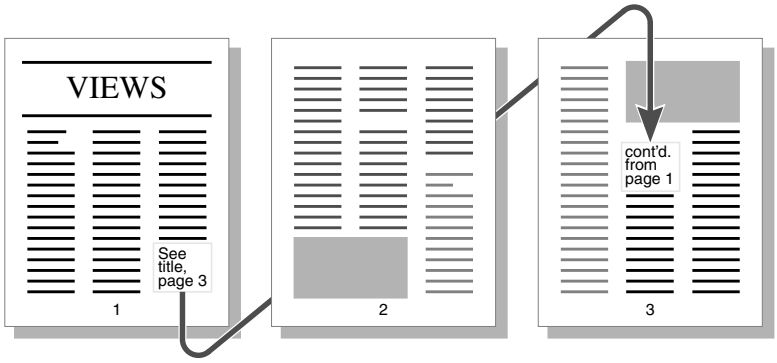
"UNSPLITTING" TEXT FRAMES

If you split a text frame in two and you then change your mind before making any other changes to the document, immediately choose Undo from the Edit menu. If you make another change but you haven't yet disconnected the two text frames, delete the lower of the two frames and then resize the remaining text frame to the size of the original unsplit frame.

If you already disconnected the two frames, cut the text from the second text frame and paste it at the end of the first text frame. Then delete the second text frame and resize the first one to the size of the original unsplit frame. Finally, if you need to turn Autoconnect back on or reassign a flow tag for the text flow, use the Customize Layout>Customize Text Frame command on the Format menu.

To cross-reference text frames

When an article in a newsletter ends on one page and starts again in a text frame on another page, you may want to tell the reader where to turn to continue reading. Similarly, you may want to indicate where the later text frame is continued from.



Use a cross-reference to indicate where the flow continues.

Use a cross-reference to indicate where the flow is continued from.

1 **Resize the two columns to make room for the cross-references.**

Because each column in a newsletter is a separate text frame, you can resize each column as necessary. Resize the bottom of the first column and the top of the continuation column.

2 **Draw a text frame for each of the cross-references.**
Draw a text frame below the first text frame and another above the continuation text frame. Don't connect either text frame to any other text frame.

3 **Insert a cross-reference in the empty text frame above the continuation text frame, pointing to the first page of the article.**
For information on creating cross-reference formats and inserting cross-references, see Chapter 10, "Cross-References."

4 **Insert a cross-reference in the empty text frame below the first text frame, pointing to the text in the continuation text frame.**

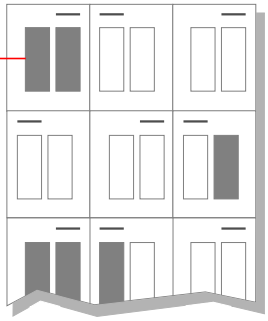
To track a text flow

In a document with many flows, it's easy to lose sight of where a flow continues. You can see more text in a flow at once by zooming out.

1 **Zoom out to 25 percent and adjust the window size to see as many pages as necessary.**
For information, see "To zoom in and out" on page 2-25.

2 **Click in the flow you want to check and choose Select All in Flow from the Edit menu.**

The flow is highlighted, showing how it traverses the pages of the document.



MOVING THROUGH A FLOW'S TEXT FRAMES

If you don't want to zoom the document to see the flow, you can move the insertion point through the flow. To go to text in the next connected text frame, click in the last line of a text frame and press the down arrow key. To go to the preceding text frame, click in the first line and press the up arrow key.

To delete disconnected pages

You can use the Delete Pages command on the Special menu to delete disconnected pages in a multiflow document. FrameMaker deletes the page along with its contents.

1. **Click in the page you want to delete.**
2. **Choose Delete Pages from the Special menu.**
3. **In the Delete Pages dialog box, type the first and last disconnected pages you want to delete and click Delete.**
   If you want to delete only one page, type that page number in both text boxes.

21

DOCUMENT TEMPLATES

Creating templates and updating documents from them

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21 DOCUMENT TEMPLATES

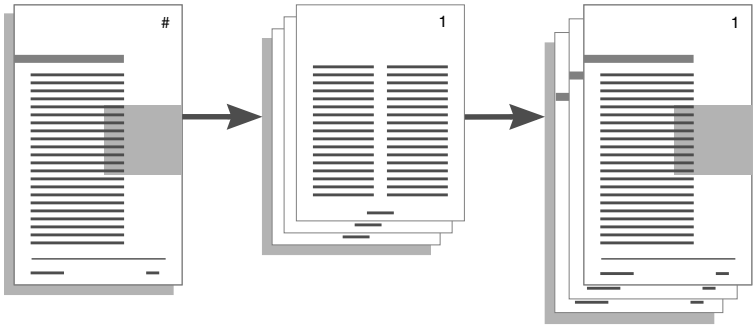
A template is a FrameMaker document you use as a foundation for creating or formatting other documents. Templates provide an easy way to apply design elements, and they ensure that your design is consistent from one document to another.

Templates have formats, definitions, and other settings

A template can have any design elements you need to use in more than one document—for example, paragraph, character, and table formats; page layout information on master pages; and graphics and formatting information on reference pages.

You can create a new document from a template to give it the template's design or reformat an existing document to match the template.

You can apply a template to a document to update the document's design.



Templates can also have variable definitions, cross-reference formats, conditional text settings, color definitions, and equation size and font settings.

You can use any FrameMaker document

When you create a new document, you can use any FrameMaker document as a template—not just one that was created especially as a template. FrameMaker makes a copy of the template and opens the copy as the new document. The document contains the design defined in the template and any text from the template.

You can also update an existing document

If you make changes to a template after creating new documents from it, you may want to update the design of the new documents to match the template. You can import the design to the new document in one step. When you update a document from a template, you specify which formats and other design elements you want to use. For example, you could update only the Paragraph Catalog and leave the rest of the document's design as it is.

Use predefined templates or design your own

FrameMaker comes with templates already set up for portrait and landscape pages and for books, memos, letters, viewgraphs, business cards, and other types of documents. You can use these templates as they are, modify them, or create custom templates of your own.

In this chapter

This chapter shows you how to design, set up, test, and organize custom templates. It explains how to create templates for generated files and conditional documents, as well as for ordinary documents. It also shows you how to import formats from a template to update the formats in a document.

You can look at a predefined template by opening it or by creating a new document based on one. For information on opening an existing template or creating a new document based on a predefined template, see Chapter 2, "Basic Procedures."

PLANNING A CUSTOM TEMPLATE

As you develop a custom template, try to anticipate the needs of other users and consider a wide range of issues that apply across documents. The more forethought you bring to the template, the more useful and effective it will be.

To think through the project

- **Try to anticipate the situations in which your template will be used.**
  Define all the formats and other design elements you think users might need. The more complete your template, the less users need to customize their documents. For an idea of formats and design elements you may need, glance through the items discussed in "Setting up a custom template" beginning on page 21-5.
- **Before starting to design and create your own templates, take a look at the FrameMaker templates.**
  Looking at existing templates may give you ideas and examples of how to set up master pages, paragraph and character formats, headers and footers, cross-reference formats, autonumbering, and much more.

  If you find a FrameMaker template that's close to what you want, use it as the basis for your template. Modify the FrameMaker template for your own needs and save it under a different name as a new custom template. Using an existing template rather than starting a new template from scratch saves you a great deal of time.

To plan ahead for other users

- **Document your template for other people who will use it.**
  If the template has sample text, you can use that text to describe the parts of the template. For example, a body paragraph might have the text *This is a body paragraph*. When you finish with the template, prepare a document summarizing its contents and put that document in the same directory as the template.
- **If documents from your template will be translated into other languages, consider letting the translators review the template design.**
  Some design elements may not work well with another language. The standard page size and default measurements may need to be different for use in other countries.

To simplify the template

- **Remember that people who use your template may not know FrameMaker as well as you do. Keep the design as simple and easy to use as possible.**
- **Set up the template so that it works as seamlessly and automatically as possible.**
  For example, specify a Next ¶ Tag in the Basic properties of the Paragraph Designer, or turn on Keep With Next or Previous in the Pagination properties.
- **If you're preparing a set of templates for a book, consider making the templates general so that you have as few of them as possible.**
  For example, you could create one template that is used for chapters, prefaces, and appendixes. That way, you won't have to update many templates if you need to make changes to them.
- **Set up a master page for each page layout that will be used by documents created from the template.**
  A chapter template might have a master page for a first page, a right page, a left page, and a command page—even though only one or two of the chapters will have command pages.

To plan the steps of the project

- **Decide on the fonts you'll use as early as possible.**
  Fonts affect many other design elements in a template—for example, line height in paragraphs and the height of header and footer columns.
- **Consider saving successive versions of a template in case you decide to use an earlier version.**

SETTING UP A CUSTOM TEMPLATE

You can set up a FrameMaker document as a template and use it to create or update other documents. The template can have as much or as little formatting information as you want.

When you set up a template, you lay out master pages, define and apply formats, and define special text such as cross-reference formats and variables. Refer to other chapters for detailed steps on how to perform these tasks. This section provides only an overview to the process of creating a template.

To design the page layout

It's usually a good idea to begin a template by specifying the overall page layout. This includes choosing the page size, defining the column layout, creating master pages, and defining the basic document properties.

1 **Create a new document.**

You can start with either a custom new document or a copy of an existing document you plan to modify. If you are designing a document that will be used primarily online, make sure that your page size is no larger than the smallest screen size on which it will be displayed. Your document may need to be in landscape orientation if it will be used on laptop computers.

2 **Define the column layout.**

If you started with a custom new document, you have already specified your column number and margins. If you are modifying an existing document, you may want to change the column layout.

3 **Add and name any custom master pages you'll need.**

4 **Enter background text and graphics on the master pages, including headers and footers.**

The headers and footers might include the page number, date, chapter number and title, section number and title, author, revision number, and draft release (preliminary, final, and so on).

If a running header or footer shows the chapter or section number, it uses a Running H/F variable that refers to the paragraph with that autonumber. To set this up, think ahead to what the tag for that paragraph will be.

5 **Define the custom document properties and view options.**

Use the Document>Text Options command on the Format menu, the Document>Numbering command on the Format menu, and the Options command on the View menu.

DISPLAYING FACING PAGES

As you design the page layout, you can see how facing pages look by displaying them side by side. Use Options from the View menu, and then choose Facing Pages from the Page Scrolling pop-up menu. Make the window larger and zoom out slightly, if necessary, to fit both pages in the window.

To design the paragraph and character formats

After designing the page layout, you should define how you want the text to be formatted. A good template has a paragraph and character format for every type of text that will be used in the documents.

1 **Create the paragraph formats.**

Paragraph formats provide the foundation of text formatting, so you should set them up before setting up the character formats. If your document will be opened or printed on computers other than your own, use fonts in your paragraph formats that are widely available.

2 **Create the character formats.**

Character formats should be overrides to paragraph default fonts. When creating a character format, specify all the settings in the Character Designer as As Is, and specify only the settings you want to change. This way, the format will work with any paragraph format.

NAMING PARAGRAPH AND CHARACTER FORMATS

Use tags that express the purpose of the text rather than the appearance of it. For example, name a format for emphasized text *Emphasis* rather than *Bold*. Then if you decide to change to italics for emphasized text, you can redefine the *Emphasis* format without having to retag any text.

Also use names that are easily recognizable. For example, you might name the formats for numbered lists *Step1* and *StepNext* rather than *st1* and *stn*.

LABELING NUMBER SERIES

If the template has more than one set of autonumbers, add a label to the format for each autonumber. For example, define step autonumbers as `S:n+`, where `S:` is the label. For more information on autonumbering, see "Formatting lists" on page 4-36.

CONTROLLING THE SPACE BETWEEN PARAGRAPHS

In paragraph formats, use either Space Above or Space Below throughout to add space above or below the paragraph. Be consistent and use either Space Above or Space Below throughout your document because FrameMaker applies only the larger of the two values between paragraphs.

To standardize graphics, frames, and tables

If the documents will contain graphics, frames, or tables, your template can provide some standards to maintain consistency.

- **Put standard items on a reference page.**
  You can include graphics that users will need again and again—for example, a symbol that calls attention to notes and cautions—and an anchored frame with a standard height and width. Users can copy and paste these items as necessary.
- **Create a paragraph format for anchored frames.**
  This provides consistent spacing around graphics. For example, a paragraph format named Frame could contain a Space Below setting of 20 points and a Line Spacing setting of zero. Then, each frame could be anchored to a blank paragraph with the Frame tag.
- **Create both a paragraph format and a character format for callouts.**
  A template should have both formats because some callouts may be text lines and some may be text frames. You cannot apply a paragraph format to a text line.
- **Choose a color model and redefine colors if necessary.**
  Use the Color>Definitions command on the View menu.
- **Prepare standard table formats.**
  Only some of the properties you set for tables can be imported into another document. The width of text in actual tables varies greatly, as do other properties. So, regardless of how you prepare your tables, users will probably need to adjust some of these properties themselves. Think of your tables as models for users to start with. For a list of the properties that are stored in the table format, see “Table properties” on page 7-4.

To define special text

A template can include definitions, formats, view options, and other settings for handling special text.

- **Select a numbering style, a number format, and other footnote properties.**
  Use the Document>Footnote Properties command on the Format menu.
- **Define formats for cross-references.**
  Use the Cross-Reference command on the Special menu.

  Standardize as much of the cross-reference format as possible. For example, if cross-references should always be introduced by *see,* include that in the format definition.

- **Create user variables.**
  Use the Variable command on the Special menu.

  Consider defining user variables for product names, document names, and other items that may change during the course of the project.

- **Define condition tags, condition indicators, and view settings for conditional text.**
  Use the Conditional Text command on the Special menu. Define settings in the Show/Hide Conditional Text dialog box.

- **Define equation sizes and fonts if any documents will have equations.**
  Use the Equations Sizes and Equations Fonts commands on the Equations pop-up menu on the Equations palette.

CREATING TEMPLATES FOR UPDATING DOCUMENTS

You can also create templates for formatting a generated file and changing the view of conditional documents in a book file. These templates are not for creating new documents.

To create a template for a generated file

If you generate a table of contents, an index, or some other kind of generated file in a directory that contains another generated file of the same type, FrameMaker uses the formatting of the existing generated file when generating the new one, if the new file uses the same name (including the suffix and extension, if any) as the existing generated file. In effect, the existing generated file serves as the new file's template, just as if you had imported formats from it. You can use this FrameMaker feature to create generated-file templates that contain page layout, paragraph and character formats, and the formatting information that appears on the reference page. For information on importing formats, see "Importing formats into a document" on page 21-12.

1. **Open the document or book file from which you want to generate the table of contents, index, or other file.**

2. **Generate the file.**
   For information on how to generate these files, see Chapter 22, "Generated Lists," and Chapter 23, "Indexes."

3 **Format the generated file.**
Follow the instructions in "Formatting a list" on page 22-14 and "Formatting an index" on page 23-19. This formatted file is your template.

4 **Save the generated file.**
Make sure that this generated-file template is in the directory that contains the document or book file that you will use to create a new generated file.

To create a set of templates for conditional documents in a book

If you often change the view of conditional documents that are part of a book, you may find it helpful to have a template for each view. That way you can change the view of all the files in the book at once, simply by importing the settings from one of the templates into the book file.

If you want to change the view of a single document that contains conditional text, it is easier simply to change which conditions are showing and which are hiding. For information, see "To change the view of a conditional document" on page 26-16.

1 **Set up a basic template for the conditional document.**
You use this template for editing the document. It should define all the document's condition tags.

In the Show/Hide Conditional Text dialog box, show all conditions and turn on Show Condition Indicators.

2 **Set up one template for each version of the conditional document.**
You use these templates for viewing or printing one version at a time. There should be a template for each condition tag you created in the basic template, and a template for any combination of conditions you might want to view. You can also use these templates to define variables and formats unique to a view.

In the Show/Hide Conditional Text dialog box for each template, show only the condition or conditions to which the template corresponds, and turn off Show Condition Indicators.

CHANGING THE VIEW

When you want to change the view, import the conditional text settings from the appropriate template into the book file. Use the Import>Formats command on the File menu.

TESTING AND ORGANIZING TEMPLATES

Before making your templates available to other users, be sure to test the templates thoroughly and put them in a logical, accessible place.

To test a template

The best way to test a template is to create several sample documents from it and then examine the documents to see that everything looks the way you want.

- **Intermingle different types of paragraphs on a page to make sure the line spacing and leading look right.**
  Try each type of paragraph in a place where you expect it to be used. Sometimes a paragraph looks fine in one place but not in another. For example, the space after a body paragraph may look correct when it appears before another body paragraph, but the space might be too large when it appears before a list.
- **Review all autonumbering carefully.**
  Examine the numbering for steps, figures, and any other autonumbered paragraphs defined in the template. Check the alignment of double-digit lists and chapter numbers.
- **Apply each master page to a body page.**
- **Try each condition tag with its indicators on.**
- **Test the color definitions.**
  Make sure color objects look the way you expect. Remember that colors on your monitor do not look exactly the same as printed colors.
- **Create tables using various table formats.**
- **Create equations to try out math element definitions and equation sizes and fonts.**
- **Generate a table of contents from a sample document.**
  Check the chapter and heading autonumbering.
- **Add several sample documents to a book and update the documents.**
  Check any cross-chapter autonumbering such as chapter and page numbers.
- **Print a sample document to see how it looks.**

To organize templates in a directory

A template directory should contain all the related templates as well as a document that describes the templates and how to use them.

1. **Create a new directory.**
   Give the directory a recognizable name that identifies what the templates are for. Put the directory in a place where your group of users has access to it and will be able to find it.
2. **Move each template into the new directory.**
   You could also save your templates in the `Templates` directory (`$FMHOME/fminit/usenglish/Maker/Templates`), which makes them available to all users.
3. **Set the file permissions so that template users have only read access to the templates.**
   Use the Save As command on the File menu to do this. Turn on Read permission and turn off Write permission for the group.

IMPORTING FORMATS INTO A DOCUMENT

You can update a document by importing paragraph formats, table formats, variable definitions, and other design elements from a template.

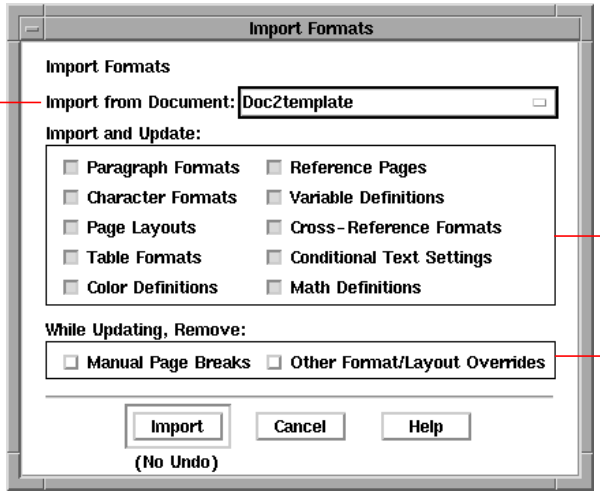
In general, when you import formatting information, FrameMaker merges the information into the document rather than completely replacing the information. For example, when you import a template's Paragraph Catalog, FrameMaker adds the template's paragraph formats to the document's Paragraph Catalog. If any formats have the same name in both files, the template's format updates (overwrites) the document's format. But if the document has any formats that are not in the template, those formats remain in the document.

To import formats into a document

You can import all the design elements from a template into a document, or you can import just the ones you specify. You can also retain any format overrides in the document—for example, tab settings—that were made to a paragraph but not saved in a paragraph format.

1. **Open the document you want to update and the template with the formats you want to import.**
   The template must be named and saved.
2. **In the document you want to update, choose Import>Formats from the File menu.**

3 **Choose the template from the Import from Document pop-up menu.**



The pop-up menu lists all open, saved documents.

4 **Turn on the Import and Update settings you want to apply to the current document.**
If you're updating variable definitions, cross-reference formats, or math definitions, and if any of these items use character formats, turn on Character Formats too so that the formats are added to the document.

For more information on these settings, see "Import and update settings" on page 21-14.

5 **To remove changes you made to individual formats without saving them in a catalog, turn on settings in the While Updating, Remove area.**
When you turn on Manual Page Breaks, FrameMaker removes page breaks that are not part of the document's Paragraph Catalog.

When you turn on Other Format/Layout Overrides, FrameMaker removes paragraph, character, page layout, and table formatting overrides.

6 **Click Import.**

REMOVING FORMAT OVERRIDES IN THE CURRENT DOCUMENT

You can remove format overrides in a document without importing from another document. To do this, choose Import>Formats from the File menu, choose Current from the Import from Document pop-up menu, turn on the settings in the While Updating, Remove area, and click Import.

IMPORT AND UPDATE SETTINGS

When you use the Import Formats dialog box to import and update one of the format items listed below, the item is updated to match the imported format. An item is updated only when the tags it uses in your document are identical to the tags used in the imported format.

The list describes the results of updating for each item. If your document is a book file, and if you import and update a format item, the results apply to all the documents in the book file, even those not open.

Paragraph Formats Merges the template's Paragraph Catalog into the document. FrameMaker also copies the template's footnote properties, the characters in the Allow Line Breaks After setting in the Text Options dialog box, and the Feather settings in the Line Layout dialog box.

Character Formats Merges the template's Character Catalog into the document.

Page Layouts Merges the template's master pages into the document. If the template and the document both have a master page with the same name, the template's master page replaces the document's. FrameMaker copies the change bar properties and the Page Number Style settings from the Numbering Properties dialog box. FrameMaker also copies all the settings from the Page Size dialog box and many of the settings in View Options (the Display Units, which document guides are on when you open a document, and Grid Spacing).

Table Formats Merges the template's Table Catalog and ruling styles into the document. For more information on which table formats are updated, see "Table properties" on page 7-4.

Color Definitions Merges the template's color definitions and views into the document.

Reference Pages Merges all but the template's FrameMath™ reference pages into the document. If the template and the document both have a reference page with the same name, the template's reference page replaces the document's. To import the FrameMath reference pages, turn on Math Definitions.

Variable Definitions Merges the template's variable definitions into the document.

Cross-Reference Formats Merges the template's cross-reference formats into the document and updates internal cross-references.

Conditional Text Settings Merges the template's condition tags and Show/Hide settings into the document.

Math Definitions Copies the template's equation size and font settings, custom math element definitions, and FrameMath reference pages into the document. If any custom math elements in the document are deleted when the reference pages are merged, FrameMaker replaces the math elements in equations with the name of the element enclosed by question marks.

PART V

Generated Files and Books

22

GENERATED LISTS

Creating, updating, and formatting a table of contents or other list

CREATING A LIST 22-4

To prepare for a paragraph list 22-4

To mark a document for a marker list 22-5

To generate a list 22-7

FIXING PROBLEM ENTRIES IN A LIST 22-11

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FORMATTING A LIST 22-14

To edit the special text flow 22-14

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To add a title 22-19

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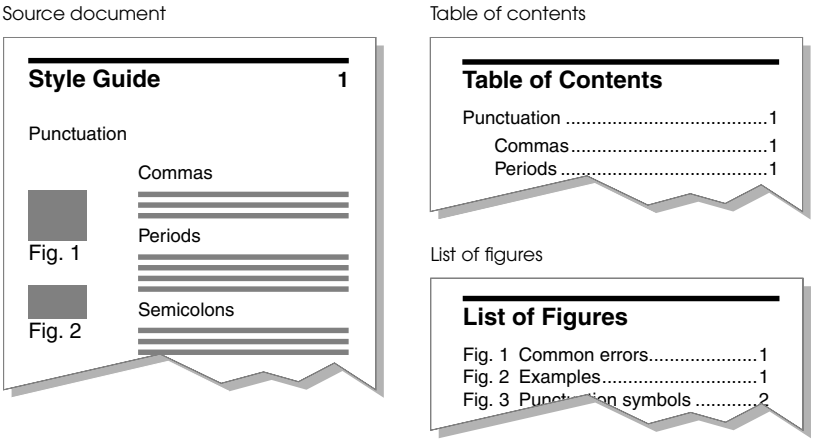
To use a template for a list 22-20

22 GENERATED LISTS

FrameMaker simplifies the creation of tables of contents and other lists. You can generate lists that contain text from paragraphs or markers you inserted throughout the text. The resulting list may be a table of contents based on heading paragraphs, a list of illustrations based on figure titles or captions, or any other page-based reference list.

You choose the type of information to include

For a list of headings such as a table of contents, you start by deciding exactly which paragraphs you want to list. Usually, for a table of contents, you include headings. For a list of illustrations, you could use paragraphs tagged as figure titles or captions.



Lists such as glossaries include the text from markers rather than from paragraphs.

Lists of references can include the fonts, cross-references, imported graphics, text insets, or condition tags that appear in the source document.

Then FrameMaker generates the list

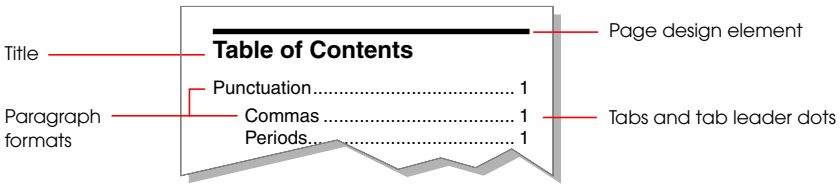
FrameMaker generates the list automatically when you give the command. It extracts the information from the source document along with the page number on which the information occurs, and builds the list as a separate document.

Revisions and corrections are easy to manage

A generated list can quickly become outdated. As you revise your source document, page numbers and text may change. You may also find errors in the generated list. For example, an incorrectly tagged paragraph in the source document may cause an entry to be missing or an extra entry to appear in the list. You can trace such errors back to the source document with a click of the mouse, make any corrections you need, and then replace the earlier list with a current one.

You format the list only once

FrameMaker provides a basic format for generated lists. You can substitute a template for the basic format or modify the basic format by changing the page layout, changing the paragraph formats, or adding a title. Once you set up the format, it will be retained when you generate the list again.



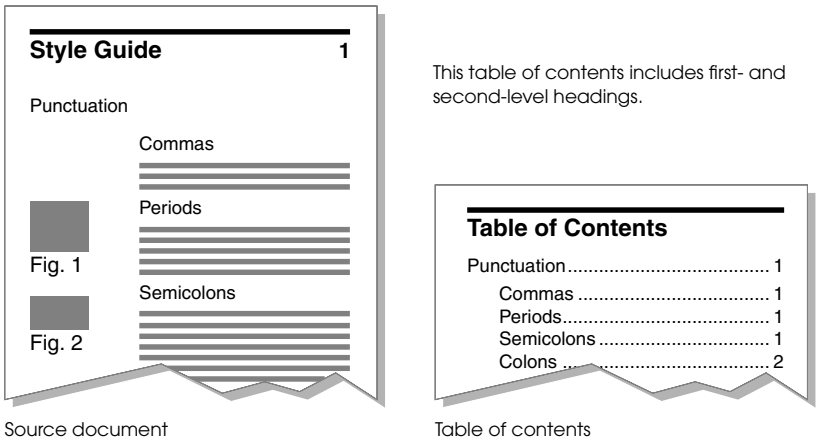
In this chapter

This chapter shows you how to create a list, how to fix problem entries and update the list, and how to format the list.

For information on setting up and generating a list for a book file, see Chapter 24, “Book Building.” For information on creating indexes, see Chapter 23, “Indexes.”

CREATING A LIST

A generated list can contain content from the source document—for example, paragraph or marker text. When you generate a paragraph list, you choose the tags of the paragraphs you want to include. When you generate a marker list, you choose the marker type.



A generated list can also contain references—information on the source document's fonts, cross-references, imported graphics, text insets, or condition tags.

To prepare for a paragraph list

Before you generate a table of contents or other paragraph list, make sure you have prepared your source document correctly.

- **Tag paragraphs consistently.**
  For example, use Heading1 for all first-level headings; don't use it for any other paragraphs.
- **Make each item you want to include in the list a single paragraph.**
  For example, you won't get the desired results if a heading is two lines (with each line in a separate paragraph).

To mark a document for a marker list

When you're preparing a table of contents or other paragraph list (or when you're preparing a list of references such as fonts or cross-references), you can just generate the list. (For details, see "To generate a list" on page 22-7.) However, when you're creating a marker list, the markers must first be inserted in the source document.

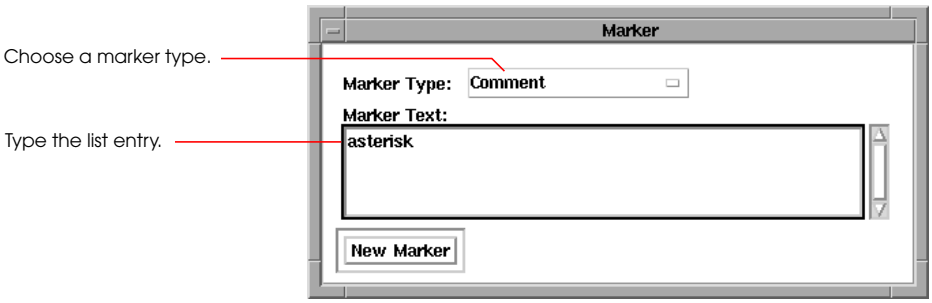
In many cases, the markers you want to extract are already in the document for another purpose—for cross-references, running headers, conditional text, or hypertext commands in a view-only document. But in other cases, such as glossaries, you insert the markers yourself before generating the list.

1 **Choose Marker from the Special menu.**
The Marker window appears. You can leave it open while you insert additional markers and edit the document.

2 **Put the insertion point where you want to insert the marker.**
You can insert markers only in text frames, not in text lines (objects drawn with the Text Line tool).

To make it easy to edit around a marker, insert it at the beginning or end of a paragraph. If the entry refers to a specific term in a paragraph, insert the marker at the beginning of the term.

3 **Choose a marker type from the pop-up menu and type the marker text that will appear as an entry in the list.**



You can use Comment, Subject, Author, Glossary, or Equation markers or the general-purpose Type markers.

You can also use Index markers, although you usually use them to generate an index rather than a list. For a discussion of the differences between lists and indexes, see "Lists of markers and indexes" on page 22-6.

Don't use the Conditional Text, Header/Footer $1, Header/Footer $2, Hypertext, or Cross-Ref marker type. FrameMaker uses these for other purposes.

Marker text can be up to 255 characters long.

4 **Click New Marker.**
FrameMaker inserts a marker. When Text Symbols is on in the View menu, a marker symbol (T) appears.

MARKER SHORTCUTS AND EDITING

To use a word in the document as the entry text without typing marker text, put a marker with no text in it at the beginning of the word. When you generate the list or index, the word to the right of the marker becomes the text of an entry.

To use a word or phrase in the document as the marker text, simply select it. As long as the selected word or phrase doesn't contain a marker, it automatically appears in the Marker Text box. Then click New Marker.

For information on editing marker text after inserting a marker, see "Editing and updating an index" on page 23-13. You edit and update all markers just as you do index markers.

LISTS OF MARKERS AND INDEXES

A list of markers contains one entry for each marker inserted on a body page in the source document. The marker text appears in the generated list exactly as it does in the source document.

In an index of markers, entries are sorted alphabetically, and entries with the same text are merged into a single entry with several page references. Also, when you generate an index, FrameMaker recognizes some syntax in the marker text that indicates index levels and special page numbering, sorting, and formatting.

For information on generating an index, see Chapter 23, "Indexes."

CHANGING NAMES OF MARKER TYPES

You can change the names of marker types that appear in the Marker window. For information, see the online manual *Changing Setup Files*.

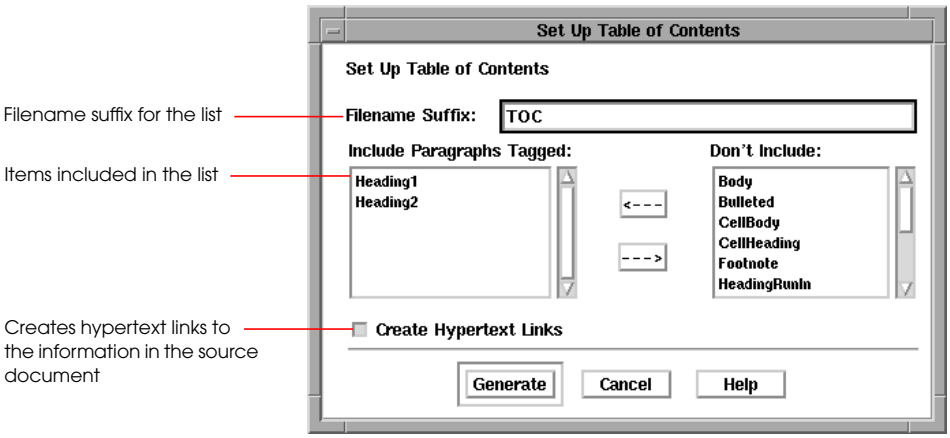
To generate a list

After you prepare your source document for a table of contents or other list, you generate the list from it. When you revise your source document, you can update the list by generating it again.

You can generate a list of paragraphs, markers, or references. A table of contents, a list of figures, or a list of tables is a paragraph list in which the entries appear in the same order they appear in the source document. You can also generate a list of markers ordered in this way. You can generate paragraph or marker lists in alphabetical order as well.

For information on lists of references such as fonts, text insets, or condition tags, see "Generating a list of references" on page 22-9.

1. **Choose Generate/Book from the File menu in the source document.**
2. **In the Generate/Book dialog box, choose a type of list from the List pop-up menu.**
3. **Click Generate.**
   The labels in the dialog box that appears differ based on the type of list you're generating.



4 **Move paragraph tags or marker types to the Include scroll list.**
To move an item between scroll lists, select the item and click an arrow, or double-click the item. To move all items from one scroll list to the other, Shift-click an arrow.

The resulting list has the same name as the source document, plus a suffix that depends on the item you chose in the List pop-up menu (for example, `TOC` for a table of contents). You can change the suffix in the Filename Suffix text box before you generate the list.

5 **Click Generate.**
FrameMaker generates the list and displays it on the screen in a separate document. At this point, the list isn't saved.

The first time you generate a list (if you don't use a template for the list as described in "To use a template for a list" on page 22-20), it uses the page layout of the source document, and all entries use the same paragraph format. For information on making changes to the format of a list—changes that won't be lost when you regenerate the list—see "Formatting a list" on page 22-14.

When the list exists in the source document's directory, FrameMaker uses its formatting when you generate the list again. So when you save the list, save it in the same directory as the source document, and don't change the filename. Otherwise, FrameMaker won't retain formatting changes when you update the list.

UPDATING A LIST

When you make changes to a source document that affect the contents of the list, generate the list again. For example, update a table of contents to include revised headings and up-to-date page numbers or to change which paragraphs are included.

Make sure you choose Generate/Book from the File menu in the source document, not in the list.

DISPLAYING SOURCE INFORMATION BY CLICKING IN THE LIST

When you generate the list with Create Hypertext Links on, each entry in the list contains a hypertext link to the corresponding information in the source document. You can then easily trace an entry back to its source while editing, or you can use the list as part of a hypertext-based online documentation system.

For more information on using hypertext links in the list to make editing easier, see "To trace an entry back to its source" on page 22-12. For information on creating online documentation, see Chapter 27, "Hypertext and View-Only Documents."

GENERATING A LIST FROM A MULTIFLOW DOCUMENT

When the source document contains more than one text flow on a page, FrameMaker extracts paragraphs or markers from the text flows, page by page in the order in which they are drawn, from back to front.

GENERATING A LIST OF REFERENCES

You can generate a report that lists fonts, cross-references, or any of the references listed below. This would be useful, for example, when you want to check which fonts are used in a document before printing the document, or when you want to make sure that external cross-references refer to the appropriate documents.

To generate a list of references, choose List of References in the Generate/Book dialog box. Then, in the Set Up List of References dialog box, choose the items you want to include in the list and click Generate.

Item	Contents of generated list
Condition Tags	The condition tags used and the pages on which they occur
External Cross-Refs	For each reference, the name of the document that contains the source of the reference, the text of the Cross-Ref marker at the source, and the page number on which the cross-reference occurs
Fonts	A description of each font that appears on each page of the document except for fonts used in equations, fonts in imported Encapsulated PostScript (EPS) files, fonts that appear only on reference pages, and fonts that appear on master pages that have not been applied to the document's body pages
Text Insets	The path of each text file (or file containing the flow) imported by reference and the page number on which the text inset appears
Unresolved Text Insets	The location of unresolved text insets
Imported Graphics	The path of each graphic file imported by reference, its dpi setting, and the page number on which the graphic appears
Unresolved Cross-Refs	The location of unresolved cross-references

If you plan to generate and save several lists of references, specify a different filename suffix for each list.

You can also generate these reports in index form rather than list form. Simply choose Index of References from the Index pop-up menu in the Generate/Book dialog box. In an index of references, each item appears once in alphabetical order, followed by the page numbers on which it occurs. When you generate an index of fonts, for example, FrameMaker creates an alphabetical list of fonts, which can be much easier to read and print.

You can use the Document Reports command to provide other information on the contents of a document. For details, see "Report generators" on page 22-10.

GENERATING A LIST ON OTHER PLATFORMS

If you plan to generate a list on more than one platform, see the online manual *Using Frame Products on Multiple Platforms*.

REPORT GENERATORS

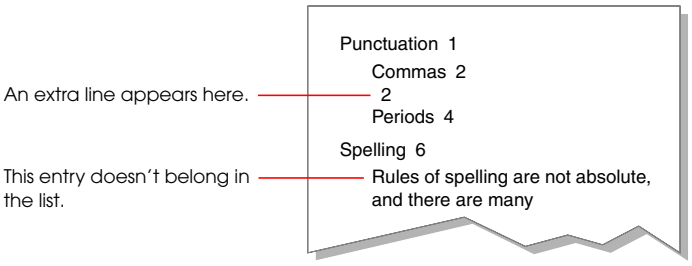
You can create reports with custom report generators as well as with the Generate/Book command whose uses are described in this chapter. For example, FrameMaker includes a sample report generator that counts the words in text frames and text lines on body pages (including the individual words in variables and cross-references).

The types of reports you can generate at your site vary, depending on the report generators that have been developed. Details on creating your own report generators can be found in the *FDK Programmer's Guide*, which is included in the Frame Developer's Kit.

To use a report generator, choose Utilities>Document Reports from the File menu. In the Document Reports dialog box, click the name of the report generator you want to use and then click Run. For a brief description of the report generator, click its name in the dialog box and then click About.

FIXING PROBLEM ENTRIES IN A LIST

Minor problems in the source document may cause corresponding problems in the list. For example, an incorrectly tagged paragraph may cause an extra entry to appear in the list or to be missing from it. Or an empty paragraph may cause an extra line to appear in the list.



You fix problem entries by tracing them back to the source document, fixing them there, and then generating the list again. When you fix them by typing directly in the list, your corrections disappear the next time you generate the list.

To find missing entries

An entry may appear in the source document, but not in the list.

- **If all entries with a particular paragraph tag or marker type are missing, make sure the Include scroll list in the Set Up dialog box contains the correct items.**
  For example, all first-level section headings might be missing.
- **If an occasional entry is missing, check the tag of the corresponding paragraph or the type of the corresponding marker in the source document.**
  If the paragraph tag or marker type is incorrect, FrameMaker won't include the information in the list.

To trace an entry back to its source

When you're trying to remove extra entries or fix typos or other problems, you'll find it helpful to trace an entry in the list back to the source document.

1. **Turn on Create Hypertext Links in the Set Up dialog box when you generate the list.**
   Each entry in the list contains a hypertext marker. The marker text is a hypertext command that allows you to display the corresponding information in the source document with a click of the mouse.

2. **Using the right mouse button, Control-click an entry in the list.**
   FrameMaker opens the source document, displays the page that contains the corresponding source information, and selects the information. If you created a marker list, the marker text appears in the Marker window. To display the Marker window, choose Marker from the Special menu.

   You can also lock the generated list as view-only and then simply click an entry in the list to display the source information. To lock or unlock the list, press Esc F l (lowercase *L*) k.

To remove extra entries

Careless formatting in the source document can cause a whole paragraph of body text to appear in a paragraph list such as a table of contents. Or an extra line that contains only a page number may appear in the list.

- **If the list contains an entry that doesn't belong there, check the corresponding paragraph tag or marker type in the source document.**
  The entry appears in the list because the paragraph tag or marker type matches one of the tags or marker types you included in the list.

  You should apply a different format to the paragraph or change the marker type.

- **If the list contains an extra line with only a page number, delete the corresponding empty paragraph in the source document.**
  If you need extra space between paragraphs in the source document, use the spacing properties of the paragraphs' formats rather than insert an empty paragraph. For details, see "To set the spacing above and below a paragraph" on page 4-20.

To fix entries that take up more than one paragraph

A multiline heading in the source document can be a problem if the line breaks were created by pressing the Return key so that each line is a separate paragraph. The list will contain an entry for each paragraph in the heading. Fixing the list requires changing the way the heading is handled in the source document.

- **Delete the extra paragraph symbols in the source document.**
  To force a heading to break into two lines where you want, change the right indent of the heading paragraph in the source document. If the heading is centered, you may want to change both the left and right indents.

To fix bad line breaks

Bad line breaks in the list or its source document may separate information that belongs together in the list. For example, the page number may appear on a line by itself. A complex page number such as *2-3* may break across lines at the hyphen. Or a forced return in the source document may be inappropriate where it appears in the list.

- **Change the characters after which FrameMaker allows line breaks.**
  For example, FrameMaker normally allows a line break between an en dash (–) and characters that follow it. To disallow line breaks after an en dash, use the Document>Text Options command on the Format menu in the generated list. For details, see "To control line breaks" on page 4-25.
- **Use nonbreaking spaces between the text and page number for each entry.**
  For instructions, see "To keep the page number with the entry text" on page 22-17.
- **Change the prefix or suffix for the source document's page numbers when you generate the list for a book.**
  If the book's pages are numbered by chapter *(1-1, 1-2, …, 2-1, 2-2, …),* the prefix—for example, the chapter number and a hyphen—should use a nonbreaking hyphen. For details, see "Controlling page and paragraph numbering" on page 24-12.
- **Delete forced returns in the source document.**
  A forced return in the source document also appears in the generated list.

  To change where a paragraph in the source document breaks into two lines, change its right indent rather than insert a forced return. If a heading is centered, you may want to change both the left and right indents.

FORMATTING A LIST

The first time you generate a list (if you don't use a template as described in "To use a template for a list" on page 22-20), it uses the page layout of the source document, and all entries use the same paragraph format. You can use a template for the list so it's formatted the way you want from the start. You can also change the page design and the formats in the list after you generate it just as you do in any other document. When you generate the list again, your new format is retained. However, when you apply text formatting changes directly to the entries in the list, they are lost when you regenerate the list.

For example, you can change the headers and footers, the number of columns of text, and the paragraph formats used for entries. You can add a title. And you can use a tab and tab leader dots before the page numbers in entries, include the autonumber of a paragraph in an entry, or rearrange the information in the entries.

For information on changing page design, see Chapter 18, "Basic Page Design," and Chapter 19, "Custom Page Design." For information on changing paragraph and character formats, see Chapter 4, "Formatting Text," and Chapter 5, "Format Catalogs."

Several of the formatting instructions that follow require you to edit a special text flow on a reference page. For information on editing the special text flow, see "To edit the special text flow," next. For general information on reference pages, see "Working with reference pages" on page 19-22.

To edit the special text flow

Many aspects of a list's format and structure are controlled by a special text flow on a reference page in the list. The text flow has a tag that matches the filename suffix, such as `TOC` for a table of contents.

Each paragraph in the flow corresponds to a paragraph tag or marker type you included in the list. For example, the paragraph tagged Heading1TOC in the text flow for a table of contents corresponds to the entries for first-level headings (tagged Heading1 in the source document). Building blocks such as `<$pagenum>` and `<$paratext>` in each paragraph control what information appears in the list and the order in which it appears.

If the list was created with hypertext links, the special text flow also contains a paragraph that specifies the form of the hypertext commands in the list. The paragraph's tag begins with the word *Active*. For more information, see "Adding hypertext links to generated files" on page 27-27.

1 **Choose Reference Pages from the View menu in the list document.**

2 **Display the reference page that contains the text flow.**
The flow is usually on a reference page with the same name as the text flow—for example, `TOC` for a table of contents—but it may have been moved to another reference page.

3 **Edit the appropriate paragraphs in the text flow.**
See the following tasks for specific editing instructions.

4 **Choose Body Pages from the View menu.**

5 **Generate the list again.**
This lets you see the effect of the changes you made to the text flow.

Make sure you generate the list from the source document, not from the list.

To rearrange information in entries

You may want the page number to precede the text, or you may want some other arrangement.

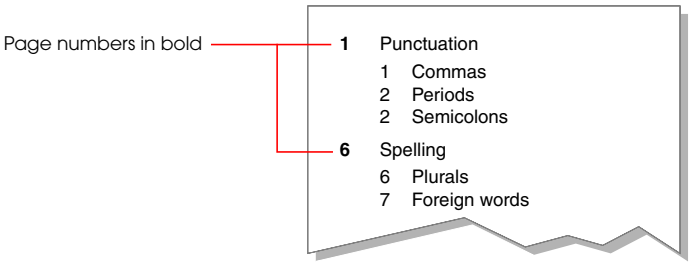
1 **Display the reference page that contains the special text flow.**
For details on the special text flow, see "To edit the special text flow" on page 22-14.

2 **Rearrange the building blocks.**
For example, to put the page number first, followed by the paragraph text, rearrange the building blocks this way:
`<$pagenum> <$paratext>`

3 **Generate the list again.**

To change character formats

You can change the character format of any text appearing in a list. For example, you can make the page number for all section headings in a table of contents appear in bold.



1 **In the list, create a new character format.**
Store the format in the Character Catalog.

2 **Display the reference page that contains the special text flow.**
For details on the special text flow, see "To edit the special text flow" on page 22-14.

3 **Type the character tag, between angle brackets (< and >), in the paragraph with the tag that corresponds to the entries you want to change.**
Type the character tag to the left of the item that has the character format you want to change. For example, if you created the character format TOCPageNum for the page number in first-level headings, use text such as:
`<$paratext>  <TOCPageNum><$pagenum>`

4 **Type `<Default Para Font>` where you want to change back to the paragraph's default font.**
For example, if the page number preceded the paragraph text in the example above, change the character format back to the paragraph's default font as follows:
`<TOCPageNum><$pagenum><Default Para Font>  <$paratext>`

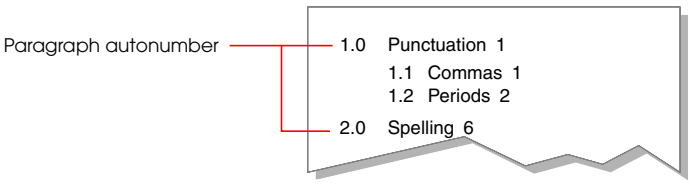
5 **Generate the list again.**
The character format changes to match your specification.

APPLYING CHARACTER FORMATS TO BUILDING BLOCKS

You can change the character format of text that appears in a list by applying a character format directly to the building block rather than preceding it with the character tag enclosed in angle brackets. To change the character format of an entry, select it in the special text flow on the reference page (including the angle brackets) and apply the desired character format.

To include paragraph autonumbers

You can include the autonumber—text and numbers inserted automatically as part of a paragraph format—as well as the text of entries.



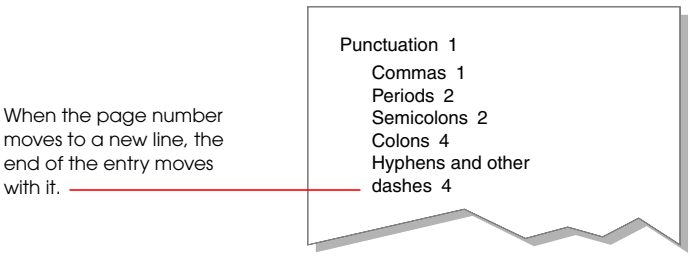
1 **Display the reference page that contains the special text flow.**
For details on the special text flow, see "To edit the special text flow" on page 22-14.

2 **Insert the `<$paranum>` building block where you want to insert the autonumber.**
For example:
`<$paranum> <$paratext> <$pagenum>`

The entire autonumber appears in the generated list, except for any spaces or tab characters at the end of the autonumber. To include only the autonumber counters and the characters between them (for example, *2.2* rather than *Section 2.2*), use the `<$paranumonly>` building block. For a complete list of building blocks, see the online Help.

To keep the page number with the entry text

When an entry spans several lines, you can force the end of the entry text to appear on the same line as the page number.

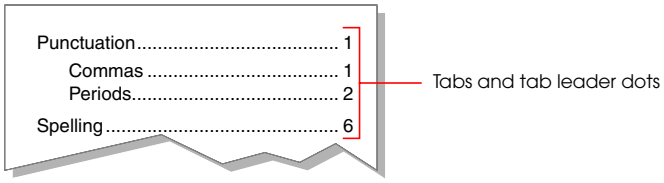


1 **Display the reference page that contains the special text flow.**
For details on the special text flow, see "To edit the special text flow" on page 22-14.

2 **Replace the space between the `<$paratext>` and `<$pagenum>` building blocks with a nonbreaking space, an en space, or an em space.**
For information on typing special characters, see "To type characters not on the keyboard" on page 3-6.

To use tabs and tab leaders

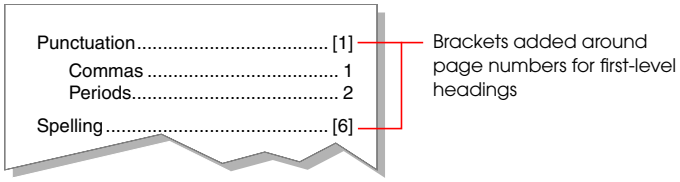
You can include a tab and leader dots between the text and the page number.



1. **Display the reference page that contains the special text flow.**
   For details on the special text flow, see "To edit the special text flow" on page 22-14.
2. **Select the space between the `<$paratext>` and `<$pagenum>` building blocks in the paragraph with the entries you want to change.**
3. **Press Tab.**
4. **Change the paragraph format of the entry by adding a tab stop where you want to align the page numbers.**
   For details, see "To define a tab stop" on page 4-15. The tab stop properties include leader dots. For details, see "To set a tab leader" on page 4-17.
5. **Update the paragraph formats of all entries with the same tag.**
   This stores the format in the list's Paragraph Catalog, making it available the next time you generate the list. For details, see "To update a paragraph format" on page 5-12.

To add text in an entry

You can insert text at a specific location. For example, you may want to use brackets to enclose the page number.



1. **Display the reference page that contains the special text flow.**
   For details on the special text flow, see "To edit the special text flow" on page 22-14.

2 **Type the text where you want it to appear.**
For example, to enclose the page number in brackets, type brackets around the page number building block, like this:
`<$paratext> [<$pagenum>]`

To add a title

If you need a title for your list, add it after you generate the list the first time.

1 **Type the title before the first entry in the list on the body page.**

2 **Create a new paragraph format for the title.**
The paragraph tag must not end with the filename suffix, such as `TOC` for a table of contents. When you generate the list again, FrameMaker replaces only the paragraphs that have tags ending with the suffix, but retains the paragraphs that don't.

To retain format changes when generating

When you regenerate a list, all formatting instructions should be carried over to the new list. If you made formatting changes that aren't retained, check these guidelines.

- **To retain formatting changes, don't change the filename or location when you save the list.**
FrameMaker won't find any formatting changes unless you save the list in the same directory as the source document and you use the filename that FrameMaker assigns.
- **To retain the title, make sure its paragraph tag doesn't end with the filename suffix, such as `TOC` for a table of contents.**
- **To retain paragraph format changes, update all paragraphs that have the same tag.**
This stores the formats in the list's Paragraph Catalog, making them available the next time you generate the list. For details, see "To update a paragraph format" on page 5-12.
- **To retain character format changes in list entries, store the character formats in the list's Character Catalog.**
This makes the formats available the next time you generate the list. For details, see "Creating and updating character formats" on page 5-17.
- **To retain other changes, make them in the special text flow.**

To use a template for a list

You can use a template for a list rather than generate the list and then make format changes one by one. For information on creating a template for a list, see "To create a template for a generated file" on page 21-9.

1 **Copy the template to the source document's directory, using the same filename as the generated list.**

2 **Generate the list.**
FrameMaker uses the format of the template.

UPDATING THE FORMAT OF A LIST FROM A TEMPLATE

Rather than copy a template to the source document's directory, you can generate the list and then update its formats from the template by using the Import>Formats command on the File menu. Then generate the list again so any changes in the special text flow are reflected in the list. If your template uses a custom master page for the first page of the list, use the Page Layout>Master Page Usage command on the Format menu to assign the custom master page to the first body page. Finally, add a title if you want one.

STORING FORMATTING INFORMATION IN THE SOURCE DOCUMENT

You can store formatting information in the source document. For example, if you store the special text flow, paragraph formats, and character formats you use in the list, you won't need to update these items from a template. They are copied to the list automatically the first time you generate it.

If the page design of the list differs from that of the source document, you still need to update the page design of the list from a template.

To store the formatting information in the source document, import the paragraph and character formats for the entries into the source document's catalogs. Also copy the special text flow to a reference page in the source document. For details, see "Importing formats into a document" on page 21-12.

23

INDEXES

Creating, editing, and formatting an index

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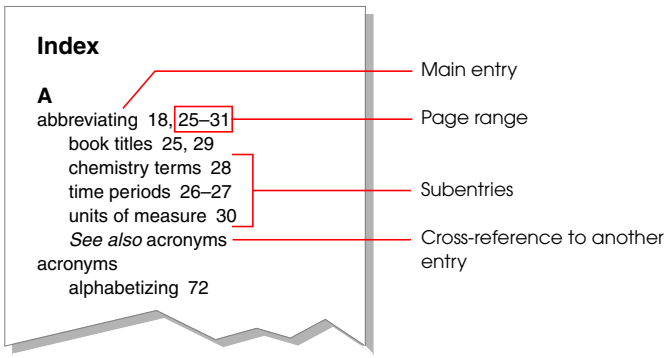
23 INDEXES

FrameMaker makes the task of compiling and updating an index virtually automatic. You insert index markers in the text of a document, and FrameMaker uses the markers to generate, sort, and arrange the index.

The marker determines the form of an entry

When you insert an index entry, you provide the text for the marker and specify the form of the index entry—for example, main entry, subentry, or cross-reference to another entry.



You also specify whether the entry refers to a single page or to a page range. The position of the marker in the document determines the page number that appears in the index when you generate it. You can insert index markers as you write or when the document is complete.

Careful planning minimizes revisions

A good index is consistent in style and structure. Careful planning before you insert markers can reduce the number of revisions and corrections you have to make later. For example, you need to decide

whether you want one or two levels of subentries and whether you want to use the singular or plural for nouns *(object* or *objects)*.

You also need to decide whether to use action verbs or gerunds *(add* or *adding)* and how entries should be capitalized (all in lowercase, with initial capital letters, or in some other style). Last, you may want to consider whether you'll refer to page ranges *(27–29)* or to consecutive pages *(27, 28, 29)*.

FrameMaker turns your markers into an index

FrameMaker generates the index automatically when you give the command. It extracts the marker text and page numbers from the source document. The information is then sorted alphabetically, combined when the entry text is the same, and arranged at the proper levels when the marker text indicates subentries. The resulting index appears in a separate document.

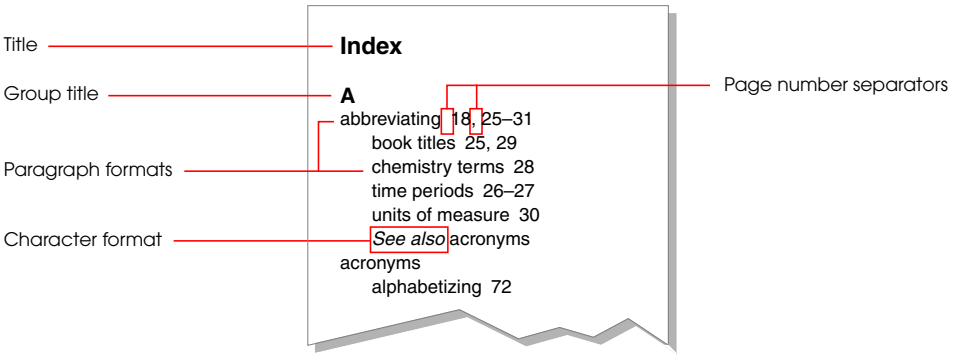
You can trace entries back to the source document

When you see the index, you'll probably find some problems you want to fix. You may find typos or inconsistent wording, and you may want to add or delete some entries. Meanwhile, the source document itself may be undergoing revisions and corrections. As such changes occur, markers may move from page to page, and pagination will probably change. When you're ready to revise the index, you can trace index entries back to their markers with a click of the mouse. You can then generate an up-to-date index at any time.

You format the index only once

FrameMaker provides a basic format for generated indexes. You can substitute a template for the basic format, or you can modify the basic format by changing the page layout, changing the character and paragraph formats, or adding a title. You can change how entries are grouped under group titles and how several page numbers are separated in an entry. You can even change the sort order for the entire

index. Once you set up the format, it is retained when you generate the index again.



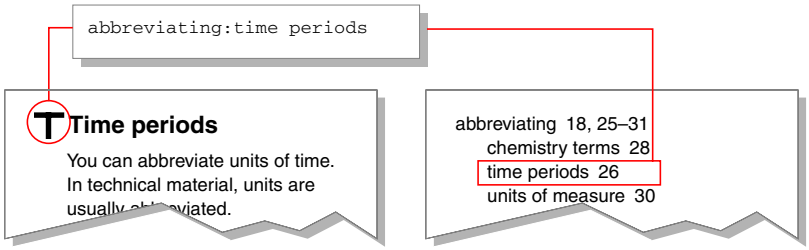
In this chapter

This chapter shows you how to create an index for a FrameMaker document, update the index and fix problem entries, and change the format.

For information on setting up and generating an index for a book file, see Chapter 24, “Book Building.”

CREATING AN INDEX

You indicate an index entry by marking it—inserting an index marker in the text. A marker appears only as a marker symbol (T) in the text, but it contains the text of the index entry. You can see the marker text in the Marker window. A marker can also contain building blocks that change the form of the entry. Use building blocks to create subentries, cross-references, or page ranges. Also use them to change the character format in an entry or to change the entry's location—its sort order.



Index marker in source document

Formatted entry placed in the index

For a description of the building blocks you can use in an index entry, see "Index building blocks" on page 23-6.

To mark an entry

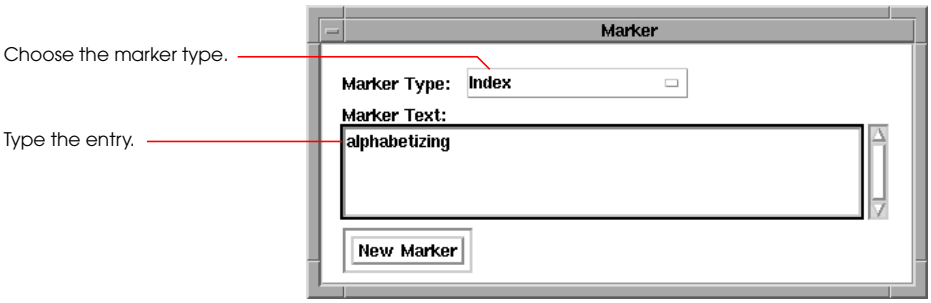
Before generating an index for a document, you mark the index entries, working with one marker at a time.

1. **Choose Marker from the Special menu.**
   The Marker window appears. You can leave it open while you insert additional markers and edit the document.

2. **Put the insertion point where you want to insert the marker.**
   You can insert markers only in text frames, not in text lines (objects drawn with the Text Line tool).

   To make it easy to edit around a marker, insert it at the beginning or end of a paragraph. If the index entry refers to a specific term in a paragraph, insert the marker at the beginning of the term.

3 **Choose a marker type from the pop-up menu and type the text of the index entry.**



You usually choose a marker type of Index. To create several indexes for a document—for example, a subject index and an author index—use a different marker type for each. However, don't use the Conditional Text type, Header/Footer $1, Header/Footer $2, Hypertext, or Cross-Ref marker type for index entries. FrameMaker uses these for other purposes.

A few characters have special meaning when used in marker text. To include a colon (:), a semicolon (;), a bracket ([or]), an angle bracket (< or >), or a backslash (\) in an entry, precede it with a backslash.

Marker text can be up to 255 characters long.

INDEX BUILDING BLOCKS

You can use building blocks in marker text to control the form of the index entry and its location in the index.

colon (:) Separates levels in an entry

semicolon (;) Separates entries in a marker

brackets ([]) Specifies a special sort order for the entry

<$startrange> Indicates the beginning of a page range

<$endrange> Indicates the end of a page range

<$nopage> Suppresses the page number in the entry

<$singlepage> In a marker that contains several entries, restores the page number for an entry that follows a `<$nopage>` building block

Character tag, between angle brackets (< and >) Changes the character format (for example, `<Emphasis>`)

<Default Para Font> Restores the paragraph's default font

4 **Click New Marker.**

FrameMaker inserts a marker. When Text Symbols is on in the View menu, a marker symbol (T) appears at the insertion point.

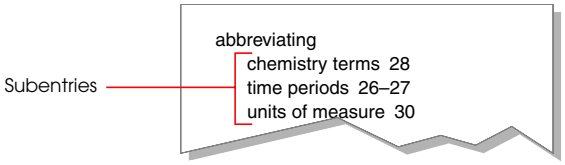
MARKING AN ENTRY WITHOUT TYPING

To use a word in the document as the entry text without typing marker text, put a marker with no text in it at the beginning of the word. When you generate the index, the word to the right of the marker becomes the text of an entry.

To use a word or phrase in the document as the marker text, simply select it. As long as the selected word or phrase doesn't contain a marker, it automatically appears in the Marker Text box. Then click New Marker.

To mark a subentry

Group several entries under the entry for a larger category of information by marking them as subentries.



You can also make subentries to subentries. An index usually has one subentry level, two at most.

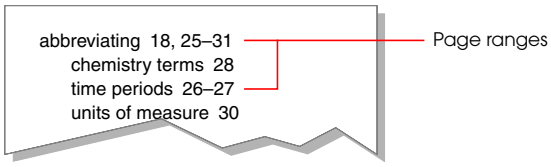
- **Mark the entry and subentry by using a colon (:) between them.**

  For example: `abbreviating:chemistry terms`

  The subentry is always preceded by the entry to which it is subordinate, as in the example. If you have two subentry levels, place a colon between the subentry and the sub-subentry.

To mark a page range

Use a page range such as *25–31* to mark information that spans several pages.



You insert two markers to indicate the range, one at the beginning of the range and the other at the end.

1. **Mark the beginning of the information and type `<$startrange>` at the beginning of the marker text.**
   For example: `<$startrange>abbreviating`
2. **Mark the end of the information and type `<$endrange>` at the beginning of the marker text.**
   For example: `<$endrange>abbreviating`

Make sure you use exactly the same spelling, capitalization, and spacing in the two markers.

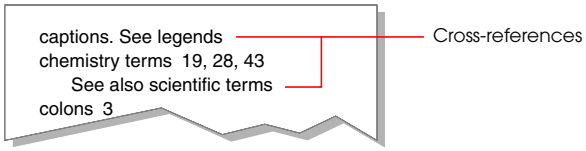
When both markers appear on the same page, the page reference in the index entry appears as a single page.

COMPRESSING SEVERAL ENTRIES INTO A PAGE RANGE

When the same marker text occurs on consecutive pages of a document, all the page numbers usually appear in the index—for example, *23, 24, 25*. Rather than use `<$startrange>` and `<$endrange>` in two markers to indicate a page range *(23–25),* you can make the page references in the index appear as a page range automatically. For details, see "To compress several entries into a page range" on page 23-22.

To mark a cross-reference entry

Use a cross-reference entry to direct readers to other terms in an index. You often use cross-reference entries rather than duplicate the entries and page numbers for synonyms that already appear in the index.



- **Mark the entry and type `<$nopage>` at the beginning of the marker text.**
  For example: `<$nopage>captions. See legends`

  This prevents a page number from appearing with the entry in the index.

To change the character format in an entry

You can change the character format of the page number in an entry. For example, you may want a word or phrase in an entry to appear in italics or you may want the page number to appear in bold.

- **To use a different character format for part of an entry, mark the entry, typing the character tag between angle brackets (< and >) before the part and `<Default Para Font>` after it.**
  For example, to create the entry "captions. *See* legends," use this marker text:
  `<$nopage>captions. <Emphasis>See<Default Para Font> legends`

  In this example, Emphasis is a character format set to italic. The character format must be stored in the Character Catalog of the index.

- **To use a different character format for the page number, mark the entry, typing the character tag between angle brackets (< and >) at the end of the marker text.**
  For example, to create the entry "abbreviating **24**," use this marker text:
  `abbreviating<PrimaryEntry>`.

  In this example, PrimaryEntry is a character format set to bold. The character format must be stored in the Character Catalog of the index.

DISPLAYING PRINCIPAL ENTRIES IN ANOTHER FORMAT

When you want the page number for all principal entries to appear in another format such as bold or italic, use a different marker type for these entries. You can then change the character format of all the page numbers that correspond to that marker type in one step. For information, see "To change the character format of all page numbers" on page 23-21.

To change the sort order of an entry

You can change where an entry appears in the index. For example, while *1980* would normally appear with other numbers in the index, you may want it to appear under *N* (for *nineteen eighty*).

- **Mark the entry, typing the sorting information between square brackets ([and]) at the end of the marker text.**

The sorting information must be the last item in the marker text.

Entry	Sort position	Marker text
navigation 47 *1980 10* nouns 21	Under *N* (for *nineteen eighty*)	`1980[nineteen eighty]`
capitalizing *in Chinese 10* foreign capitals 18	Under *capitalizing,* but ignoring the word *in*	`capitalizing:in Chinese [capitalizing:Chinese]`
abbreviating units 16 *see also acronyms*	As the last entry under *abbreviating*	`<$nopage>abbreviating: see also acronyms [abbreviating:zzz]`

In these examples, *10* is the page number for the entry, provided automatically. In the last example, *zzz* sorts the entry as the last subentry under *abbreviating.* The entry has no page number because the marker text includes the `<$nopage>` building block.

To put several entries in one marker

It may be convenient to put the marker text for several short entries in one marker. Marker text can be up to 255 characters long.

- **Mark several entries in the same marker, using a semicolon (;) between entries.**

Entries	Sorted under	Marker text
punctuation 10 colons 10	P C	`punctuation;colons`
hyphens. See dashes dashes 10	H D	`<$nopage>hyphens. See dashes;<$singlepage>dashes`
1980 10 1980 10	Numbers N	`1980[1980;nineteen eighty]`

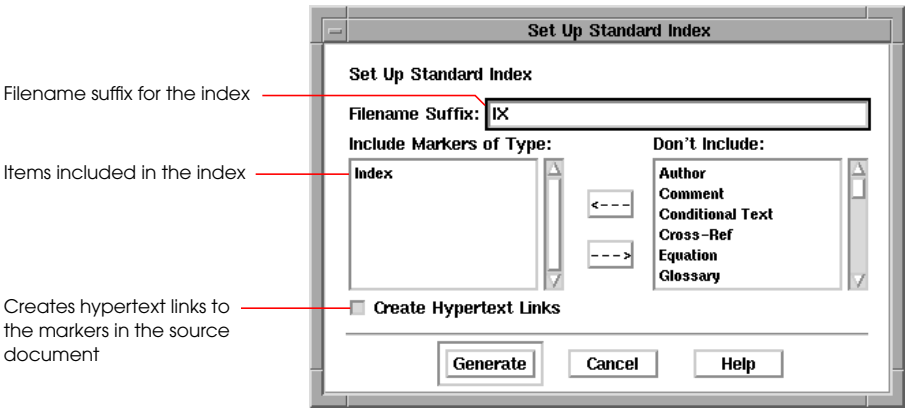
In the second example, `<$nopage>` affects subsequent entries in the marker. To return to a single page number, `<$singlepage>` is included with the next entry in the marker.

In the last example, the semicolon makes the same entry text *(1980)* appear in two places in the index—with numbers and under *N*.

To generate an index from marked entries

After you mark the entries in your source document, you can generate the index. When you revise your source document, you can generate the index again to update it.

1. **Choose Generate/Book from the File menu in the source document.**
2. **In the Generate/Book dialog box, choose a type of index from the Index pop-up menu.**
   Choose Standard Index unless you're generating more than one index for the document.
3. **Click Generate.**
4. **Move the marker type(s) you used for the entries to the Include Markers of Type scroll list.**



To move an item between scroll lists, select the item and click an arrow, or double-click the item.

The resulting index has the same name as the source document, plus a suffix that depends on the item you chose in the Index pop-up menu (for example, `IX` for a standard index). You can change the suffix in the Filename Suffix text box before you generate the index.

5 **Click Generate.**

FrameMaker generates the index and displays it on the screen in a separate document. At this point, the index isn't saved.

The first time you generate an index (if you don't use a template for the index as described in "To use a template for an index" on page 23-28), it uses the page layout of the source document and some basic paragraph formatting for the entries. For information on making changes to the format of the index—changes that won't be lost when you regenerate the index—see "Formatting an index" on page 23-19.

When the index exists in the source document's directory, FrameMaker uses its formatting when you generate the index again. So when you save the index, save it in the same directory as the source document, and don't change the filename. Otherwise, FrameMaker won't retain formatting changes when you update the index.

DISPLAYING SOURCE INFORMATION BY CLICKING IN THE INDEX

When you generate the index with Create Hypertext Links on, each entry in the index contains a hypertext link to the corresponding marker in the source document. You can then easily trace an entry back to its source while editing, or you can use the index as part of a hypertext-based online documentation system.

For more information on using hypertext links in the index to make editing easier, see "To trace an entry back to its source" on page 23-13. For information on creating online documentation, see Chapter 27, "Hypertext and View-Only Documents."

If your index has group titles such as *A* or *A–C*, turning on Create Hypertext Links provides links for these titles as well as for the individual entries within the groups. For information on using these links to navigate to the beginnings of the groups, see "To add thumbtabs to a generated index" on page 27-29. For information on creating group titles, see "To change entry groupings and group titles" on page 23-26.

GENERATING AN INDEX ON OTHER PLATFORMS

If you plan to generate an index on more than one platform, see the online manual *Using Frame Products on Multiple Platforms*.

EDITING AND UPDATING AN INDEX

No matter how carefully you plan the index, you'll probably want to make some changes when you review the entire index for the first time. For example, some entries may not use parallel phrasing; you may decide to change the organization of some entries; or you may need to correct some spelling errors.

You revise or delete an index entry after tracing it back to its corresponding marker in the source document. You add an entry just as you do when you create the index in the first place.

Keep the index current by updating it after you edit the source document.

To trace an entry back to its source

When you review the generated index and find an entry that needs revision, you have to trace the entry back to the corresponding marker in the source document in order to revise the entry.

1. **Turn on Create Hypertext Links in the Set Up dialog box when you generate the index.**
   Each page reference in the index includes a Hypertext marker. The marker text is a hypertext command that allows you to display the corresponding information in the source document with a click of the mouse.
2. **Choose Marker from the Special menu.**
3. **Using the right mouse button, Control-click an entry or a page reference in the index.**
   FrameMaker opens the source document, displays the page that contains the corresponding marker, and selects the marker. The marker text appears in the Marker window.

   You can also lock the index as view-only and then simply click a page reference in the index to display the corresponding marker. To lock or unlock the index, press Esc F l (lowercase *L*) k.

OTHER WAYS TO SELECT A MARKER

You can use the Find/Change command on the Edit menu to find and select a marker by choosing Any Marker, Marker of Type, or Marker Text from the Find pop-up menu. If you choose Marker of Type or Marker Text, fill in the Find text box. When found, the marker is selected, and the marker text appears in the Marker window. Don't click Change in the Find/Change window to change the marker text. If you do, FrameMaker replaces the marker itself. For details on changing the text of a marker, see "To revise or delete an entry," next.

You can also select a marker by dragging through it. But if several markers appear next to one another, you'll find it difficult to select only one. In that case, you can use keyboard shortcuts to select one character at a time. For details on shortcuts, see the *Quick Reference*.

To revise or delete an entry

You revise entries by fixing their corresponding markers in the source document. When you revise them by typing directly in the index, your changes disappear the next time you generate the index. For example, you can use the Spelling Checker to find spelling errors in an index. But when you find an error, you correct it by changing the marker text in the source document.

When you trace an entry back to its corresponding marker in the source document (as described previously), the marker is selected, and the marker text appears in the Marker window.

- **To revise an entry, select the marker, change the text in the Marker window, and click Edit Marker.**
- **To delete an entry, select the marker in the source document and press Delete.**

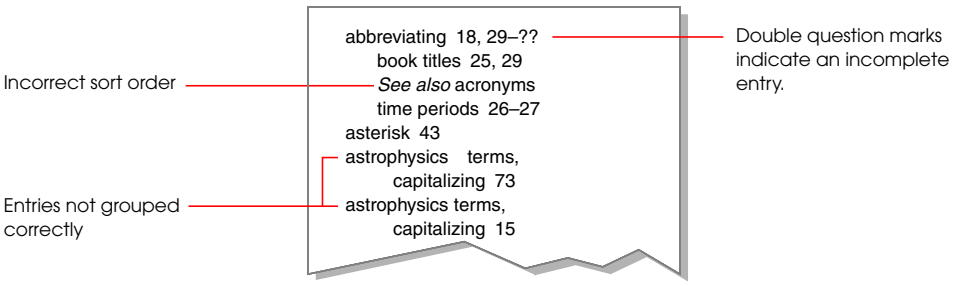
To update an index

Update an index after you revise marker text, add or delete markers, or fix problem entries. Also update an index to include up-to-date page numbers after revising the source document or to change which marker types are included.

- **Generate the index again.**
  For instructions, see page 23-11. Make sure you choose Generate/Book from the File menu in the source document, not in the index.

FIXING PROBLEM ENTRIES IN AN INDEX

If you type marker text or syntax incorrectly, the index will reflect it. The first time you generate an index, problems often appear.



You fix problem entries with the same editing methods you use for normal revisions to the index. You trace entries back to the source document and then revise the text in the Marker window or delete the marker. When you fix entries by typing directly in the index, your corrections disappear the next time you generate the index.

To find missing entries

If an entry is missing entirely from the generated index, the corresponding marker may have an incorrect marker type or be in hidden conditional text. If you can't find the marker in the source document, it was probably deleted accidentally.

- **To find and select the marker, use the Find/Change command in the source document.**
  In the Find/Change window, choose either Marker of Type or Marker Text from the Find pop-up menu, and then type the marker type or marker text in the Find text box. Choose Marker Text if you think the marker type might be incorrect.

  When a marker is selected, the marker text appears in the Marker window.

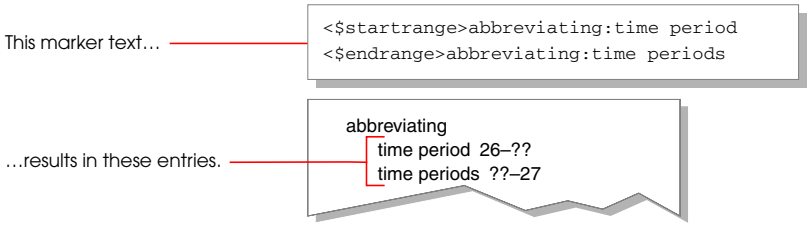
- **To make sure the marker isn't in hidden conditional text, use the Conditional Text command on the Special menu to show all conditional text, and then generate the index again.**
  If the entry appears, its condition tag settings are incorrect. For information on showing all conditional text, see "To change the view of a conditional document" on page 26-16.

- **To generate a list of markers, use Generate/Book on the File menu.**
  The list contains the marker text for all the markers, in page or alphabetic order. You can then search the list for the entry you want. For details, see "To generate a list" on page 22-7.

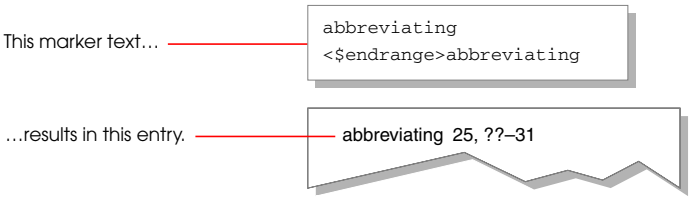
To fix entries that contain double question marks

Double question marks (??) appear in a page range when FrameMaker finds only one of the two markers that mark the range.

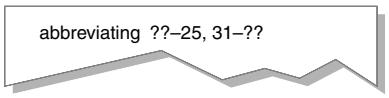
- **Make sure that neither marker is missing.**
- **Make sure that the spelling, punctuation, and capitalization of the marker text match exactly, except for `<$startrange>` and `<$endrange>`.**
  In the illustration, a spelling difference causes the problem.



- **Make sure that `<$startrange>` appears in the first marker and that `<$endrange>` appears in the second marker.**
  In the illustration, a missing `<$startrange>` causes the problem.



If `<$endrange>` appears in the first marker, and `<$startrange>` appears in the second marker, this index entry appears:

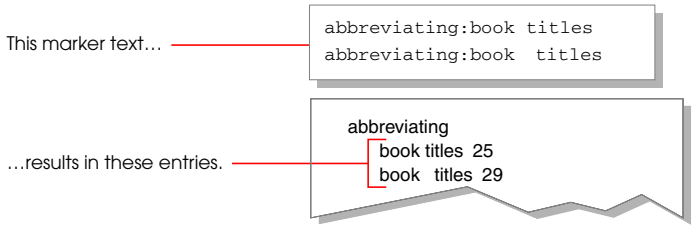


To fix entries that are sorted or grouped incorrectly

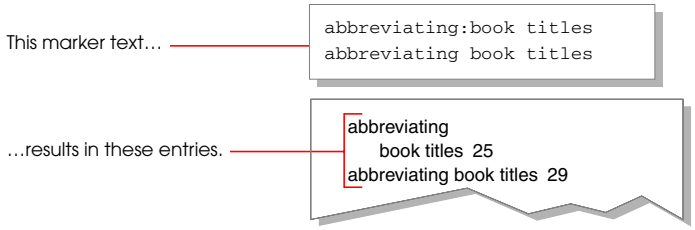
If sorting errors occur in a pattern—for example, if all numeric entries appear at the end of the index rather than at the beginning—make sure that the sorting information in the special text flow on the reference page is correct. For more information, see "To change the sort order for an entire index" on page 23-24.

However, most sorting problems result from incorrect marker text.

- **Make sure that the marker doesn't contain an extra space.**
  In the illustration, an extra space in the second marker results in two lines in the index where there should be only one.

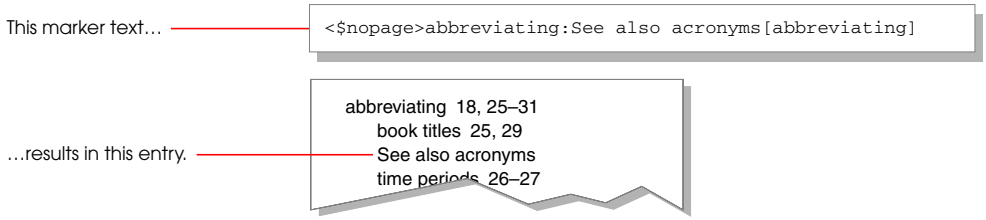


- **Make sure that the punctuation is correct.**
  If a semicolon appears where a colon belongs, two main entries appear rather than one subentry. If a colon is missing as in the illustration below, a subentry appears incorrectly as a main entry.



- **Make sure that sorting information appears between square brackets (`[` and `]`) at the very end of the marker text.**

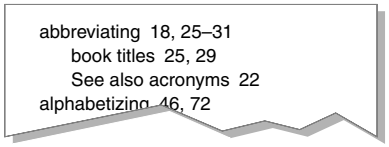
- **Make sure that sorting information is correct.**
  Because *:zzz* is missing in the sorting information in the cross-reference entry below, the cross-reference appears in the middle of the subentries rather than at the end.



In the example, use this marker text instead:
`<$nopage>abbreviating:See also acronyms[abbreviating:zzz]`

To remove page numbers from cross-reference entries

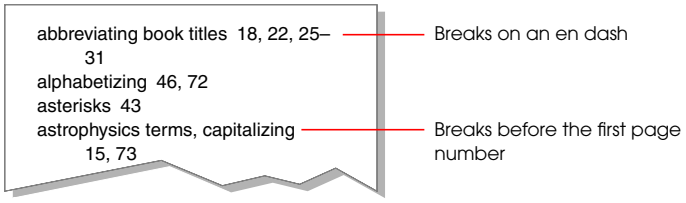
A cross-reference entry may incorrectly contain a page number.



- **Make sure that `<$nopage>` appears at the beginning of the marker text for the cross-reference entry.**

To fix bad line breaks

Entries may break between numbers in a page range or between the end of the entry and the first page number.



- **Change the characters after which FrameMaker allows line breaks.**
  For example, FrameMaker normally allows a line break between an en dash (–) and characters that follow it. To disallow line breaks after an en dash, use the Document>Text Options command on the Format menu in the index. For details, see "To control line breaks" on page 4-25.

- **Change the characters used for page number separators.**
  To force the end of an entry to appear on the same line as the page number, use nonbreaking spaces, an en space, or an em space as the separator between them.

  If you specified spaces or hyphens to appear between page numbers in a range, make sure they are nonbreaking.

  For details, see "To change page number separators" on page 23-22.

- **Change the prefix or suffix for the source document's page numbers when you generate the index for a book.**
  If the book's pages are numbered by chapter *(1-1, 1-2, …, 2-1, 2-2, …),* the prefix—for example, the chapter number and a hyphen—should use a nonbreaking hyphen. For details, see "Controlling page and paragraph numbering" on page 24-12.

FORMATTING AN INDEX

The first time you generate an index (if you don't use a template as described in "To use a template for an index" on page 23-28), it uses the page layout of the source document and some basic paragraph and character formatting for the entries. You can use a template for the index so it's formatted the way you want from the start. You can also change the page design and the formats in the index after you generate it just as you do in any other document. When you generate the index again, your new format is retained.

For example, you can change the headers and footers, the number of columns of text, and the paragraph and character formats used for entries. You can add a title. And you can use a tab and tab leader dots before the page numbers in entries or include the autonumber of a paragraph in an entry rather than the page number.

For information on changing page design, see Chapter 18, "Basic Page Design," and Chapter 19, "Custom Page Design." For information on changing paragraph and character formats, see Chapter 4, "Formatting Text," and Chapter 5, "Format Catalogs."

Several of the formatting instructions that follow require you to edit a special text flow on a reference page. For information on editing the special text flow, see "To edit the special text flow," next. For general information on reference pages, see "Working with reference pages" on page 19-22.

To edit the special text flow

Many aspects of an index's format and structure are controlled by a special text flow on a reference page in the index. The text flow has a tag that matches the filename suffix, such as `IX` for a standard index. For each marker type included in the index, the special text flow contains several paragraphs that control the format and structure of entries generated from that marker type. These paragraphs have tags that end with the filename suffix.

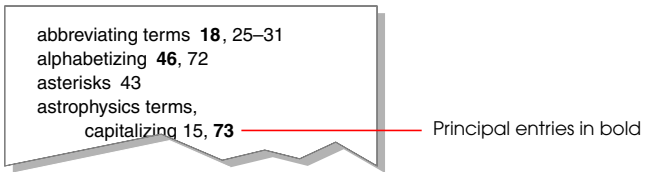
If the index was created with hypertext links, the special text flow also contains a paragraph that specifies the form of the hypertext commands in the index. The paragraph's tag begins with the word *Active*. For more information, see "Adding hypertext links to generated files" on page 27-27.

1. **Choose Reference Pages from the View menu in the index.**
2. **Display the reference page that contains the text flow.**
   The flow is usually on a reference page with the same name as the text flow—for example, `IX` for a standard index—but it may have been moved to another reference page.
3. **Edit the appropriate paragraphs in the text flow.**
   See the following tasks for specific editing instructions.
4. **Choose Body Pages from the View menu.**
5. **Generate the index again.**
   This lets you see the effect of the changes you made to the text flow.

   Make sure you generate the index from the source document, not from the index.

To change the character format of all page numbers

You can change the character format of page numbers for all entries created with the same marker type. For example, if you want the principal entries in an index to be more noticeable, you can use a different marker type for those entries to have their page numbers appear in bold.



1. **In the index, create a new character format for the page numbers.**
   Store the format in the Character Catalog.
2. **Display the reference page that contains the special text flow.**
   For details on the special text flow, see "To edit the special text flow" on page 23-20.
3. **Type the character tag, between angle brackets (< and >), at the start of the paragraph with the tag that begins with the marker type.**
   For example, if IndexPageNum is a character format set to bold, you could type the following in the paragraph tagged IndexIX:
   `<IndexPageNum><$pagenum>`

   When you generate the index again, the page numbers corresponding to entries created from markers of type Index all change to bold.

To include paragraph autonumbers

If all paragraphs in the source document that can contain an index marker have an autonumber—text and numbers inserted automatically as part of a paragraph format—you can refer readers to the autonumber rather than a page number. This is how the index to a printed Thesaurus often appears.

1. **Display the reference page that contains the special text flow.**
   For details on the special text flow, see "To edit the special text flow" on page 23-20.

2 **Replace the `<$pagenum>` building block with `<$paranumonly>` in the paragraph with the tag that begins with the marker type.**

For example, to include the paragraph autonumber rather than the page number in the entries generated from markers of type Index, replace the building block in the paragraph tagged IndexIX.

The autonumber counters and the characters between them (for example, *2.2* for a paragraph whose autonumber is *Section 2.2*) appear in the index. To include the entire autonumber in the index (except for spaces or tab characters at the end of the autonumber), use the `<$paranum>` building block.

To compress several entries into a page range

When the same marker text occurs on consecutive pages of a document, all the page numbers usually appear in the index—for example, *23, 24, 25*. You can make these page references appear in a page range *(23–25)* automatically.

1 **Display the reference page that contains the special text flow.**

For details on the special text flow, see "To edit the special text flow" on page 23-20.

2 **Insert the `<$autorange>` building block at the beginning of the paragraph with the tag that begins with the marker type.**

For example, to compress the entries generated from markers of type Index when possible, edit the paragraph tagged IndexIX to contain the following:
`<$autorange><$pagenum>`

To change page number separators

A typical index entry such as *editing 1, 2–3* has a space after the entry text, a comma and a space between page numbers, an en dash to show a range, and nothing after the last number. You can change the en dash to *to* or change these features in any other way.

1 **Display the reference page that contains the special text flow.**

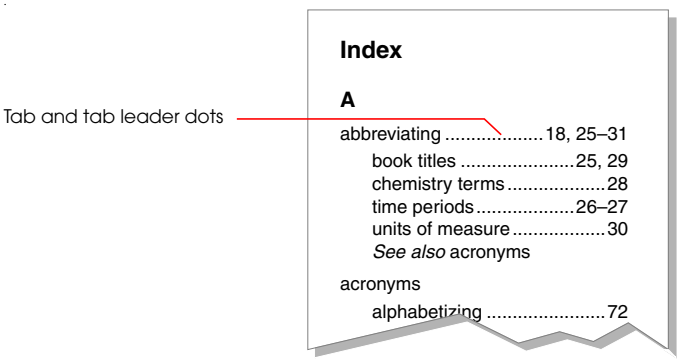
For details on the special text flow, see "To edit the special text flow" on page 23-20.

2 **Edit the Separators paragraph.**
You can change any separator, but you must use the numbers *1*, *2*, and *3*.

With the change shown above, an em space appears between the entry text and the first page number, and *to* appears between page numbers in a range. Nonbreaking spaces were used to prevent *2 to 3* from breaking across lines.

To align page numbers

The page references in an index entry are normally separated from the entry text by a space. When you want page numbers in an index to align with one another, use a tab instead.



1 **Display the reference page that contains the special text flow.**
For details on the special text flow, see "To edit the special text flow" on page 23-20.

2 **Select the space before the number *1* in the Separators paragraph and press Tab.**

3 **Change the paragraph format for each level of the index by adding a tab stop where you want to align the page numbers.**
For details, see "To define a tab stop" on page 4-15. The tab stop properties include leader dots. For details, see "To set a tab leader" on page 4-17.

4 **Update the paragraph formats of all entries at each level of the index.**
Make sure you update each format in the index's Paragraph Catalog, making it available the next time you generate the index. For details, see "To update a paragraph format" on page 5-12.

To ignore characters when sorting an index

By default, FrameMaker ignores hyphens, nonbreaking hyphens, en dashes, and em dashes when sorting index entries. You can specify that FrameMaker ignore other characters—for example, underscore characters or periods.

1 **Display the reference page that contains the special text flow.**
For details on the special text flow, see "To edit the special text flow" on page 23-20.

2 **Edit the IgnoreChars paragraph.**
Add other characters you want to ignore when sorting, or delete characters you want to consider.

SORTING THE INDEX LETTER BY LETTER

FrameMaker doesn't usually ignore spaces when sorting index entries. As a result, the entries are sorted word by word. To sort the index entries letter by letter, add a space at the beginning of the IgnoreChars paragraph in the special text flow. (The space cannot be at the end of the paragraph.)

Type of sort	Example
Letter by letter	Typeface Type font Type lead Typestyle
Word by word	Type font Type lead Typeface Typestyle

To change the sort order for an entire index

Indexes are sorted so special symbols appear first, numbers appear second, and alphabetic characters appear last. By default, alphabetic characters appear in the correct sort order for the English language. You can change the sort order of index entries—for example, to sort alphabetic characters based on the sort order for another language.

You change the sort order by editing the contents of the SortOrder paragraph in the special text flow. For details on the special text flow, see "To edit the special text flow" on page 23-20.

- **To move symbols, numbers, or alphabetic characters to another location in the index, rearrange the building blocks in the SortOrder paragraph in the special text flow.**
  For example, to put the symbols at the end of an index, arrange the building blocks as follows:
  `<$numerics><$alphabetics><$symbols>`

- **To specify your own sort order for symbols, numbers, or alphabetic characters, replace a building block in the SortOrder paragraph with the characters in the order you want them to sort.**
  Each sort order building block represents several characters in a particular order. The table below shows the order for US English. The alphabetic sort order differs slightly for other languages.

Building block	Characters represented, in order
`<$numerics>`	`0 1 2 3 4 5 6 7 8 9`
`<$alphabetics>`	`AÁÀÂÄÃÅaáàâäãåª Bb CÇcç Dd EÉÈÊËeéèêë Ff` *`ƒ`* `Gg Hh IÍÌÎÏıíìîï Jj Kk Ll Mm NÑnñ OÓÒÔÖÕØoóòôöõøº Pp Qq Rr Ss Tt UÚÙÛÜuúùûü Vv Ww Xx YŸyy Zz`
`<$symbols>`	All other characters in ASCII order

  Letter groups (for example, *Dd* above) are separated by spaces. Characters within a letter group are sorted as if they were the same character, unless they are the only characters that differ in the sorted text. For example, if two entries differ only in their capitalization, the capitalized entry appears first:

  Animus 2
  animus 2

  If you replace `<$alphabetics>` with individual characters, remember to separate the letter groups with a space. Also, don't press Return at the end of a line. Let FrameMaker wrap the characters automatically from line to line.

  If you replace `<$symbols>` with individual characters, use a backslash before angle brackets (< or >).

SORTING LETTER PAIRS AS IF THEY WERE A SINGLE LETTER

In some languages, letter pairs are sorted as a single letter. For example, in Spanish, the letter pair *ch* should be sorted after *c*. To indicate that a letter pair should be sorted in a particular way, specify the letter pair between angle brackets (< and >)—for example: `CÇcç<CH><Ch><ch>`. In this example, all the characters or letter pairs are in the same letter group (the letter *C*). The letter pair *CH* is sorted after the letter *C,* and uppercase letter pairs are sorted before lowercase letter pairs.

To change entry groupings and group titles

Index entries are grouped one letter at a time—all the *A*'s, all the *B*'s, and so on—using the uppercase letter as a group title. If you have a small index or only a few entries under some letters such as *X, Y,* and *Z*, you may want to group letters differently and change the titles.

FrameMaker inserts group titles as if they were index entries, but uses a different paragraph format. It uses the labels and sort positions you specify in the GroupTitles paragraph in the special text flow. For details on the special text flow, see "To edit the special text flow" on page 23-20.

- **To change the groupings and group titles, edit the GroupTitles paragraph in the special text flow.**

  Replace the group titles (the characters between semicolons) with new titles, or delete group titles you don't want. Type text between square brackets ([and]) to specify how you want the group titles sorted.

  For example, the following GroupTitles paragraph groups entries three letters at a time. The group title *A–C* appears at the beginning of the *A*'s; *D–F* appears at the beginning of the *D*'s; and so on.

```
Symbols[\ ];Numerics[0];A-C[A];D-F[D];G-I[G];J-L[J];M-O[M];
P-R[P];S-U[S];V-Z[V]
```

New group title
Sorting information

- **To create an index without group titles, edit the GroupTitles paragraph in the special text flow to look like this:**

```
[\ ];[0];[A];[B];[C];[D];[E];[F];[G];[H];[I];[J];[K];[L];
[M];[N];[O];[P];[Q];[R];[S];[T];[U];[V];[W];[X];[Y];[Z]
```

  Empty paragraphs appear rather than group titles in the index. The sorting information between the brackets ensures that the empty paragraphs appear in the correct locations.

- **To create an index with neither a group title nor a space between entry groupings, delete all the text in the GroupTitles paragraph in the special text flow, but don't delete the paragraph symbol.**

GROUPINGS IN HYPERTEXT DOCUMENTS

In a hypertext document, you can provide thumbtabs to the group titles to make navigating through the index easier. For information, see "To add thumbtabs to a generated index" on page 27-29.

To add a title

If you need a title for your index, add it after you generate the index the first time.

1. **Type the title before the first entry in the index on the body page.**
2. **Create a new paragraph format for the title.**
   The paragraph tag must not end with the filename suffix, such as `IX` for a standard index. When you generate the index again, FrameMaker replaces only the paragraphs that have tags ending with the suffix. It retains the paragraphs that don't.

To retain format changes when generating

When you regenerate an index, all formatting instructions should be carried over to the new index. If you made formatting changes that aren't retained, check these guidelines.

- **To retain formatting changes, don't change the filename or location when you save the index.**
  FrameMaker won't find any formatting changes unless you save the index in the same directory as the source document and you use the filename that FrameMaker assigns.
- **To retain the title, make sure its paragraph tag doesn't end with the filename suffix, such as `IX` for a standard index.**
- **To retain paragraph format changes, update all paragraphs that have the same tag.**
  This stores the formats in the index's Paragraph Catalog, making them available the next time you generate the index. For details, see "To update a paragraph format" on page 5-12.
- **To retain character format changes in index entries, store the character formats in the index's Character Catalog.**
  This makes the formats available the next time you generate the index. For details, see "Creating and updating character formats" on page 5-17.
- **To retain other changes, make them in the special text flow.**

To use a template for an index

You can use a template for an index rather than generate the index and then make format changes one by one. For information on creating a template for an index, see "To create a template for a generated file" on page 21-9.

1 **Copy the template to the source document's directory, using the same filename as the index.**

2 **Generate the index.**
FrameMaker uses the format of the template.

UPDATING THE FORMAT OF AN INDEX FROM A TEMPLATE

Rather than copy a template to the source document's directory, you can generate the index and then update its formats from the template by using the Import>Formats command on the File menu. Then generate the index again so any changes in the special text flow are reflected in the index.
If your template uses a custom master page for the first page of the index, use Page Layout>Master Page Usage on the Format menu to assign the custom master page to the first body page. Finally, add a title if you want one.

STORING FORMATTING INFORMATION IN THE SOURCE DOCUMENT

You can store formatting information in the source document. For example, if you store the special text flow, paragraph formats, and character formats you use in the index, you won't need to update these items from a template. They are copied to the index automatically the first time you generate it.

If the page design of the index differs from that of the source document, you still need to update the page design of the index from a template.

To store the formatting information in the source document, import the paragraph and character formats for the entries into the source document's catalogs. Also copy the special text flow to a reference page in the source document. For details, see "Importing formats into a document" on page 21-12.

24

BOOK BUILDING

Grouping documents into a book

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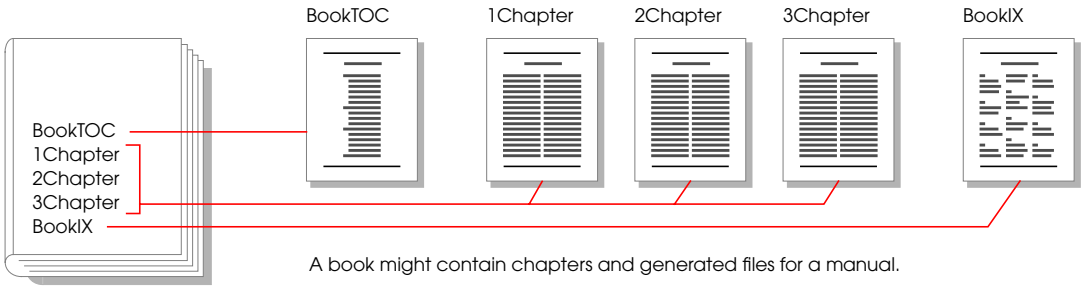
24 BOOK BUILDING

You can group separate documents into one FrameMaker book. This grouping lets you generate a single table of contents or other file for the documents, and it greatly simplifies printing, numbering, cross-referencing, and formatting.

A book ties related files together

A book ties multiple files together so you can work with them as a single unit. For example, you can number pages and paragraphs continuously from one file to the next, update cross-references across the files all at once, and so on.



A book might contain chapters and generated files for a manual.

You can generate a table of contents and an index for the entire book, and you can print the entire book with single commands.

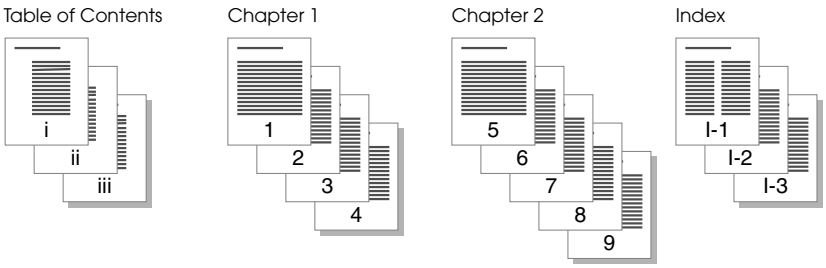
Files are listed in the book window

When you're ready to assemble a book, you list the names and locations of your files in a book window in the order you want them. The information is saved in a book file. The book file can contain documents and generated files.

You specify the numbering system

Each file in a book can have its own numbering properties. For example, you might start page numbering at *i* in the table of contents, *1* in the first chapter, number continuously through subsequent chapters, and then start over again at *1* in the index. You can also add a prefix or a suffix to page numbers—for example, *2-* in *page 2-1*—and you can specify whether a file begins on a left or right page.

Pagination can start at 1 in some files and can be continuous in others.



FrameMaker does the rest

When you're ready to generate and update the files in the book, a command starts FrameMaker creating or updating generated files such as the table of contents. Page and paragraph numbering are updated throughout the files, text insets are updated, and cross-references are updated to match the new page and paragraph numbers.

You can use the book window for revisions

Once a book is set up, you can use its book window to do further work on the files. You can open document files directly from the book window to revise them, and you can use the book window to print, save, or format files, even when they're not open.

If you have two versions of a book, you can open two book windows and run a comparison of the text and other items in the versions.

In this chapter

This chapter shows you how to set up the files in a book, specify page and paragraph numbering, generate and update the files, work with files from the book window, and compare two versions of a book. For more detailed information on tables of contents and indexes, see Chapter 22, "Generated Lists," and Chapter 23, "Indexes."

SETTING UP A BOOK

When setting up a book, you first create a book file and then tell FrameMaker which documents and other files you want to include in it. The filenames appear in a book window in the order you specify. For information on preparing files for a book, see "Organizing files for a book" on page 24-4.

Setting up is the beginning of the book-building process, and it's useful to think through the entire process before you begin.

To think through the book-building process

Book building is assembling the parts of a book—table of contents, chapters, and so on. You generate parts such as the table of contents during the assembly process, but most of the book exists as separate parts before you assemble them. When these parts are complete and you are ready to begin building the book, you will find it easier to proceed if you have the whole process firmly in mind.

The steps of the book-building process follow. They are explained further in the next sections.

1 **Create a book file.**
For details, see "To create a book file" on page 24-6.

ORGANIZING FILES FOR A BOOK

As you prepare your files for a book, follow these tips to help you get organized.

Consolidate files Create a directory specifically for your book. Then put the book file and all the document files in this directory.

Separate chapters Put each chapter in a separate FrameMaker document.

Divide long files If you have any chapters over 50 pages long, consider dividing them into separate files, making sure each file begins at the top of a page (that is, don't split sentences, paragraphs, or tables across files).

FrameMaker opens and saves short documents faster than it does long documents, so you might find the separate files easier to work with. You can number the pages and paragraphs continuously throughout the files so they still fit together as a chapter.

2 **Save and name the book file.**
Save the book file periodically as you set up files and whenever you edit the book.

3 **Add the filenames for existing documents to the book file.**
Think of these documents as the book's chapters. For details, see "To add document files to a book" on page 24-7.

For tips on preparing files for a book before you add them, see "Organizing files for a book" on page 24-4.

4 **Set up any generated files for the book—for example, a table of contents and an index.**
Setting up the generated files tells FrameMaker what information you want it to find when generating the files and defines the files' pagination and autonumbering. For details, see "To add a generated file to a book" on page 24-8.

5 **Specify the pagination and autonumbering for the documents.**
This defines such characteristics as whether each document starts at page 1 or continues where the previous document left off. For the steps to specify pagination and autonumbering, see "Controlling page and paragraph numbering" on page 24-12.

6 **Generate and update the book.**
Generating and updating a book updates page and paragraph numbering in all the files in the book, updates text insets in the book's files, updates cross-references so they are correct based on the new page and paragraph numbers, and creates or updates generated files. Although this is the last step in the book-building process, there are other times when you should generate and update the book. For information on how to generate and update a book, see "Generating and updating" on page 24-18. For information on when to generate and update a book, see "When to generate and update" on page 24-20.

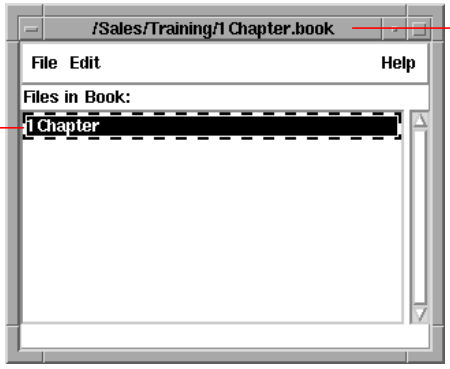
To create a book file

You typically generate the book file from the first document that will be in the book, but you can generate the book file from any document.

1 **Open one of the documents you want to include in the book.**

2 **Choose Generate/Book from the File menu.**

3 **In the Generate/Book dialog box, click New Multifile Book and click Generate.**
A book window appears showing the contents of the book file (so far just the document you started with). If any files generated from this document—for example, a table of contents or an index—are in the same directory, they also appear in the book window.



FrameMaker gives the book a name based on the document's name, plus the extension `.book`.

The name of the document you generated from appears in the book window.

4 **Name the book.**
You probably want to give the book a name more general than the name of a document in it—for example, `Manual` rather than `1Chapter`. You can rename the book file when you save it.

SAVING, RENAMING, AND CLOSING A BOOK FILE

You can save, rename, and close a book file just as you can a document file. Choose Save, Save As, Revert to Saved, or Close Book from the File menu in the book window. For information on these commands, see Chapter 2, "Basic Procedures." Be aware that saving a book file saves only the book and not the files in it.

FrameMaker lets you open, save, or close all the files in a book file at once. Hold down Shift, open the book's File menu, and choose Open All Files in Book, Save All Files in Book, or Close All Files in Book. For information on these commands, see "Working with files in a book window" on page 24-24.

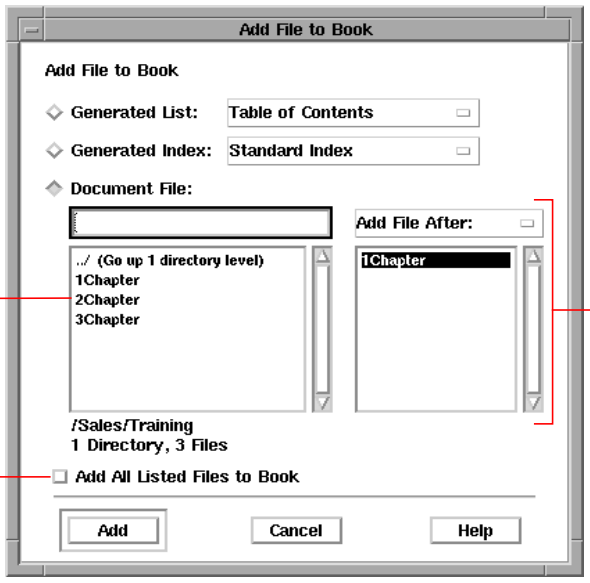
To add document files to a book

You can add document files or generated files to a book. When you add a file to a book, you are actually adding only its name and location to the book file. The book file can then find the document or generated file when you choose commands from the book window in order to work with a file.

These instructions are for adding a document file. For information on adding a generated file, see "To add a generated file to a book" on page 24-8.

1 **Choose Add File from the File menu in the book window.**

2 **Specify which document files you want to add to the book.**



Select a single file you want to add.

Location for the files you're adding

Or turn on this setting to add all the files in the scroll list that are saved in Normal format.

You can add any document saved in Normal format. Rather than add files one at a time, it may be quicker to add all the files in the scroll list, delete unwanted files from the book, and then rearrange the files in the order you want.

You can change to another directory in this scroll list just as you do in similar scroll lists.

3 **Specify where the document files should go in the book.**
Select a filename in the scroll list below the Add File pop-up menu, and choose Add File After or Add File Before from the pop-up menu.

4 **Click Add.**
The filename appears in the scroll list below the Add File pop-up menu where you specified.

5 **If this is the only file or the last file you are adding, click Done.**
If you have more files to add, repeat steps 2 through 4, once for each file you want to add to the book, before clicking Done.

USING A WILDCARD TO DISPLAY FILENAMES

You can limit the contents of the Document File scroll list. In the Add File to Book dialog box, click Document File, type a wildcard in the text box above the list, and press Return. This is helpful when you want to add all similarly named files to a book. For example, to display only the files ending with *.doc*, type `*.doc` in the text box and press Return. To display the entire contents of the directory again after using a wildcard, type an asterisk (*) in the text box and press Return. For information on other wildcards, see "Wildcards" on page 8-8.

RENAMING A DOCUMENT FILE IN A BOOK

A book isn't updated automatically to reflect filename changes of the files in the book. To change the name of a document in a book, change the filename on the disk. Then delete the old filename from the book file and add the new one. For information on deleting files from a book file, see "To rearrange or delete files" on page 24-12.

To add a generated file to a book

You can add any kind of generated file to a book—for example, a table of contents, a list of figures, or an index. The file need not exist yet; it will be created when you generate it. When you generate the file, FrameMaker gathers information from the files in the book.

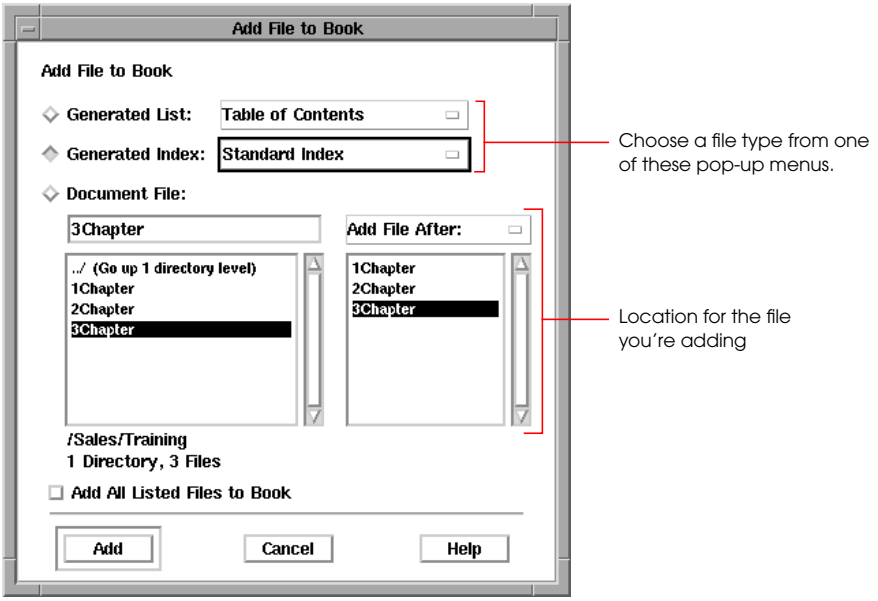
When you add a generated file to a book, you also define the information you want to include in it and the pagination and autonumbering properties.

FrameMaker bases the name of a generated file on the book's filename. Before adding a generated file, make sure the book file has the name you want.

For background information on generated files and how to prepare for them, see Chapter 22, "Generated Lists," and Chapter 23, "Indexes."

1 **Choose Add File from the File menu in the book window.**

2 **Specify which type of generated file you want to add to the book.**



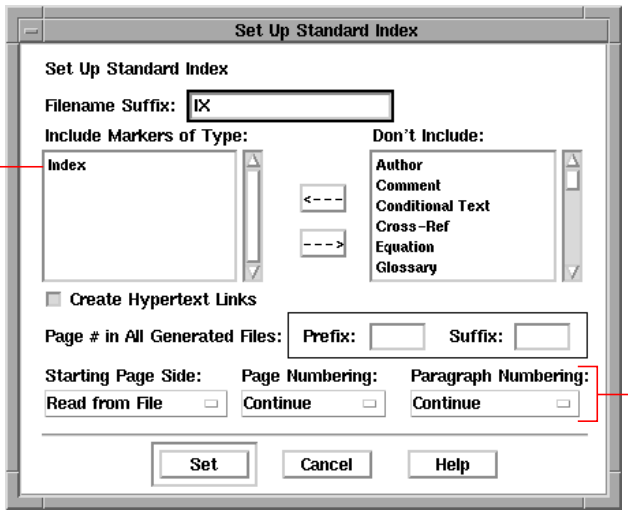
Don't click Document File even if you want to add an existing generated file. If you add the file as a document, FrameMaker won't recognize it as a generated file and won't update it.

3 **Specify where the generated file should go in the book.**
Choose Add File After or Add File Before from the pop-up menu and select a filename in the scroll list below the pop-up menu.

4 **Click Add.**
Another dialog box appears, showing the items FrameMaker can search for when generating the file.

5 **Move the items you want in the generated file to the Include scroll list.**

The information in the scroll lists varies depending on the type of file you're generating. For a table of contents or other list based on paragraph tags, the paragraph tags used in the book's documents appear. For an index or other marker list, the FrameMaker marker types appear. For a list of references or index of references, the items Condition Tags, External Cross-Refs, Fonts, Imported Graphics, Text Insets, Unresolved Cross-Refs, and Unresolved Text Insets appear.



To move an item between scroll lists, select the item and click an arrow, or double-click the item. To move all items from one scroll list to the other, Shift-click an arrow.

6 **To include automatically generated hypertext links in the generated file, turn on Create Hypertext Links.**

FrameMaker automatically creates hypertext links for each item in the Include scroll list. When you click a generated entry in the document (for example, a section name in a table of contents), FrameMaker opens the source document and displays the appropriate page.

7 **Specify pagination and autonumbering for the generated file in the bottom part of the dialog box.**

The settings are the same as they are for a document file. For information on them, see "To specify the numbering properties" on page 24-13.

8 **Click Set.**

The generated file's name, followed by a plus sign (+), appears in the book window and in the scroll list below the Add File pop-up menu in the Add File to Book dialog box. The file hasn't been generated yet; you'll generate and update all the files in the book when you finish setting up the book file. For information on generating files, see "To generate and update files in a book" on page 24-20.

9 **If this is the only file or the last file you are adding, click Done.**

If you have more generated files to add, repeat steps 2 through 8, once for each generated file you want to add, before clicking Done.

USING AN EXISTING FILE AS A GENERATED FILE

If you generated and formatted a table of contents or other generated file before creating the book, or if you want to use a template for a generated file, you can use the existing file as a generated file in the book.

First use the Add File command to add a new generated file to the book, making sure that you click a generated file option in the dialog box. If you don't, FrameMaker won't recognize the file as a generated file and won't update it.

Then put the existing generated file in the directory that contains the book file, using the name of the generated file in the book. (Look in the book window to get the generated file's name.)

RENAMING A GENERATED FILE

When you add a generated file to a book, FrameMaker assigns the file a name based on the book's filename. In general, you shouldn't change the name of the generated file. If you rename the book file using the Save As command, the name of the generated file changes in the book window. FrameMaker won't be able to find the renamed generated file when you try to generate, update, or open it. If this happens, change the generated file's name on the disk to match the name in the book window.

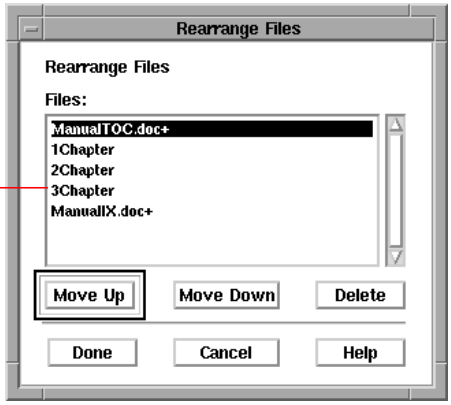
If you rename the book file outside of FrameMaker, and if you want the filename of a generated file to be based on the book's current filename, delete the generated file from the book. Then add the generated file again. FrameMaker gives the file a name based on the book's current filename. Finally, change the file's setup using the Set Up File command.

To rearrange or delete files

You can change the order of files in a book file and delete files from a book file. When you delete files, the filenames are removed from the book window, but the files remain on the disk.

1 **Choose Rearrange Files from the File menu in the book window.**

2 **Select a file and click Move Up, Move Down, or Delete.**



Files in the book, in their current order

You can rearrange and delete as many files as you want.

3 **When the files are arranged correctly, click Done.**

CONTROLLING PAGE AND PARAGRAPH NUMBERING

You can specify numbering properties for each file in a book. For example, you might start page numbering at *1* in the table of contents and first chapter, continue through subsequent chapters, and then start over again at *1* in the index. You can also add a prefix or suffix to the page number—for example, *3-* in page *3-6*.

Some aspects of page and paragraph numbering are set in the book file—whether a file begins on a left or right page, whether the page and paragraph numbering are continued from the previous chapter, and whether page references in generated files have a prefix or suffix.

Other aspects are set in the documents themselves—including the numbering style (for example, Arabic or Roman), and the prefix or suffix you want to use in page footers or in cross-references.

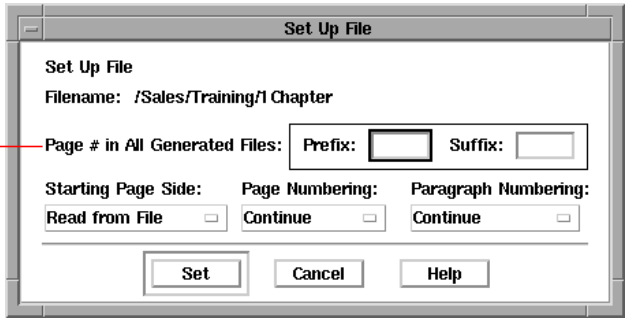
To specify the numbering properties

When you generate a book, you can specify whether a file begins on a right or left page and whether numbering continues from the previous file in the book.

You can also add a prefix or suffix to the page numbers that FrameMaker puts in the entries of generated files. For example, you can include a chapter number before page numbers to create page references such as *2-3* in a table of contents. For information on adding a prefix or suffix to the numbers in the file's headers or footers, see "To include chapter numbers in headers or footers" on page 24-15.

1. **In the book window, select the name of the file whose numbering properties you want to change.**
2. **Choose Set Up File from the File menu In the book window.**
3. **To put text before or after the file's page numbers in generated files, fill in the Prefix or Suffix text box.**

Type a prefix or suffix you want to use in generated files.



For example, if you want a prefix such as *1-* to appear for a chapter number when a page number from Chapter 1 appears in a generated file, type the chapter number and the hyphen in the Prefix text box. If you later rearrange files in the book so that the prefix is no longer accurate, you change the prefix in this dialog box.

If the prefix or suffix contains a hyphen, use a nonbreaking hyphen (Meta-hyphen) to prevent lines in generated files from breaking at the hyphen.

4 To specify the page side of the file's first page when the book is generated, choose a setting from the Starting Page Side pop-up menu.

Choose	To
Read from File	Use the file's current first page side
Next Available Side	Have FrameMaker set the first page side of a file based on the last page in the previous file, which is useful when you have two files that combine to make one chapter, or when you have a two-sided document but chapters can start on either side
Left or Right	Make sure the first page is always a left or a right page

5 To specify the file's pagination, choose a setting from the Page Numbering pop-up menu.

Choose	To
Continue	Continue page numbering from the previous file in the book
Restart at 1	Restart page numbering in this file
Read from File	Use the file's current first page number

6 To specify the file's autonumbering, choose a setting from the Paragraph Numbering pop-up menu.

Choose	To
Continue	Continue paragraph numbering from the previous file in the book
Restart	Restart paragraph numbering in this file

7 Click Set.

You'll see the changes when you generate and update files in the book.

To include chapter numbers in headers or footers

You may want to number pages by chapter, such as *2-3* for page 3 of Chapter 2. You can either type the chapter number directly in the header or footer of each chapter or use a running header/footer variable for the chapter numbers. When you use a variable, the numbers are updated automatically whenever you update the book or rearrange its files.

The page numbers in document headers and footers are not affected by the prefix or suffix specified with the Set Up File command.

1. **Display the master page that contains the header or footer you want to contain the chapter number.**

2. **Edit a Running H/F variable so that it refers to the autonumber of the paragraph with the chapter title.**
   Use the `<$paranum>` or `<$paranumonly>` building block, and include the tag of the chapter title in the variable definition. The variable definition might look like this:

   ```
   <$paranum[ChapterTitle]>
   ```

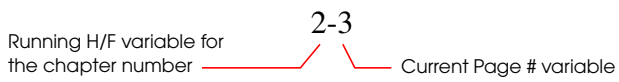
   Use the Variable command on the Special menu to edit and insert the variable. For details, see "To insert a variable in a running header or footer" on page 12-18, "To change the definition of a system variable" on page 12-13, and "To display the text, autonumber, or tag from a paragraph" on page 12-20.

3. **Put the insertion point in the header or footer where you want to add the chapter number and insert the Running H/F variable.**

4. **Type a hyphen.**

5. **Insert the Current Page # variable.**
   Use the Headers & Footers>Insert Page # command on the Format menu. For details, see "To add page numbers and dates" on page 18-13.

   The header or footer should look like this on a body page:



INSERTING CHAPTER NUMBERS IN MULTIFILE CHAPTERS

If you have separated a long chapter into several files, it's possible that only the first file contains the chapter number in the chapter title.

If a file that is part of the chapter does not have a chapter number, and you want the chapter number to appear in its header or footer, insert the number in a paragraph at the top of the first page by applying a paragraph format that uses the autonumber series label used in the autonumbering properties for your chapter. The paragraph format should use a nonincrementing counter. For more information on autonumbering, see "To create a numbered list" on page 4-36.

If you don't want the paragraph to appear in the document, draw a text frame and connect it to the beginning of the main text flow. Make the text frame small enough that it contains only the paragraph with the chapter number. Then set the paragraph's color to White. (If you should later join the separate files into a single file, make sure you delete this text frame.) For instructions on drawing text frames, see "To add a text frame" on page 13-26. For instructions on connecting flows, see "To connect text frames" on page 20-10. For instructions on setting a paragraph's color, see "To choose a color" on page 4-9.

To include chapter numbers in cross-references

If your book's pages are numbered by chapter (for example, *2-6*), you probably want cross-references to include the chapter number as part of the page number—for example, *see page 2-6*.

- **Create a cross-reference format that includes the chapter number.**

  Use the same paragraph tag in the cross-reference format that you used in the Running H/F variable (see "To include chapter numbers in headers or footers" on page 24-15). The cross-reference format might look like this:

  ```
  See page <$paranum[ChapterTitle]>-<$pagenum>.
  ```

  To keep the chapter number on the same line as the page number, use a nonbreaking hyphen (Meta-hyphen) in the cross-reference format.

  For information on cross-reference formats, see "Creating a cross-reference format" on page 10-10.

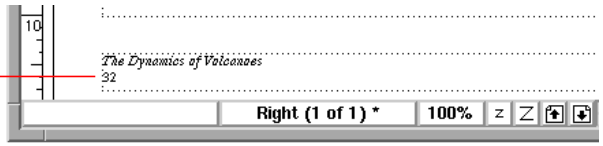
To show the total page count of a book

You can show the total page count of a file or book along with the page numbers—for example, *4 of 15* on page 4 of a 15-page document.

When you insert the page count in a file's header or footer with the Page Count variable, FrameMaker shows the number of pages in that file, not in the entire book. If you want to show the number of pages in a book, you can make page numbering continuous across files, put the page count in the last file's header or footer, and cross-reference it from the other files in the book.

1 **Set up the files for continuous page numbering.**
Use the Set Up File command on the File menu in the book window. For information on setting continuous page numbering, see "To specify the numbering properties" on page 24-13.

2 **Insert the Page Count variable in the header or footer of the last file in the book.**
Put the variable in an otherwise empty paragraph.



Use the Headers & Footers>Insert Page Count command on the Format menu. For details, see "To add page numbers and dates" on page 18-13.

3 **Create a new paragraph format for the paragraph with the page count.**
Store the format in the Paragraph Catalog so that you can insert a cross-reference to the paragraph. For information on creating formats, see "To create a paragraph format" on page 5-11.

If you don't want the page count to appear where you put it, either resize the text frame so the page count is hidden or set the variable's color to White.

4 **In the other files in the book, insert cross-references to the paragraph with the page count.**
Put the cross-references in the header or footer of each file in the book, including the last one. They should refer to the text of the paragraph with the page count. For information on inserting cross-references, see "To insert a paragraph cross-reference" on page 10-5.

To create a master table of contents or index for several books

When you're producing several related books, you may want to create a master table of contents or index for the books.

1 **Create a new book file that contains the files in all the books in the order you want them.**
For instructions, see "Setting up a book" on page 24-4. If you are adding files that were generated in the original books, add them to the new book as document files. For details, see "To add document files to a book" on page 24-7.

2 **Add a table of contents, an index, or other generated file to the new book file.**
Use the Add File command on the File menu in the book window. For details, see page 24-8.

3 **Specify how page numbers should appear in the generated file.**
Use the Set Up File command on the File menu in the book window for each file in the book. Make sure you set the Starting Page Side and Page Numbering options to Read from File and the Paragraph Numbering option to Continue. For details, see "To specify the numbering properties" on page 24-13.

You can use a different prefix or suffix for each book. For example, if you're creating a master index for a user manual and a reference manual, you could use a *U* as the prefix for all files in the user manual and an *R* for all files in the reference manual. You could also use capital Roman numerals for volume numbers.

4 **Generate the files.**
Use the Generate/Update Book command on the File menu in the book window. For details, see "Generating and updating," next.

GENERATING AND UPDATING

After setting up a book and specifying page and paragraph numbering for each file in the book, you generate and update the files. This is the last step in book building.

When you generate and update, FrameMaker updates page and paragraph numbering in all files in the book, updates text insets in the files, updates cross-references so they are correct based on the new page and paragraph numbers, and creates or updates generated files. You can change these settings after you generate and update the book, but you must generate and update the book again so that the changes take place.

FrameMaker also adds empty pages where required to make sure that each file begins where you specify. Extra pages may appear where you don't want them if you incorrectly specified the pagination for the files.

For example, if the first file ends on a right page and the second file has Starting Page Side set to Right, FrameMaker adds an empty left page to the first file. But if the Starting Page Side in the second file is set to Left, or to Next Available Side, FrameMaker doesn't add an empty page. For information on setting pagination preferences, see "To specify the numbering properties" on page 24-13.

To change the setup of files in a book

When you want to change the starting page side or the page or paragraph numbering of any document or generated file in a book, you must change its setup. These changes do not affect the document or file until you generate and update the book. You can also change the setup of an existing generated file so the next time the book is generated and updated, FrameMaker adds automatic hypertext links to it or uses different paragraph tags or markers.

1. **In the book window, select the name of the file you want to change.**
2. **Choose Set Up File from the File menu in the book window.**
3. **Make the changes in the Set Up dialog box.**
   The available options are different depending on whether you are changing a generated file or a document file.

   Specify pagination and autonumbering for the file. For more information on these options, see "To specify the numbering properties" on page 24-13.

   To include automatically generated hypertext links in a generated file, turn on Create Hypertext Links. FrameMaker automatically creates hypertext links for each item in the Include scroll list the next time the book is generated and updated.
4. **Click Set.**
   The changes you just made appear in the document or file the next time you generate the file.

To generate and update files in a book

You should generate and update a book when you make any of a number of changes to a document file or a book file. For a list of these changes, see "When to generate and update" on page 24-20. When you generate and update a book, FrameMaker updates the pagination, autonumbering, text insets, and cross-references in all the documents in the book file. You can change the pagination or autonumbering of any document in a book, add automatically created hypertext links to an existing file, or change the paragraph tags and marker types a generated file uses at any time. However, you do not see the effects of the changes until you generate and update the book. For more information, see "To change the setup of files in a book" on page 24-19.

1 **Choose Generate/Update from the File menu in the book window.**

WHEN TO GENERATE AND UPDATE

Generate and update files in a book whenever you do the following:

- Set up a new book

The names of generated files appear in the book window after you set it up, but the actual files do not exist until you generate and update.

- Add a generated file to an existing book using Add File
- Rearrange or remove files in a book
- Change the setup information of a document or generated file using the Set Up File command
- Edit a document file so that other files in the book are no longer current

If you change a chapter title, for example, your table of contents is no longer accurate. Or if you edit some text and cause the document's pagination to change, it can affect the pagination of documents that follow.

- Add a new color to a file in a book

If you print process color separations, you won't be able to print the new color until you generate and update.

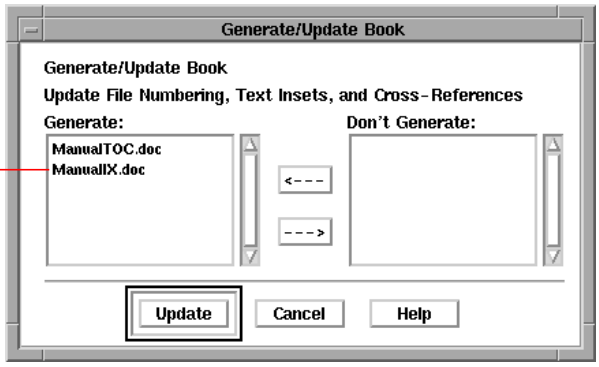
- Add a new paragraph tag to a file in a book

For example, if you set up a table of contents, you won't be able to include the paragraph tag until you generate and update.

- Change the conditional text settings or overrides in a document file
- Change formatting information in the special flow on a reference page of a generated file

If you edit a special flow, the changes do not appear in the generated file until you generate it again.

2 **In the Generate/Update Book dialog box, move the names of the files you want to generate to the Generate scroll list.**



Only generated files appear in the list.

To move a filename between scroll lists, select the filename and click an arrow, or double-click the filename. To move all filenames from one scroll list to the other, Shift-click an arrow.

If the book contains several generated files, you can generate them all at once. If you want to update the pagination, autonumbering, text insets, and cross-references without generating any files, move all the filenames to the Don't Generate list.

3 **Click Update.**

If a file is open, FrameMaker updates it only in your computer's memory and not on the disk. You need to save the file to keep the changes. If a file isn't open, FrameMaker changes it on the disk.

Messages occasionally appear in the book window's status bar when you generate and update files in a book. These messages describe problems with cross-references, conditional text settings, and print separation settings in the book's files. For a list of the messages, see "Messages when generating and updating" on page 24-22.

IF FRAMEMAKER DOESN'T GENERATE A FILE

If you don't get a generated file that you expected, make sure the name of the generated file has a plus sign (+) after it in the book window. If it does not have one, FrameMaker considers the file a document and won't generate it.

This happens when you add the file as a document file rather than as a generated file when you set up the book. To solve the problem, delete the file from the book window and then add it again as a generated file. For instructions, see "To add a generated file to a book" on page 24-8.

MESSAGES WHEN GENERATING AND UPDATING

While generating and updating files, FrameMaker may display messages in the book window's status bar or in an alert box. These messages let you know the status of the generating and updating process, alert you to any problems, and name the first file in which the problem was found. (Later files may have similar problems.)

Unresolved Cross-Refs The file indicated contains unresolved cross-references. For information on fixing unresolved cross-references, see "To update cross-references manually" on page 10-19.

Inconsistent Show/Hide Settings Conditional text settings differ from file to file in the book.

You can fix the settings in one file at a time, using Conditional Text on the Special menu. See "To change a tag's condition indicators" on page 26-8.

But you'll probably find it easier to fix the settings throughout the book at once. To do this, update the settings with the Import>Formats command on the File menu. For more information, see "To update the format of files" on page 24-26.

Inconsistent Color Settings The file indicated contains color separation settings that differ from settings for other files in the book, or the indicated file has a color defined differently in other files in the book. For information on color settings, see "To print color separations" on page 17-18. For information on creating and naming colors, see "To create a new color" on page 17-6.

Couldn't Open File FrameMaker encountered a problem opening the file. For example, the file may be in the wrong format, it may have been saved with an earlier version of FrameMaker, or it may use unavailable fonts. For more information on the problem, open the file.

Book Not Self-Consistent The contents of generated files, the page count, or cross-references changed while generating and updating files in the book. FrameMaker tried to update the files again, but the contents continued to change. For example, if a book contains both a list of markers and an alphabetical list of markers, and if both contain hypertext links, the number of markers grows each time the files are generated. If this happens, move one of the generated lists out of the Include scroll list when you use the Generate/Update command again.

IMPROVING PERFORMANCE

To generate and update files faster, open as many of the files in the book as possible before you use the Generate/Update command. After using the command, save all the files in the book and the book file. This makes generating and updating faster the next time. (If you don't have saved copies of these files, FrameMaker may need to scan them twice for operations such as calculating page count and updating page numbers.)

To add or delete empty pages

After you generate a book, you may find that you didn't set up your documents' pagination properly, and you may need to add or delete an extra page so that each file in the book starts on the side (left or right) you want. Every file in a book has its own setting that tells FrameMaker whether to add or delete a page before saving or printing the document. (For information on this setting, see "Determining how pages are numbered" on page 18-14.) If, when the book is generated, the setting causes FrameMaker to add or delete a page in a document, then the next document in the book may start on the wrong side. You can make sure the pagination in a book is correct by changing a document's setup through the book file. Changing the setting in the book file overrides the individual document's setup.

1. **In the book window, select the filename right after the file with the extra page.**
   For example, if the first chapter contains an extra page, select the second chapter.
2. **Choose Set Up File from the File menu in the book window.**
3. **In the Set Up File dialog box, change the setting in the Starting Page Side pop-up menu.**
   Change the setting to Left or Right as appropriate, or change it to Next Available Side. For details, see "To specify the numbering properties" on page 24-13.
4. **Save the book file.**

WORKING WITH FILES IN A BOOK WINDOW

You can use a book window to open, save, print, and close individual files in a book. You can also open, save, and close all the files in a book and print and update the format of several files or all the files.

To open files

You can use the book window to open a single file or all the files in a book at once.

- **To open one file in a book, double-click its filename in the book window.**
  You can also select the file in the book window and press Return. You can use the Open command on the File menu in the book window to open any file, whether or not it's in the book.
- **To open all files in a book, hold down Shift and choose Open All Files in Book from the File menu in the book window.**

IMPROVING PERFORMANCE

You can open files more quickly with the Open All Files in Book command if you first suspend the automatic updating of text insets and cross-references. To do so, choose Suppress Automatic Reference Updating from the Edit menu in the book window. In the Suppress Automatic Reference Updating dialog box, turn on the checkbox and click Set. This suppresses automatic updating, but only when you use the Open All Files in Book command. When you open an individual document that has automatic update settings on, text insets and cross-references still update.

To print files

You can print one or more files from a book window. The normal printing options are available, except for thumbnails and print range; FrameMaker always prints the entire file when you print a file from a book.

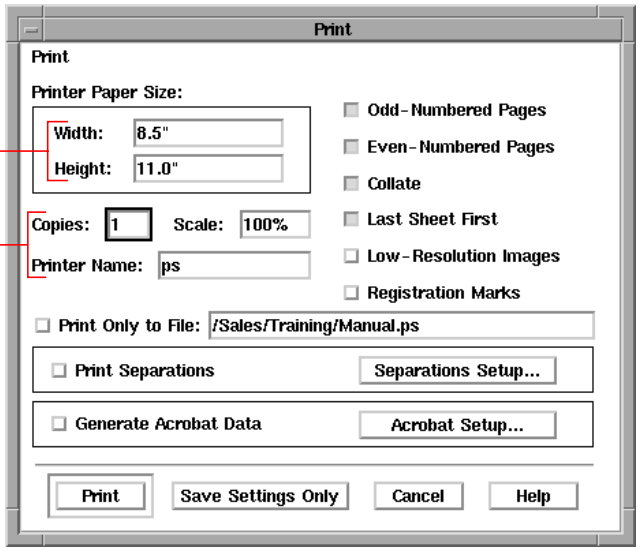
To make sure your page numbering, cross-references, text insets, and generated files are up to date, generate and update the book before you print files from it.

1. **Choose Print from the File menu in the book window.**
2. **In the Print Book Files dialog box, move the names of files you want to print to the Print scroll list.**
   To move a filename between scroll lists, select the filename and click an arrow, or double-click the filename. To move all filenames from one scroll list to the other, Shift-click an arrow.
3. **Click Print.**

4 Specify printing options in the Print dialog box.

Make sure these numbers match the size of paper in the printer.

Type the number of copies to print and the name of the printer.



You can create a PostScript print file by typing a filename in the Print Only to File text box. Be aware that a PostScript file for a big book can be quite large. You can create a separate PostScript file for each file in the book by typing an asterisk (*) for the PostScript filename in the Print Only to File text box.

For information on the other options in the dialog box, see "To customize printing" on page 2-39.

5 Click Print.

To stop printing, press Control-c.

PRINTING SPECIFIC PAGES IN A FILE

You can print specific pages in a file as you normally do—open the file, choose Print from the File menu, type the start and end page numbers in the Print dialog box, and click Print.

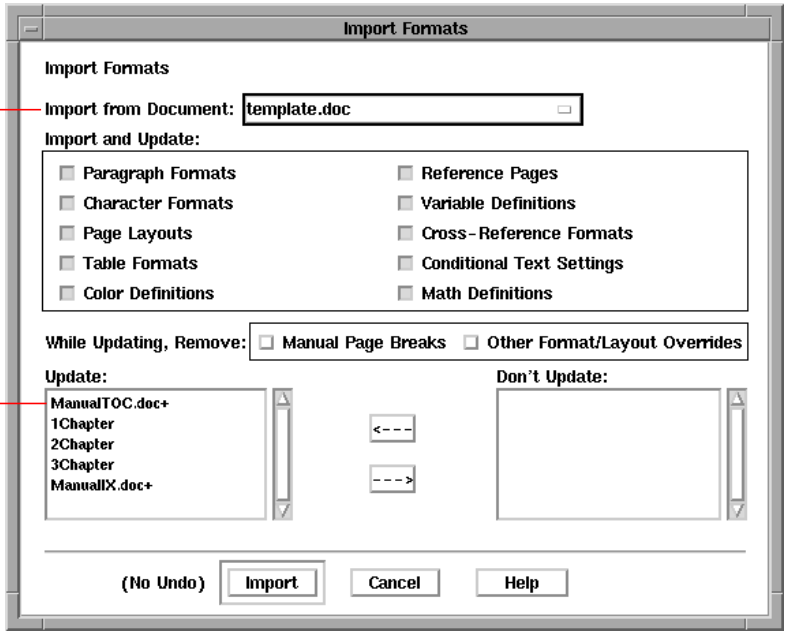
To update the format of files

If you want to change the page design, paragraph formats, or other formats in a chapter, you can make the changes in one file and then update all the chapters in the book at once. You can update files more quickly if you open as many of the files in the book as possible before using the Import>Formats command.

1 **Open the file with the formats you want to use.**
The file must be named and saved.

2 **In the book window, choose Import>Formats from the File menu.**

3 **Specify the file with the formats and the files you want to update.**



Choose the file with the formats you want to use.

Move the files you want to update into the Update scroll list.

The Import from Document pop-up menu lists all open, saved documents.

To move a filename between scroll lists, select the filename and click an arrow, or double-click the filename. To move all filenames from one scroll list to the other, Shift-click an arrow.

4 **Turn on the Import and Update settings you want to apply to the files.**
For information on these settings, see "Import and update settings" on page 21-14.

5 **To remove format overrides, turn on While Updating, Remove settings.**
If you turn on Manual Page Breaks, FrameMaker removes page breaks that are not part of a paragraph's format definition.

If you turn on Other Format/Layout Overrides, FrameMaker removes paragraph, character, page layout, and table formatting overrides.

6 **Click Import.**
If a file is open, FrameMaker updates it only in your computer's memory and not on the disk. You need to save the file to keep the changes. If a file isn't open, FrameMaker changes it on the disk.

To save or close all files

You can save or close one document in a book file just as you do with any other file—by using the Save or Close command on the document's File menu. But you can also save or close all open files in a book at once.

- **To save all files in a book, hold down Shift and choose Save All Files in Book from the File menu in the book window.**
  FrameMaker saves the book file and all open files in the book that have changed.
- **To close all files in a book, hold down Shift and choose Close All Files in Book from the File menu in the book window.**
  FrameMaker closes the book file and all open files in the book.

To close a book file

Close a book file when you finish using it.

- **To close the current book file, choose Close from File menu in the book window.**
  If changes made to the book haven't been saved, FrameMaker asks whether you want to save the changes or cancel closing the book.

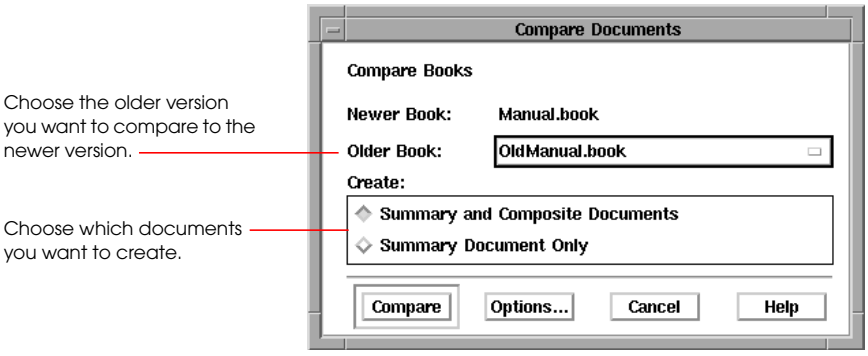
COMPARING BOOKS

You may want to keep different versions of a book as you work on the book or as you prepare it for production. FrameMaker can compare two versions of a book to show you what has changed in the newer version. It looks not only at the text in the two versions, but also at footnotes, markers, anchored frames, text insets, variables, and cross-references.

To compare two versions of a book

When you compare two versions of a book, FrameMaker creates two documents that explain the results—a composite document that lets you see the differences side by side and a summary report of the differences. FrameMaker compares only the documents whose filenames match between the two books. For more information on how FrameMaker compares documents, see "Comparing document versions" on page 25-9.

1. **Open both versions of the book file.**
2. **In the newer version, choose Utilities>Compare Books from the File menu in the book window.**
3. **Choose the older version and which documents you want FrameMaker to create.**



The Older Book pop-up menu lists all open, named book files.

4. **Click Options and set up the comparison options in the Comparison Options dialog box.**
   For information on the options in this dialog box, see "To compare two versions of a document" on page 25-10.
5. **Click Compare.**
   When the comparison is complete, FrameMaker displays the summary and composite documents. The summary document, named *newerbook*`Summary`, lists differences in setup information. Composite documents, named *filename*`CMP`, describe the differences in each file. The documents are all placed in the newer book's directory. If files with these names already exist, FrameMaker does not overwrite them, but saves the older files, adding the extension `.backup` to their names.

   If there are no differences between the two versions, FrameMaker displays an alert and does not create any new documents.

PART VI

Version Management

25

REVISION MANAGEMENT

Managing document revisions and comparing versions

MARKING REVISIONS WITH CHANGE BARS 25-4

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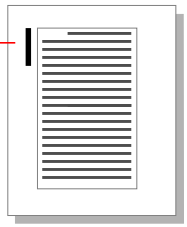
25 REVISION MANAGEMENT

When you revise a document, FrameMaker helps you keep track of the revisions. You can add change bars, create revision pages, and compare two versions.

Change bars flag document revisions

When you revise a document, you may want to keep track of changes for yourself or for your readers. Change bars are an effective way of identifying new or changed material.

A change bar visually identifies new or revised text.



You can have change bars appear automatically when you edit text, or you can insert change bars in specific locations. Later, you can remove all change bars in the document or you can selectively remove individual change bars.

Revision pages preserve existing pagination

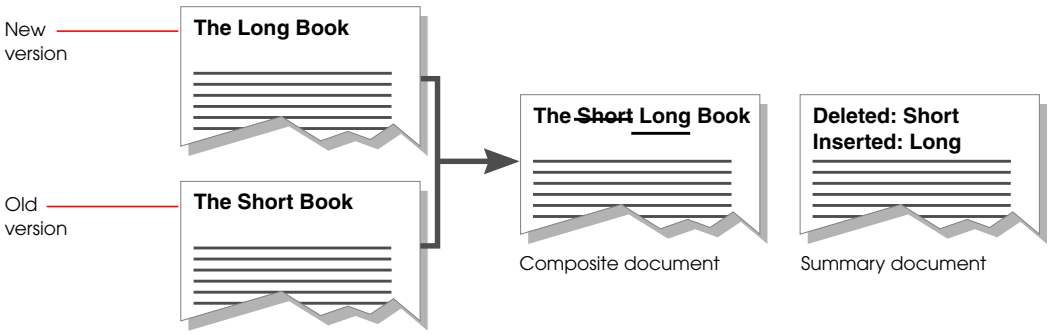
You can use revision pages to replace existing pages, or you can insert them between existing pages. Then you can print and distribute only the revised pages. Later, you can repaginate the document to once again number the pages consecutively.

You can compare the revision with the original

If you receive a revised document with changes that have not been flagged by change bars or revision pages, or if you want more specific

information on the changes, you can compare the new version to the old version.

FrameMaker creates a composite document and a summary document when you compare two versions of a document.



The composite document is a conditional document that combines both versions to allow you to see the changes side by side. The summary document contains a general summary and a revision list for each type of item being compared.

In this chapter

This chapter shows you how to use change bars and revision pages to indicate document changes and how to compare a revision with the original.

MARKING REVISIONS WITH CHANGE BARS

A change bar is a vertical line (usually in the margin) that visually identifies new or revised text. You can have change bars appear automatically whenever you insert, change, or delete text, or you can select the specific text that you want marked with change bars. If you want all changes marked, you should let FrameMaker automatically insert the change bars. However, if you want only occasional changes marked, it is probably easier to mark the text yourself.

Later you may want to remove the change bars from text. For example, between drafts of a manual you'll want to erase the old change bars before adding new ones. Or you can also remove individual change bars.

When you add change bars to text, you change the paragraph's format so that it no longer matches the Paragraph Catalog format with the same tag. If you later update the document with the paragraph formats from another document and you remove format overrides, the change bars are removed.

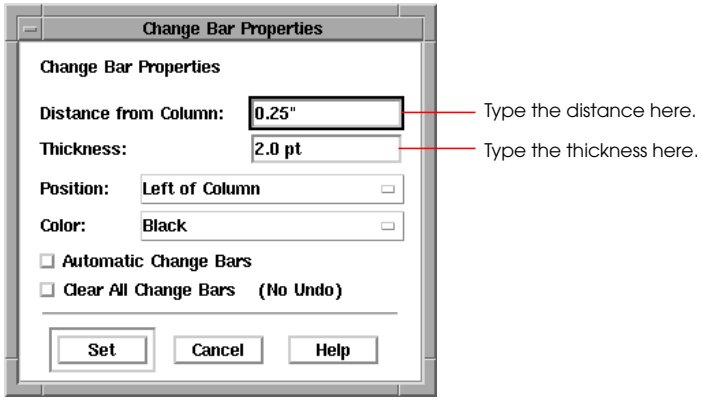
If you have two versions of a document, you can insert change bars in the newer version by comparing the versions. For information on adding change bars this way, see "Adding only change bars" on page 25-13.

To add change bars automatically

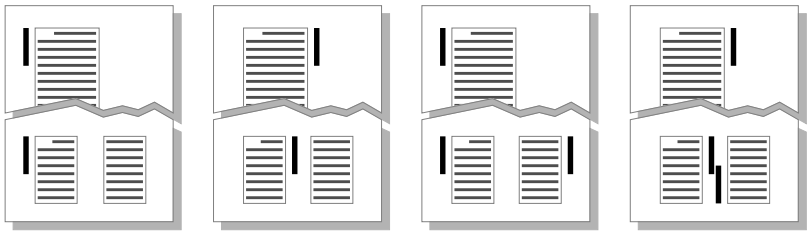
If it's important that every change you make to a document be flagged, you can have FrameMaker add change bars automatically. For example, if a document's revisions will be incorporated into translated versions, it's important that the language translators see where even the smallest changes occur.

1 **Choose Document>Change Bars from the Format menu.**

2 **Specify the distance from the column of text to the change bars and the thickness of the bars.**



3 **Choose the position of the change bars from the Position pop-up menu.**
The position is relative to the edges of the column that contains the changed text, regardless of whether it's a single- or multicolumn page.



4 **Choose a color for the change bars from the Color pop-up menu.**

5 **Turn on Automatic Change Bars and click Set.**

POSITIONING CHANGE BARS

On a two-column page, you probably wouldn't choose the side farther from the page edge because that would put the change bar next to the other column. On a single-column page, you could choose nearer or farther, but you would probably choose farther to put the change bar in the wider margin.

To add change bars to selected text

At times, you may want to flag only the most important changes to your document rather than flag every change. For example, if you're sending out the second revision of a document for review, you may not want to call the reviewers' attention to every added comma or reorganized sentence. Instead, you probably want them to focus on substantive changes.

For these situations, you can select specific text to mark with change bars rather than add them automatically.

1 **Select the text you want to mark.**

2 **Choose Characters>Designer from the Format menu.**

3 **Turn on the Change Bar property in the Character Designer and click Apply.**
The change bar will appear next to only the lines you select.

ADDING CHANGE BARS TO ENTIRE PARAGRAPHS

If you want to display a change bar next to one or more entire paragraphs, regardless of how much text in the paragraphs has actually changed, click in a paragraph or select several paragraphs. Then choose Paragraphs>Designer from the Format menu. In the Paragraph Designer, turn on Change Bar in the Default Font properties and click Apply.

To create a character format that adds change bars

Another way to selectively apply change bars to text is to create a character format that adds change bars. Creating a character format is probably the easiest way to selectively apply change bars; once you create a character format, you simply select the text and apply the character format to it. Using a character format also allows you to retain change bars when you update your document with new paragraph formats and remove format overrides.

1. **Click in any paragraph and choose Characters>Designer from the Format menu.**
2. **In the Character Designer, choose Set Window to As Is from the Commands pop-up menu.**
3. **Turn on Change Bar.**
4. **Choose New Format from the Commands pop-up menu.**
5. **In the New Format dialog box, type a tag name and turn on Store in Catalog.**
6. **Click Create.**

To remove change bars

Regardless of how you added change bars to your document, you can remove them all at once or selectively. For example, if you change your mind about a revised paragraph and restore the original, you save your reviewers confusion if you remove the change bar next to the paragraph.

- **To clear all change bars from a document, use the Document>Change Bars command on the Format menu.**
  In the Change Bars dialog box, turn on Clear All Change Bars and click Set.
- **To remove several change bars, use the Character Designer.**
  Choose Characters>Designer from the Format menu. For each change bar you want to remove, select the text with the change bar, turn off Change Bar, and click Apply.
- **To remove a single change bar, select the text and press Esc c h.**
  This technique is especially useful during revision, when you change a passage and then change it back to its original state.

- **To remove a change bar applied by a character format, select the text and apply the Default ¶ Font from the Character Catalog.**
  This removes the change bar character format.

REMOVING A CHARACTER TAG

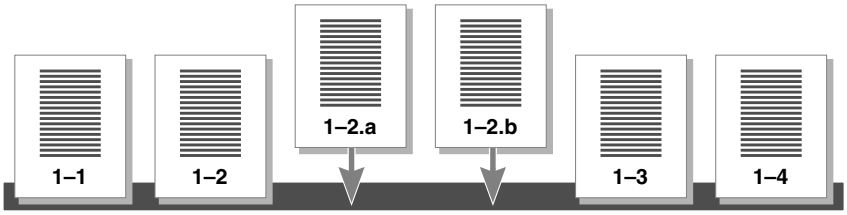
If you've marked text as changed by applying a character format that displays a change bar, you can remove the change bar in any of the ways described above. However, the only way to remove the tag from the text is to select the text and apply the Default ¶ Font from the Character Catalog.

SEARCHING FOR CHANGED TEXT

The Find/Change command is useful for searching for text with a particular character format or tag. For example, you can search for all text with the tag you've used to apply change bars and replace it with a different character format. For information on using the Find/Change command, see Chapter 8, "Searching."

CREATING REVISION PAGES

When you add or delete parts of a document, the page numbers of existing text and graphics may change. Rather than change the pagination of existing material, you may want to issue revision pages. A revision page inserted between existing pages is called a *point page* because FrameMaker appends a period (or "point") and a number or letter to the previous page number.



The page numbers of point pages are based on the number of the main page before them.

You can create revision pages only in a document with a single text flow and no body page overrides of master page layouts.

To freeze pagination

If you intend to use revision pages in a document, freeze the pagination before revising the document. When you add text or graphics, FrameMaker inserts revision pages for the new material; when you delete text or graphics, FrameMaker does not repaginate the existing pages.

1 **Press Esc p z to display the Freeze Pagination dialog box.**

2 **Choose a numbering style for point pages from the Point Page # Style pop-up menu.**

Choose	For numbering that looks like this
Numeric	2.3
roman	2.iii
ROMAN	2.III
alphabetic	2.c
ALPHABETIC	2.C

3 **Click Freeze.**

CHANGING THE NUMBERING STYLE

Later, if you want to change the numbering style without unfreezing the document, you can press Esc p z to display the Unfreeze Pagination dialog box. Choose a different numbering style and then click Set Page # Style. FrameMaker immediately changes the point page numbering style throughout the document.

DOCUMENTS WITH MULTIPAGE TABLES OR FLOATING ANCHORED FRAMES

If a document contains multipage tables or anchored frames with Floating on, freezing pagination may produce undesirable results. Check the document's page numbering carefully after freezing the pagination.

PARAGRAPHS THAT BREAK BETWEEN PAGES

If a document contains paragraphs that break between pages, freezing pagination may produce undesirable results. The portion of a paragraph that occurs on a revision page becomes its own separate paragraph or page. When you unfreeze the pagination, FrameMaker can't merge the portion with its previous paragraph.

To unfreeze pagination

After printing your revision pages, you can repaginate the document so that it once again numbers all pages consecutively.

1 **Press Esc p z to display the Unfreeze Pagination dialog box.**

2 **Click Unfreeze.**

To avoid having empty pages after the last repaginated page, choose Delete Empty Pages in the Numbering dialog box. For more information, see "To add or delete empty pages at the end of a document" on page 18-15.

COMPARING DOCUMENT VERSIONS

When you compare two versions of a document, FrameMaker creates two documents that explain the results—a composite document that lets you see the differences side by side and a summary report of the differences.

The *composite* document is a conditional document. You choose the condition tag you want to apply to changed text, and you specify whether FrameMaker should flag changes with change bars. In the composite document, differences are considered to be insertions or deletions. For information on conditional documents, see Chapter 26, "Conditional Documents."

The *summary* document contains a general summary and a revision list for each type of item being compared. You can create the summary document as a hypertext document, with links to the actual pages where the changes occurred. By creating a hypertext summary document, you can quickly display changed pages for reading or editing. In the summary document, differences are considered to be insertions, deletions, or changes.

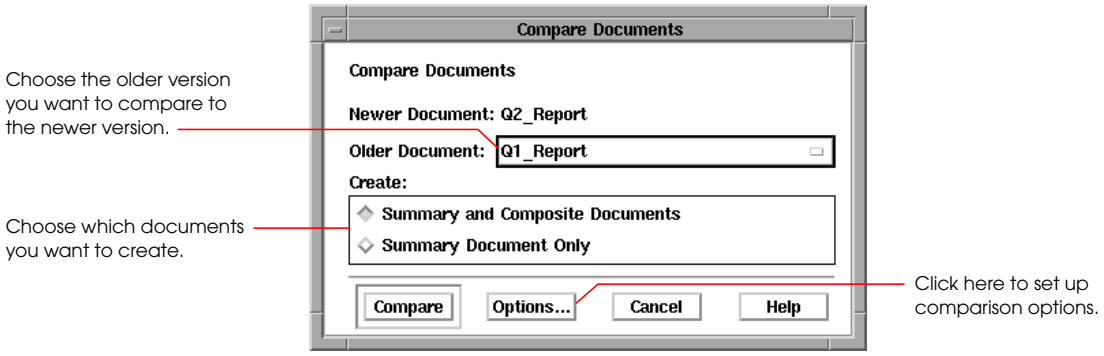
For information on how these documents are organized, see "Reading the composite and summary documents" on page 25-14. For information on comparing book versions, see "Comparing books" on page 24-27.

To compare two versions of a document

This section explains how to compare two versions of a document in general terms. Subsequent sections describe how to set up the comparison options for handling inserted and deleted text, adding change bars, and generating a hypertext summary document.

When FrameMaker compares the content of documents it also compares formats that affect content—variables and cross-references.

1. **Open both versions of the document.**
   If the documents contain conditional text, all conditions must be visible.
2. **In the newer version, choose Utilities>Compare Documents from the File menu.**
3. **Choose the older version and the documents you want FrameMaker to create.**



All open, named documents (except the current document) are listed in the Older Document pop-up menu.

4. **Click Options and set up the comparison options in the Comparison Options dialog box.**
   For information on the options in the dialog box, see "To handle inserted and deleted text in the composite document" on page 25-11, "To insert change bars in the composite document" on page 25-13, and "To create a hypertext summary document" on page 25-13.
5. **Click Compare.**
   When the comparison is complete, FrameMaker displays the summary and composite documents. If there are no differences between the two versions, neither document is created.

For information on the form and content of composite and summary documents, including a complete list of the items compared in them, see “Reading the composite and summary documents” on page 25-14.

COMPARING DOCUMENTS THAT CONTAIN CONDITIONAL TEXT

When you want to compare the full texts of two documents that contain conditional text, you simply show all conditions before performing the comparison. However, when you want to exclude some conditions from the comparison, you need to save copies of both documents, show the tags of the conditions you want to compare, and delete the rest of the tags. Simply hiding these conditions saves you the step of copying the documents, but it gives you unexpected results.

When you want to compare the different conditions in a single document, save two copies of the document, show different tags in the two documents, and, in both, delete tags for all the conditions you don’t show. For information, see Chapter 26, “Conditional Documents.”

COMPOSITE AND SUMMARY DOCUMENT FILENAMES

The composite document has the same name as the newer version with `CMP` appended to the end. For example, if the newer version is named `Report3`, FrameMaker names the composite document `Report3CMP.doc`.

The summary document is named `Summary.doc`. If you create multiple summary documents, unlock the file by pressing Esc F l (lowercase *L*) k and use the Save As command to give the documents unique names.

COMPARING DOCUMENTS WITH MULTIPLE FLOWS

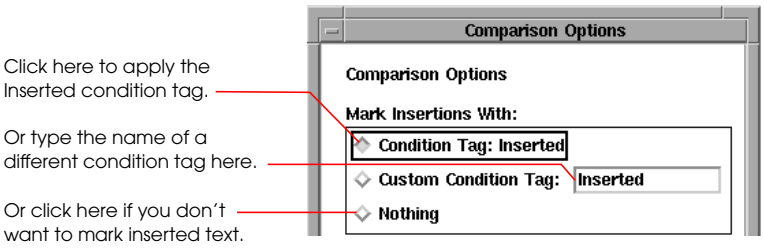
You can compare documents with multiple flows. However, to prevent FrameMaker from comparing the wrong flows, make sure each flow has a unique tag and that the flows to compare have the same flow tag. For information on changing a flow tag, see “To change a flow tag” on page 20-9.

To handle inserted and deleted text in the composite document

In the composite document, all changes are considered insertions or deletions. You can choose how you want the composite document to indicate inserted and deleted text by using the Comparison Options dialog box. When the composite document is displayed, conditional text is visible and the condition indicators are on.

For information on displaying the Comparison Options dialog box, see “To compare two versions of a document” on page 25-10.

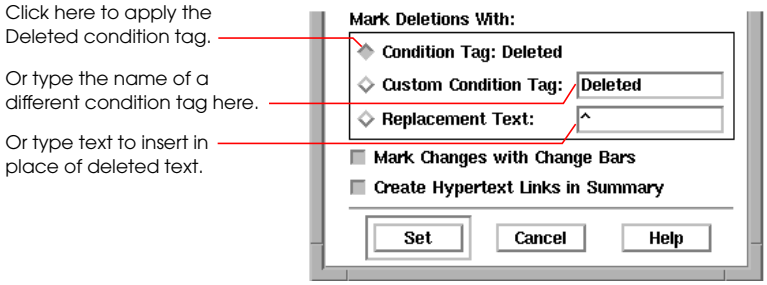
- **To mark inserted text, choose one of the Mark Insertions With settings in the top half of the Comparison Options dialog box.**



The preset condition indicators for the Inserted condition tag are green and underline.

Click Set when you're ready to return to the Compare Documents dialog box.

- **To mark deleted text, choose one of the Mark Deletions With settings in the bottom half of the Comparison Options dialog box.**



The preset condition indicators for the Deleted condition tag are red and strikethrough.

You can specify any text to substitute for deleted text. For example, you can substitute *Confidential* everywhere that text has been deleted.

Click Set when you're ready to return to the Compare Documents dialog box.

- **To leave deleted text out, click Replacement Text in the Mark Deletions With area and leave the text box empty.**

To insert change bars in the composite document

When you want to call attention to changes in the composite document, you can mark them with change bars.

- **In the Comparison Options dialog box, turn on Mark Changes with Change Bars.**
  FrameMaker uses the current settings in the Change Bars dialog box. For details, see "To add change bars automatically" on page 25-4.

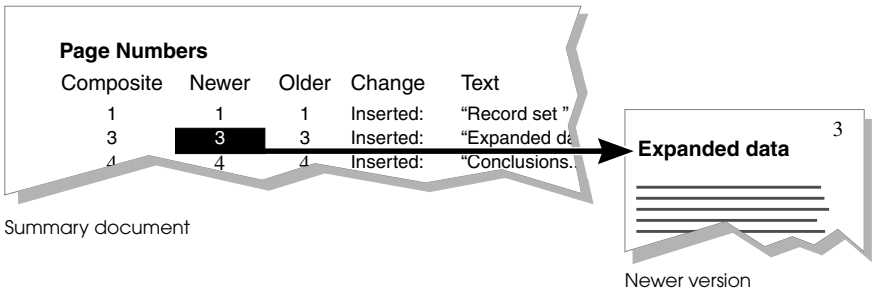
  For information on displaying the Comparison Options dialog box, see "To compare two versions of a document" on page 25-10.

ADDING ONLY CHANGE BARS

When all you want to do is add change bars to a newer version of a document, turn on Mark Changes with Change Bars in the Comparison Options dialog box, click Nothing in the Mark Insertions With area, and click Replacement Text in the Mark Deletions With area. Leave the Replacement text box empty. The composite document will be a copy of the newer version with change bars marking all changes.

To create a hypertext summary document

If you're going to use the summary document to help you work in the source documents, you may want to generate the summary as a hypertext document. When you do so, the page numbers in the summary document become active areas, with hypertext links to the newer version, the older version, and the composite document. When you click the page number of an indicated change, FrameMaker displays the page in the source document that contains that change.



- **In the Comparison Options dialog box, turn on Create Hypertext Links in Summary.**
  In the summary document, click on the page number of the page to display.

  For information on displaying the Comparison Options dialog box, see "To compare two versions of a document" on page 25-10.

USING HYPERTEXT DOCUMENTS

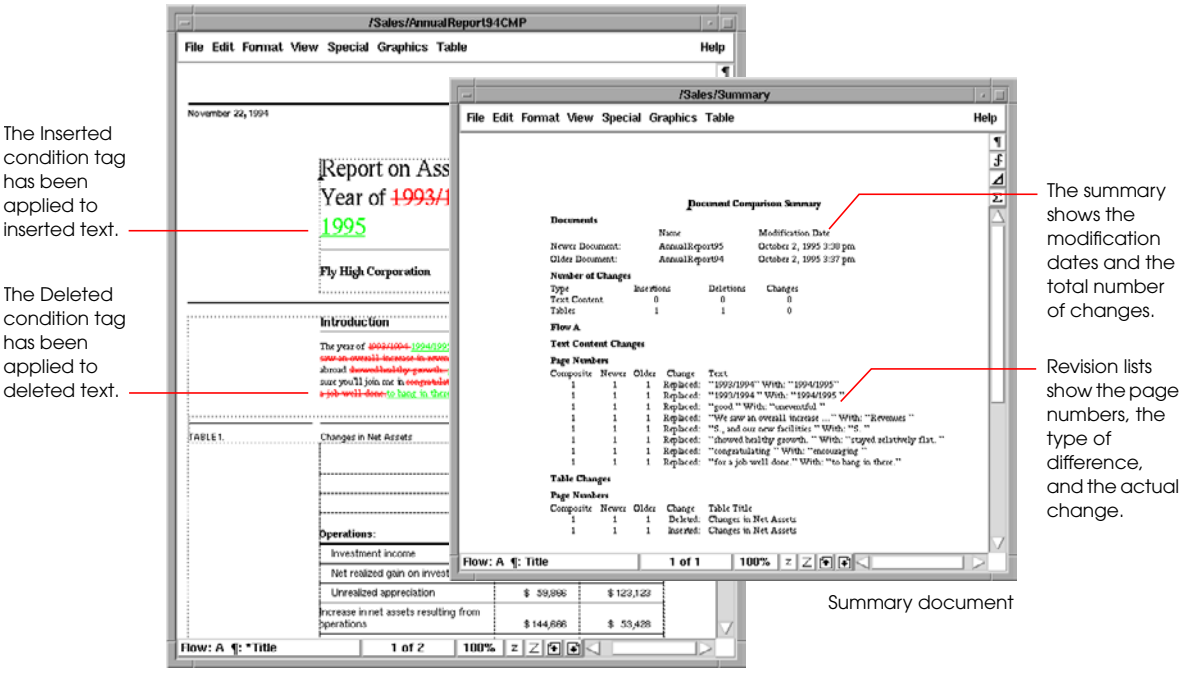
For information on hypertext documents, see Chapter 27, “Hypertext and View-Only Documents.” For information on generating hypertext lists and documents, especially note the section “Adding hypertext links to generated files” on page 27-27.

COMPOSITE DOCUMENT

In the composite document, FrameMaker considers all changes to be insertions or deletions. For example, if the contents of a graphic frame have changed, both versions appear in the composite: the older version is marked as deleted; the

READING THE COMPOSITE AND SUMMARY DOCUMENTS

The composite document starts out as a copy of the newer version. As the newer version is compared to the old version, inserted text is flagged and text that was deleted is pasted in and flagged. The summary document begins with a general summary and then contains a revision list for each type of item compared (flows, text, variables, and so on).



newer version is marked as inserted. Variables in the composite document use the newer definitions; however, they aren't marked as changed. Only inserted and deleted variables are considered changes.

SUMMARY DOCUMENT

In the summary document, differences are considered insertions, deletions, or changes. If an item has moved, it's marked as deleted and inserted. Regardless of the change, FrameMaker displays the number of the page on which the change occurs in the composite document, the newer document, and the older document. For insertions, the page number given for the older version is the page where the item would be inserted to match the newer version. For deletions, the page number for the newer version is the page where the item would have appeared if it hadn't been deleted.

If your document contains duplicate markers, the first occurrence of the marker is listed in the summary document. You can find the other occurrences in the document by using the Find/Change command.

ITEMS COMPARED

When comparing two versions of a document, FrameMaker checks the contents of flows with the same names on body and reference pages. When checking these flows, it looks at inserted and deleted text, footnotes, anchored frames, tables, variables and their definitions, cross-reference formats and references, footnote text, and marker types and text.

When comparing *anchored frames,* FrameMaker compares the objects in the frame. If the objects in the frame are different, or if they are in different positions, FrameMaker marks the entire anchored frame as changed. For example, when you change the order of objects in the frame—by using the Front or Back command—FrameMaker considers the anchored frame changed.

When comparing *text insets*, FrameMaker compares the modification date, the filename, the relative pathnames of text insets, and the way the inset was imported (for example, if the lines were merged into paragraphs, each line was imported as a paragraph, or if the text was converted to a table). If any of these are different, FrameMaker marks the entire text inset as changed.

When comparing *graphic insets* and *imported graphics,* FrameMaker compares the contents and dpi of the inset or imported graphic. For example, FrameMaker checks whether the object has been flipped, inverted, or rotated. It also compares the size of the bounding box. When comparing imported graphics, FrameMaker compares how the graphic was imported—by reference or by copying. If the graphic was imported by reference, FrameMaker compares the relative pathnames. If any of these are different, FrameMaker marks as

changed the line that contains the anchored frame of the graphic inset or the imported graphic.

When comparing *equations,* FrameMaker compares the size of the equation, the location of the equation within its graphic frame, and the math expressions. If there are differences in any of these areas, FrameMaker marks the entire equation as changed.

When comparing *tables,* FrameMaker checks the number of rows and columns, whether cells are straddled, and whether cells are rotated. If any of these are different, FrameMaker marks the entire table as changed. If text in cells has changed, only the new table appears in the composite document and FrameMaker marks as changed the line that contains the table's anchored frame. If more than 75 percent of the cells have changed, FrameMaker marks the entire table as changed.

ITEMS NOT COMPARED

FrameMaker doesn't compare master page flows (including header and footer flows) or untagged flows; graphic objects or text lines not in anchored frames; anchored frame positions; footnote properties or numbers; paragraph, character, or table tags; text or table formatting; tags in the Paragraph Catalog, Character Catalog, or Table Catalog; or the contents of text insets. Because FrameMaker doesn't check the formatting of text or tables, FrameMaker won't notice different ruling or shading in a table or a different color assigned to text.

26

CONDITIONAL DOCUMENTS

Maintaining multiple versions in one document

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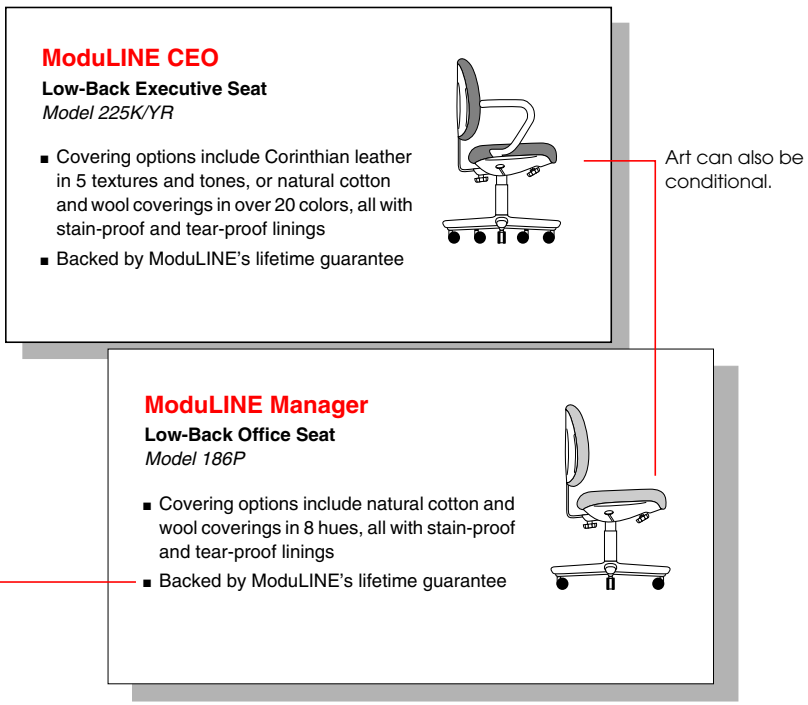
26 CONDITIONAL DOCUMENTS

If you're preparing several versions of a document, each with minor differences, you can use one FrameMaker document for all the versions. You create multiple versions of the same document by using conditional text. You can also use conditional graphics.

Conditional text for each version

Conditional text is specific to one version of a document. Unconditional text is common to all versions. You can use conditional text to produce separate documents for similar products, for example, or to include comments, which can be hidden before you print the final copy.

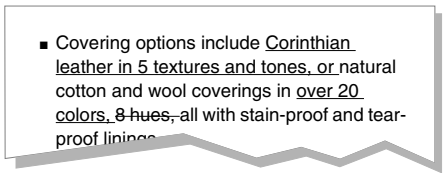


You can make any unit of text conditional, from one character to entire sections. Graphics, tables, cross-references, footnotes, markers, and table rows can be conditional.

Conditional text is easy to see

Using condition indicators, you can change the appearance of conditional text to make it easy to identify.

Condition indicators (underline and strikethrough) identify two conditions.



FrameMaker gives you many choices for viewing and printing conditional text. You can view all versions of a document at the same time, show all condition indicators, turn off the condition indicators, or hide selected versions of the document. Whatever you display is what appears in the printed document.

You can add comments you don't want to print

As you work on a document, you may want to write notes to yourself or to your reviewers. You may want to include these comments in early drafts but not in the final printed draft. You can manage such a situation by using conditional text for your comments.

You can merge separate versions

If you already have two versions of a document, you can merge them into one conditional document for future editing. When you merge two versions, FrameMaker compares the versions and creates a composite conditional document.

In this chapter

This chapter shows you how to plan and work in a conditional document. It also provides information on creating and using conditional tags. For information on merging and comparing documents, see Chapter 25, "Revision Management."

PLANNING A CONDITIONAL DOCUMENT

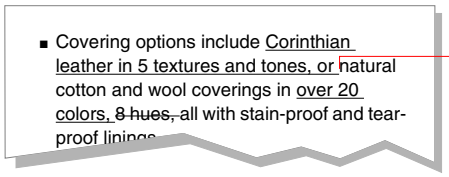
When planning a conditional document, you should examine the nature of the material and, because others may have to work in or maintain a conditional document you create, look at how different people can take turns working with it. Plan to treat conditional material consistently to make the document easier to use and maintain. Others will need to know the conventions you followed as you applied condition tags. The guidelines that follow will help you plan a conditional document and make sure it conforms to your plan.

To think through the project

- **Define what the finished versions of your document should look like.**
  For example, if you are creating a manual that describes a program that runs on both UNIX and Windows platforms, you might want to be able to produce at least two *versions*: a UNIX version and a Windows version. If you want to produce these versions with editorial comments sprinkled in the text during the review process, you will want even more versions: UNIX with comments, UNIX without comments, Windows with comments, and Windows without comments.
- **Decide how many condition tags are necessary to achieve the desired versions.**
  A version of a document is defined by a unique set of *condition tags*. For example, a version of a finished UNIX manual might be defined by having a UNIX condition tag showing, a Windows condition tag hidden, and a Comments condition tag hidden.
- **Evaluate the extent to which the document can be conditional and how you can organize the material to simplify development and maintenance.**
  For example, you might be able to organize a book so it has some chapters that are conditional, some that are the same for all versions, and some that are different for each version.
- **Identify the items you can handle with variables instead of conditional text.**
  Words and phrases—for example, product and company names—are easier to work with as variables.
- **Determine the smallest unit of conditional text.**
  For example, if a conditional document will be translated, a whole sentence should be the smallest amount of text you make conditional. Because word order often changes during translation, using conditional text for part of a sentence could complicate translation.

- **Decide whether to make spaces and punctuation conditional.**
  If conditional text begins or ends with punctuation, make the punctuation conditional too. This makes the text easier to read when you're viewing more than one version.

  To avoid word spacing problems, such as having an unconditional space followed by a conditional space, set standards for handling spaces following conditional text (either always conditional or always unconditional).



To plan ahead for other users

- **If a conditional document has several authors, plan document structure and work flow.**
  Break a document into several small files so several people can work on different parts of the document at the same time.
- **Decide how you will provide explanatory notes to other authors.**
  To help explain a conditional document, add comments where you think they'd be helpful and apply the predefined Comment condition tag to them. (Or, if you plan to use the Comment tag for something else, create a new condition, give it a name such as Explanation, and apply the new condition tag to your comments.)
- **For conditional text that will appear side by side, decide which condition tags to put first and use this order throughout the document.**
  The order can help distinguish tags that make up a version. It will also help subsequent authors maintain the document.

For example, text in the CEO condition always appears before text in the Manager condition.

To implement the plan

- **Use a text frame rather than a text line for the text you want to make conditional.**
  Text lines cannot be made conditional.
- **If the document will contain graphics imported by reference into a conditional anchored frame, create separate locations for the graphics in each version.**
  This simplifies file management when you need to copy or archive a version of the document with its graphics files.
- **If a document will contain conditional graphics, create a separate anchored frame for each version.**
- **Insert index markers in the appropriate conditional or unconditional text.**
  By careful placement of index markers, you can create conditional indexes. An index marker in conditional text will appear in the generated index only in a version that defines that condition tag as showing.
- **When inserting cross-references in conditional text, make sure both the reference and the source of the cross-reference have the same condition tag.**
  Otherwise, the cross-reference marker and the source marker may not appear in the document at the same time.

  When FrameMaker updates cross-references, it considers only the markers that are showing. If conditional text is hidden, FrameMaker will not find a marker in it, and the cross-references may be unresolved.

CREATING CONDITION TAGS

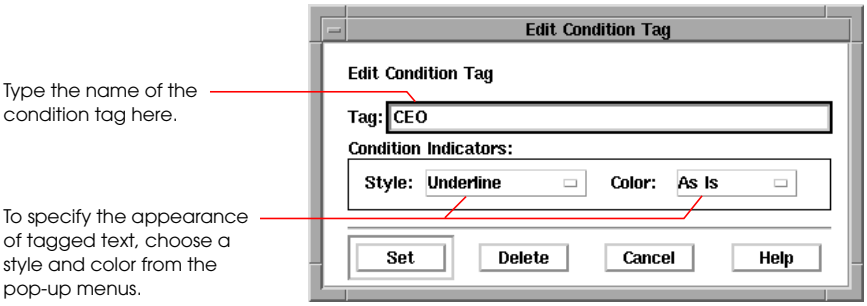
Condition tags make up a version of a document. In the product brochure example at the beginning of this chapter, there are two condition tags—CEO and Manager. You can also create a condition tag for comments that you don't want to show when the document is printed.

Each condition tag has condition indicators that can help you easily see your conditional text. You can change a condition tag's indicators at any time, or you can delete the tag altogether.

To create a condition tag

When you create condition tags, you should use condition indicators so that you can distinguish text in one version from text in another. (If your conditional document will be used to create many versions, use color indicators and work on a color monitor.) Try to use meaningful names, beginning with a unique first letter for quick tagging from the keyboard.

1. **Choose Conditional Text from the Special menu.**
2. **In the Conditional Text window, click Edit Condition Tag.**
3. **In the Edit Condition Tag dialog box, type a name, specify condition indicators for the condition tag, and click Set.**



The condition tag appears in the Conditional Text window.

USING COLORS AS CONDITION INDICATORS

Conditional text appears in magenta when it is assigned two or more overlapping condition tags that use different colors as condition indicators. For this reason, you might not want to use magenta to indicate a particular condition.

USING CONDITION TAGS FROM ANOTHER DOCUMENT

If another document has the conditional text settings that you want to use in your current document, you can import them. You do this by choosing the Import>Formats command from the File menu. For more information, see “Importing formats into a document” on page 21-12.

To change a tag's condition indicators

You can change the appearance of conditional text by changing the tag's condition indicators. You will notice the change when you display the document with its condition indicators showing. For information on how to display condition indicators, see "To change the view of a conditional document" on page 26-16.

1. **In the Conditional Text window, select the tag you want to change.**
2. **Click Edit Condition Tag.**
   The Edit Condition Tag dialog box displays the tag's current settings.
3. **In the Edit Condition Tag dialog box, use the pop-up menus in the Condition Indicators area to choose a new style or color and click Set.**
   For a tip on assigning colors, see "Using colors as condition indicators" on page 26-7.

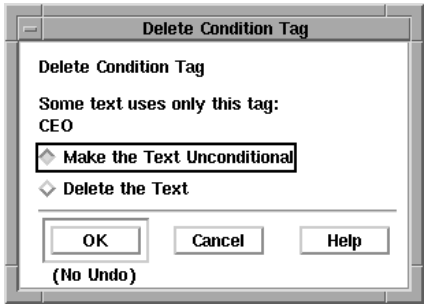
To delete a condition tag

You can delete a condition tag when you no longer need it in a document. When you delete a condition tag, you do not automatically delete text that has that tag. FrameMaker gives you the choice of making the text unconditional or deleting the text.

1. **In the Conditional Text window, select the tag you want to delete.**
2. **Click Edit Condition Tag.**
   The Edit Condition Tag dialog box displays the tag's current settings.
3. **In the Edit Condition Tag dialog box, click Delete.**
   If the document contains text with the condition tag you deleted, FrameMaker removes the condition tag from the text.

4 **If the following dialog box appears, choose either to make the text unconditional or to delete it and then click OK.**

You see this dialog box when any text in the document has only one condition tag and that tag is the one you want to delete.



TIP FOR ARCHIVING VERSIONS

A quick way to archive one version of a conditional document is to make a copy of the document and, in that copy, to delete all condition tags not used to create that version.

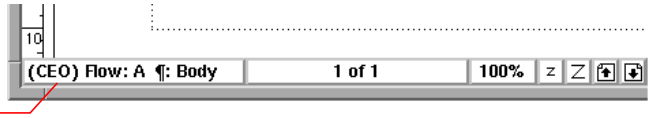
GENERATING A LIST OF CONDITION TAGS

To determine if a condition tag is being used in a document, you can generate a list or index of condition tags that appear on each page of a document. To do this, use the Generate/Book command to generate a list of references that includes condition tags. (For details, see "To generate a list" on page 22-7.) If the list shows that a condition tag has not been used, you may want to delete it.

USING CONDITION TAGS

To make text conditional, you apply tags by using the Conditional Text window, by using the keyboard, or by copying and pasting condition tag settings.

When you put the insertion point in conditional text, the text's condition tags appear in parentheses in the Tag area of the status bar.



Condition tag of selected text

In any conditional document, some text may be used in more than one version. You can apply as many condition tags to a selection of text as you like. The condition indicator of each version applied to a passage of text is visible. Text with two or more condition tags that use different colors as condition indicators always appears in magenta.

The CEO indicator is a line under the text; the Manager indicator is a line through the text; the Secretary indicator is a line over the text.

To apply or change a condition tag

When you use the Conditional Text window to apply a condition tag, you can apply more than one tag to a selection at a time.

1 **Select the item you want to make conditional.**

To make this conditional	Select
Text in a text frame, table cell, or footnote	Text
Anchored frame and its contents	Frame's border or anchor symbol
An entire table	Table's anchor symbol
Table row	Whole row
Cross-reference	Cross-reference text
Footnote	Footnote reference (the number in the main text)
Marker	Marker symbol
Variable	Variable text

To make new text you're about to type conditional, click where you want the text to begin.

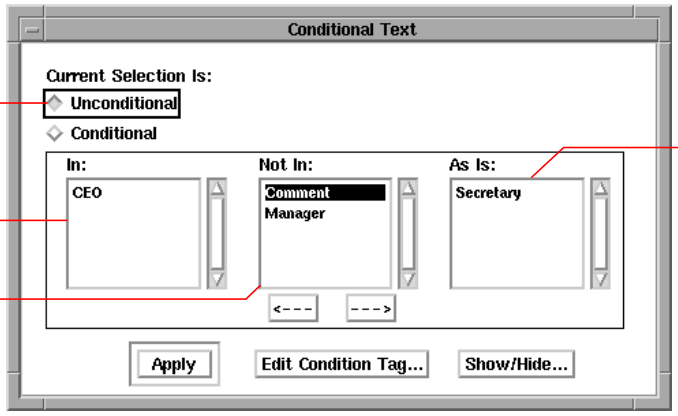
2 Choose Conditional Text from the Special menu.

The Conditional Text window shows the condition tag settings of the selected text.

If the text currently has no condition tag, the Unconditional button is on.

If *all* of the selection is in a certain condition, that tag appears here.

If *none* of the selection is in a condition, that condition tag appears here.



If only *part* of the selection is conditional, all tags appear here.

If the *entire* selection is conditional, any tags applied to only portions of the selection appear here.

3 Move the condition tags to the appropriate scroll lists.

To move a condition tag between scroll lists, select the tag and click an arrow, or double-click the tag. To move all tags from one scroll list to another, select a tag in the list and Shift-click an arrow.

To include text in a condition, select the text and move the condition tag to the In scroll list. To exclude text from a condition, select the text and move the condition tag to the Not In scroll list. Condition tags in the As Is scroll list will not be applied.

4 Click Apply.

If text is selected, FrameMaker applies the settings to the text. If you have put an insertion point in the document, the settings apply to text you type until you move the insertion point or press Return.

If you apply a condition tag that's currently hidden, the selected text disappears unless it is also part of a condition that is showing. For information on viewing hidden text, see "To change the view of a conditional document" on page 26-16.

MAKING ARTWORK CONDITIONAL

Because an anchored frame's anchor symbol is a text symbol, it can be conditional just as any other text. For this reason, you can treat graphics or artwork in anchored frames as conditional "text."

For an example of conditional artwork, see the sales brochure illustrated on page 26-2. There, one frame is anchored in text with the CEO condition, and the other frame is anchored in text with the Manager condition. The artwork, each in its own frame, is shown or hidden depending on whether the text at the anchor is shown or hidden.

KEYBOARD SHORTCUT TO CHANGE A CONDITION TAG

After selecting the item to which you want to apply a condition tag, press Control-4. The Tag area at the bottom of the document window prompts you to type the tag.

Start typing the tag name. You may need to type only a few characters before the name appears in the Tag area. Type lowercase letters to search forward; type uppercase to search backward. You can also use the up arrow and down arrow keys to scroll through the tags. Press Return to apply the condition tag or, if you decide to cancel the operation, click in the document without pressing Return.

AVOIDING UNRESOLVED CROSS-REFERENCES

If you insert a cross-reference to a source paragraph (such as a heading), and if the first word in the paragraph is conditional, the Cross-Ref marker that FrameMaker inserts is also conditional (with the first word's condition tag). This means the marker will be hidden when you hide the first word's condition tag settings. As a result, the cross-reference will be unresolved.

To avoid this, enlarge the view, carefully select just the Cross-Ref marker at the beginning of the source paragraph, and make it unconditional. The marker will always be visible so the cross-reference will be resolved no matter which version is visible.

To copy and paste condition tag settings

If a condition tag is already in use somewhere in a document, copying and pasting it is often the quickest way to apply it to other text.

1. **Put the insertion point in text with the condition tag settings you want to copy.**
   The text's condition tags appear in the Tag area.
2. **Choose Copy Special>Conditional Text Settings from the Edit menu.**
3. **Select the item to which you want to paste the tag or click to place the insertion point.**
4. **Choose Paste from the Edit menu.**
   FrameMaker applies the settings to the selected text. If no text was selected, any text you type at the insertion point will have the condition tag.

   If you paste the settings into a different document, the tag name appears in that document's Conditional Text window so you can use it again.

FIND AND CHANGE CONDITION TAG SETTINGS

You can also use the Find/Change command to paste condition tag settings. Select the text with the tags you want to paste and choose Copy Special>Conditional Text Settings. Set up the Find/Change window to search for the item you want to make conditional, and change it by using the By Pasting option on the Change pop-up menu. For more information, see "To search for conditional text" on page 8-12 and "To change by pasting from the Clipboard" on page 8-17.

To create nonprinting comments

You can apply the Comment condition tag to items that you don't want to include in the final printed draft of a document. By default, the Comment tag has condition indicators of red underline. You can change the indicators if you want to, or you can create a different tag for your comments.

1. **Apply the Comment condition tag to the comments.**
   For information on how to apply a condition tag, see "To apply or change a condition tag" on page 26-10. Alternatively, you can apply a different condition tag or change the condition indicators of the Comment tag.
2. **Use the Show/Hide dialog box to hide the comments.**
   When you print the document, the comments will not appear.

   For information on how to show or hide conditional text, see "To change the view of a conditional document" on page 26-16.

PUTTING COMMENTS IN THE MARGIN

You can put comments in margins by using anchored frames. See "Creating an anchored frame" on page 15-4.

To remove a condition tag from text

When you no longer want text to be part of a version, you can remove the text's condition tag for that version. When you remove all the tags from conditional text, either the text becomes unconditional or it is deleted, depending on your choice.

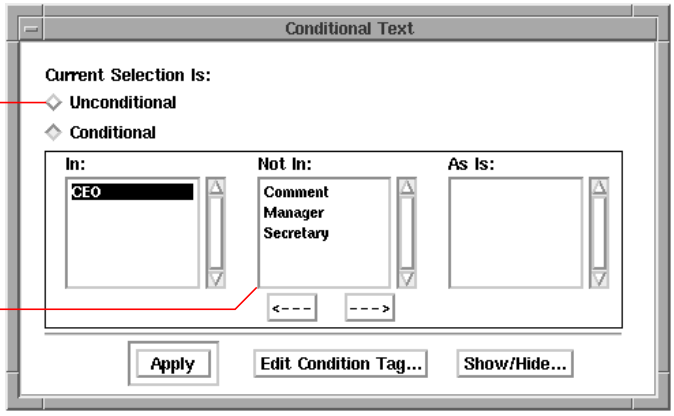
For example, when editing a document you realize that a phrase you wrote and made conditional for one version actually applies to both versions of the document. You can remove the condition tag from the text and make the text unconditional.

Removing a condition tag from text is not the same as deleting a tag from a document. When you remove a tag from text, the tag remains in the document so it can be applied again later.

1. **Select the item with the tag you want to remove.**
   For instructions on what to select, see the table in "To apply or change a condition tag" on page 26-10.
2. **Choose Conditional Text from the Special menu.**
3. **Select the condition tags you want to remove.**

If you want to remove all condition tags from the selection, click here.

If you want to choose which condition tags to remove, move them to the Not In scroll list.

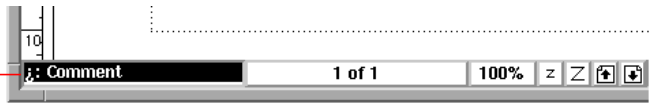


To move a condition tag between scroll lists, select the tag and click an arrow, or double-click the tag. To remove all condition tags from a selection, click Unconditional.

4 **Click Apply.**

KEYBOARD SHORTCUT TO REMOVE A CONDITION TAG

After selecting the item from which you want to remove condition tags, press Control-5. The Tag area at the bottom of the document window prompts you to type the tag.



Start typing the tag name. You may need to type only a few characters before the name appears in the Tag area. Type lowercase letters to search forward; type uppercase to search backward. You can also use the up arrow and down arrow keys to scroll through the tags. Press Return to remove the condition tag from the item or, if you decide to cancel the operation, click in the document without pressing Return.

If you're removing the last condition tag in the selection, the Remove Condition Tags dialog box appears. Choose to make the text unconditional or to delete it and then click OK.

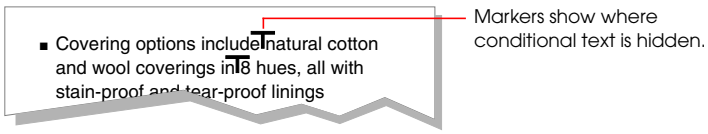
KEYBOARD SHORTCUT TO REMOVE ALL CONDITION TAGS

To remove all tags from a selected item, press Control-6.

WORKING IN A CONDITIONAL DOCUMENT

You can view or print all unconditional and conditional text simultaneously, or you can turn off the display of one or more versions. FrameMaker ignores hidden conditional text when formatting a document. Hidden conditional text is represented on the screen by a conditional text marker (T), a nonprinting text symbol.

One version showing, with condition indicators off and text symbols on



You should usually work with text symbols turned on when you're working in a conditional document. Conditional text markers alert you to text that is in other versions of the document.

If you're displaying more than one version, or if you're showing one version and want to see which part is conditional, you can turn the condition indicators on.

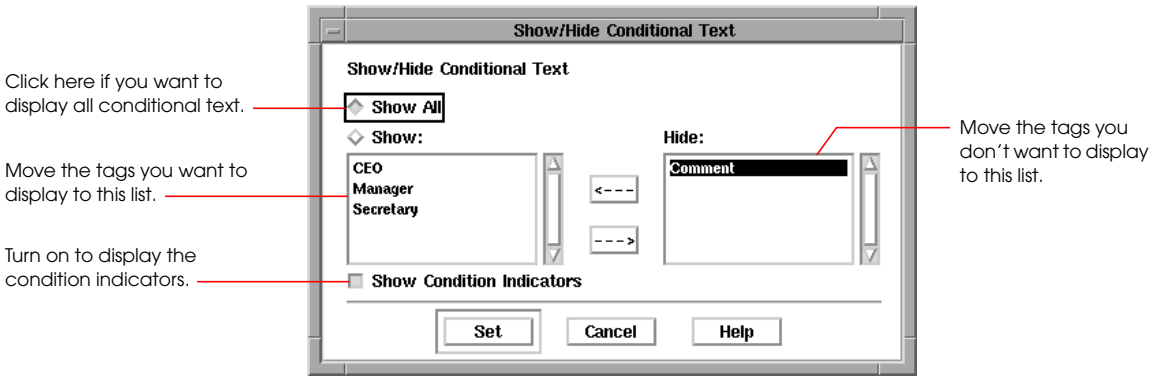
When you edit a conditional document, FrameMaker generally pays attention only to the versions currently displayed. This means, for example, that when you use the Find/Change command to locate text, FrameMaker searches through only displayed versions. However, you can cut, copy, and paste hidden text by selecting the conditional text marker (T) and by using the commands on the Edit menu.

A conditional document may need different variable definitions for each version. A simple way to manage these differences is to create a template for each version of the document with each template defining the variables for that version. Once these templates are created, you can import their formats into the conditional document.

To change the view of a conditional document

A conditional document can display any number of conditions at a time and can have any of its condition indicators on or off.

1. **Choose Conditional Text from the Special menu.**
2. **In the Conditional Text dialog box, click Show/Hide.**
3. **In the Show/Hide Conditional Text dialog box, select the condition tags of the text you want to show and indicate whether you want to display their condition indicators.**



To move a condition tag between scroll lists, select the tag and click an arrow, or double-click the tag. To move all tags from one scroll list to the other, select one tag in the list and Shift-click an arrow.

4 **Click Set.**

When text has more than one condition tag, the text will be visible if any of its tags are in the Show scroll list.

VIEWING IMPORTED CONDITIONAL TEXT

When you import text containing passages of conditional text into a document, all the condition tags applied to text in the source document are imported so that you can use them to show or hide imported conditional text. Even if the flow is imported by reference and appears in a text inset, you can change views of conditional text in the flow in the document containing the inset.

Whether a passage of conditional text is initially shown or hidden when you import it depends on the match between the condition tags in the source document and the target document (the document you're importing into).

When condition tags match	When condition tags don't match	When Show All is on in target document
Conditional text is initially shown or hidden according to the setting in the *target* document.	Conditional text is initially shown or hidden according to the setting in the *source* document.	All conditional text is initially shown.

For information on importing text, see "To import a text flow" on page 3-13 and "What gets imported" on page 3-16.

To edit conditional text

You may want to work with all conditional text visible, using condition indicators to distinguish the different conditions. Work with conditional text hidden when you don't want global changes such as finding and changing to affect certain versions.

■ **To copy and paste conditional text, use the Copy and Paste commands just as you do when working with unconditional text.**

When you copy text, FrameMaker copies its conditional text markers and condition tag settings.

When you paste text with a condition tag that's not in the destination document, FrameMaker adds the tag to the destination document.

- **To delete conditional text, use the Cut command.**
  When you try to cut hidden conditional text, FrameMaker displays an alert that asks you to either delete the text or cancel the command.
- **To apply format changes to hidden text, use the Paragraph Designer and the Character Designer.**
  Paragraph and character format changes you apply to selections don't update conditional text hidden within the selection. To apply a format change to all paragraphs or characters, including hidden conditional text, click Update All in the designer window or choose Update All from the Paragraph Format pop-up menu on the formatting bar.

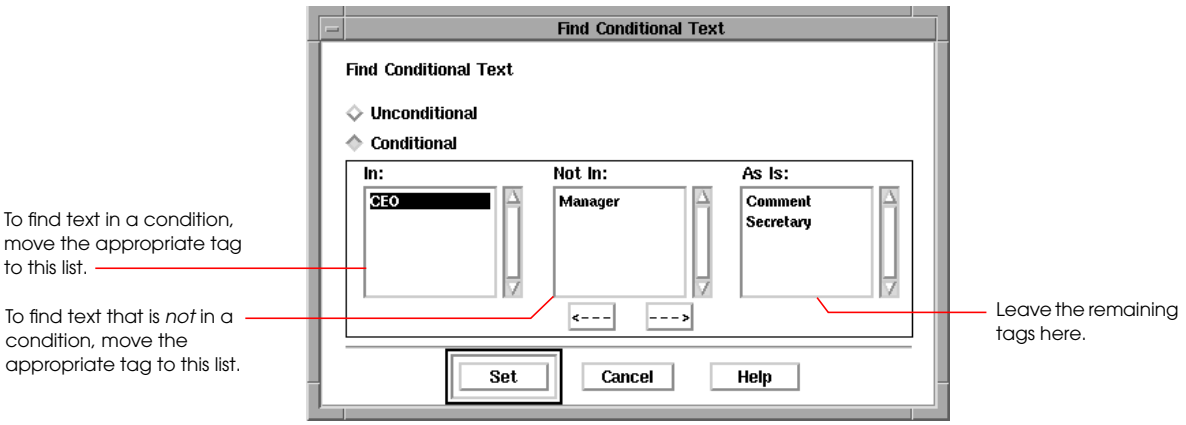
  Applying format changes with the Import>Formats command also updates hidden conditional text.
- **To spell-check all text, show all conditional text before using the Spelling Checker.**
  FrameMaker doesn't spell-check hidden conditional text.
- **To search through all text, show all conditional text before using the Find/Change command.**
  FrameMaker doesn't search through hidden conditional text.
- **To compare the full texts of two documents, show all conditional text before choosing Utilities>Compare Documents from the File menu.**
  If you want to exclude a condition from the comparison, save a copy of both documents, delete the condition tags you do not want to compare, and then compare the documents. If you want to compare the differences in a single conditional document, save two copies of the document, show different conditional settings for the one and the other, delete hidden conditions in both, and then compare the two documents. In both cases, you need to delete the conditions you don't want to compare; simply hiding them can give unexpected results.

To find conditional text

Use the Find/Change command to search for text belonging to any visible condition tag. FrameMaker will find conditional text in text frames, graphic frames, and table cells, but will not find conditional table rows. FrameMaker doesn't search through hidden conditional text.

1. **Choose Find/Change from the Edit menu.**
2. **In the Find/Change dialog box, choose Conditional Text from the Find pop-up menu.**

3 **In the Find Conditional Text dialog box, select the conditions you want to find and click Set.**



To find all conditional text, leave all tags in the As Is scroll list.

To move a condition tag between scroll lists, select the tag and click an arrow, or double-click the tag. To move all tags from one scroll list to another, select one tag in the list and Shift-click an arrow.

4 **Click Find in the Find/Change window.**

To use variables

A conditional document may need different variable definitions for each version. Create a template for each version of the document containing the definitions for each version. For example, a sales kit uses a variable with the product's name, and the conditional document describes two products. Each version also needs different header and footer information. Create a template for each version of the kit, using a variable that uses the proper product name as its definition and that has the correct header and footer variables.

- **To define variables, create a template for each version of the document.**
  Each template should have only one version visible and should define the variables for that version. For information on defining variables, see Chapter 12, "Variables."

- **To use variable definitions from another document, choose the Import>Formats command from the File menu.**
  In the Import Formats dialog box, turn on Variable Definitions and turn off the remaining checkboxes unless there are other items you need from that document. For information on the Import>Formats command, see "Importing formats into a document" on page 21-12.

To print a conditional document

When you are ready to print a finished version of a document, follow these guidelines.

- **Change your view of the document to include only the version you want to print, and turn off condition indicators.**
- **If your document contains variables, make sure the variable definitions are correct for the version you're printing.**
- **Spell-check the document.**
  This will catch double spaces, punctuation problems, and unusual hyphenation.
- **Update cross-references.**
  You may see an alert about unresolved cross-references. If so, you'll have to fix them. You may have cross-reference markers in conditional text that is currently hidden. Show the version, and update the cross-references again. For more information on correcting unresolved cross-references, see "Maintaining cross-references" on page 10-17. For a tip on how to prevent some unresolved cross-references, see "Avoiding unresolved cross-references" on page 26-12.
- **Save a copy of the document for each version before manually adjusting line and page breaks.**
  Use the copy for each version for making the adjustments and for printing. These adjustments will differ with each version. Use the original document for future edits.
- **If the document is part of a book, update the book and its generated files.**
  If the book contains documents with different condition tag indicators for the same tag, or if some condition tags are displayed in one document but are hidden in another, FrameMaker displays an alert. If this occurs, click Cancel to stop generating and correct your documents' conditional text settings.
- **Check the index for double question marks (??), which indicate missing or incorrect index markers.**
  For more information, see "To fix entries that contain double question marks" on page 23-16.

PART VII

Online Documents

HYPERTEXT AND VIEW-ONLY DOCUMENTS

27

Creating and working with online view-only documents

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27 HYPERTEXT AND VIEW-ONLY DOCUMENTS

Most FrameMaker documents are destined for the printed page. Hypertext documents are designed and written to be read on the screen.

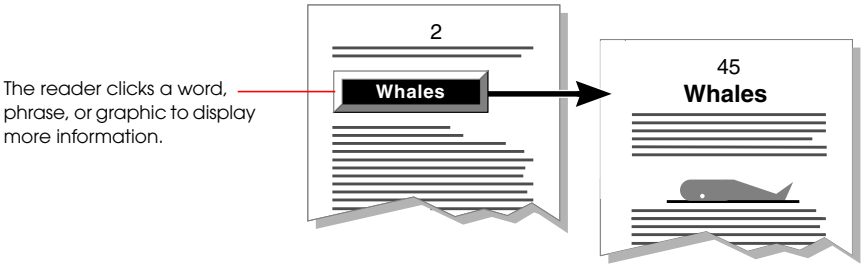
Hypertext encourages nonsequential exploration

With hypertext documents, you can set up an instructional online environment, such as an interactive help system or a guided product demonstration. Readers can page through the contents sequentially or explore at random, following the paths you provide.

Hypertext commands link information

When you set up a hypertext document, you designate active areas. These active areas contain hypertext commands that tell FrameMaker how to respond when someone clicks one of the areas.

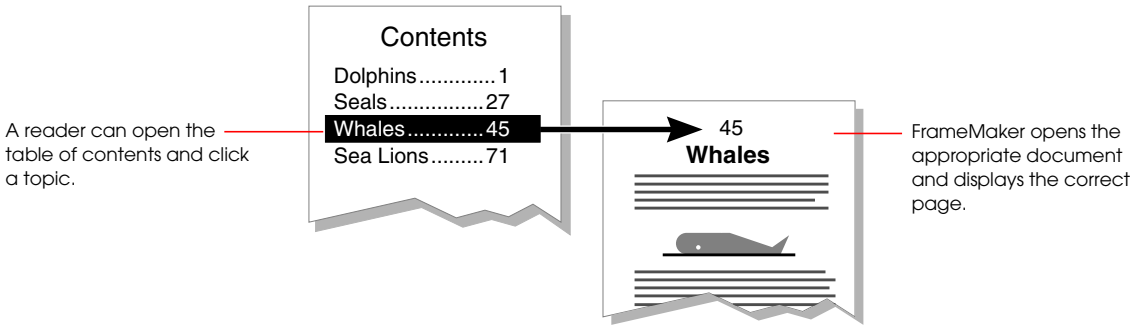
For example, readers might click in a list to learn about a specific item, or click part of a graphic for a more detailed drawing of that part. They can choose a topic from a pop-up menu, or they can click buttons to navigate through a document.



You can set up links within a single hypertext document or between two different hypertext documents. You can also set up a link that opens a different document as a new unnamed document, ready for editing.

You can generate a hypertext table of contents

Hypertext lists such as tables of contents and indexes provide quick access to documents you want to distribute online. For example, you can generate a hypertext table of contents from a book file.



Readers can display, but not edit, view-only documents

You distribute your hypertext documents to readers in View Only format. Readers can open and read such documents, but they can't edit them. After setting up and testing a hypertext document, you change it to View Only format. If you need to edit it further, you change it back to Normal format.

If your readers don't have FrameMaker for reading online hypertext documents, you can distribute FrameReader or FrameViewer with your hypertext system. With FrameReader or FrameViewer, readers can open and navigate through documents and also use a few FrameMaker commands, such as Print, Copy, and Find. You can also convert a FrameMaker document to an Adobe Acrobat document so that readers can view it with Acrobat Exchange or Acrobat Reader.

Expert designers can create complex hypertext systems

With in-depth knowledge of FrameMaker, you can change the view-only window display or selectively disable menu commands. These types of expert controls are available through a Maker Interchange Format (MIF) file. For information on using MIF to set up the view-only window, see the online manual *MIF Reference*.

In this chapter

This chapter shows you how to develop a hypertext online system, how to use specific hypertext commands, and how to generate a hypertext list. This chapter also shows you how to work in a view-only document and how to convert a hypertext document to an Adobe Acrobat document.

DEVELOPING AN ONLINE SYSTEM

Creating effective and easy-to-use online documents takes careful planning. You need to design a page size and layout that's appropriate for the type of computer the document will be read from and for the type of reader who will use it. Well-designed online systems usually include graphics or symbols that the reader can click to navigate through the system. These graphics are made active with hypertext commands, and they often appear in the same place on each page. For example, you can create active areas from which readers can choose topics to explore.

If you've never created a hypertext document or online system before, you may want to research the subject before starting. You can learn things such as how to organize material for an online document and what types of font families, styles, and sizes look best on the screen.

To plan an online system

This section describes a few pointers to keep in mind when creating a hypertext online system with FrameMaker.

- **Write several short documents rather than one long one.**
  A long document takes longer to open. With a series of short documents (typically 10 pages or less), there is little delay if a reader clicks an active area to display a page from another document.
- **Use fonts that are readily available.**
  You may want to use fonts such as Times and Helvetica because these fonts are available on most systems and they print on all PostScript printers.
- **Keep all of the documents that make up the system together in one directory.**
  This way you won't have to keep track of pathnames for imported graphics and hypertext commands that require filename specifications.

To create an online system

After planning your online document or system, create the hypertext documents using these general steps. The rest of this chapter describes the process in more detail.

1. **Design the pages.**
2. **Write the contents.**
3. **Designate the areas where you want to insert hypertext commands.**
4. **Insert hypertext commands that tell FrameMaker what to do when your reader clicks an active area.**
5. **Test the commands.**
6. **Change the documents to View Only format.**
7. **Distribute the documents to your readers.**

PREPARING AREAS FOR BECOMING ACTIVE

A reader navigates through an online hypertext system by clicking active areas, which are areas containing hypertext commands. An active area can be a range of text, a graphic, or different parts of the same graphic. You can set up active areas on body pages, or you can set them up on master pages so they appear in the same location on all body pages. For example, you can set up navigational buttons on master pages.

Before you insert a hypertext command, you must first prepare the area. You can prepare a range of text by making it visually different from surrounding text. Or you can prepare a graphic by drawing a text frame around it into which you insert the hypertext command. After you insert a hypertext command, the prepared area becomes active.

To prepare a text area

A text area can be a word, a phrase, or an entire paragraph. If your reader clicks in a text area that contains a hypertext command, FrameMaker finds the hypertext command, highlights the area, and performs the command. You may want to visually distinguish the text area from surrounding text, or you may want the area to look the same as surrounding text.

- **To designate a word or a phrase as an active area, select the text and change its character format.**

Changing the character format defines the boundaries of the text area. Most formatting differences are recognized—for example, underlining, super- and subscripting, and color. The only formatting changes that are ignored are pair kerning, spread, change bars, and case.

- **To designate a word or phrase as an active area without changing its appearance, use a character format that sets all properties to As Is.**
  For information on creating and applying character formats, see Chapter 5, "Format Catalogs."
- **To designate an entire paragraph as an active area, make sure there are no character format changes in the paragraph.**
  As long as there are no character format changes in the paragraph, FrameMaker searches the paragraph until it finds a hypertext command and then highlights the entire paragraph and performs the command.

USING A SINGLE TEXT AREA FOR MULTIPLE HYPERTEXT COMMANDS

If a document has a string of text items, and if each item needs a hypertext command, you can make the entire string a single area without character changes and then insert the various hypertext commands. FrameMaker divides the string into active areas based on the locations of the markers.

When a reader clicks in the string, FrameMaker determines which active area was clicked and executes the correct hypertext command.

To prepare a graphic

Graphics provide a visual key of what the reader can click. For example, readers can click an icon to display information on a topic.

You can click a graphic to display a different topic.

An active area over a graphic can contain a hypertext command that simply jumps to another location or that divides the graphic into a matrix of hypertext commands.

1. **Draw a text frame that covers the entire graphic you want to make active.**
   A hypertext command must be in a text frame. For information on using the Text Frame tool to draw a frame, see "To add a text frame" on page 13-26.

   Make sure that the graphic is not set to have text run around it. For details, see "Preventing text from running around a graphic" on page 13-32.

2. **Set the text frame's fill and pen patterns to None.**
   This makes the text frame transparent so that readers see only the graphic behind the frame. For information on setting fill and pen patterns, see "Choosing object properties" on page 13-18.

3. **Use the Bring to Front command on the Graphics menu to place the text frame in front of the graphic, if it isn't already there.**

To prepare the same area on several pages

You can create an area that appears in the same location on more than one page. You do this by setting up the area on a master page and inserting the hypertext command there. For example, you can create active buttons on master pages that readers can click on body pages to display the next or previous page.

The reader can click the double arrow to retrace steps.

The reader can click the left arrow to go to the previous page or the right arrow to go to the next page.

You can override master page active graphics on individual body pages if you want to send the reader somewhere else. For example, you can create a next-page button with an override on the last body page of each document because there is no next page to display.

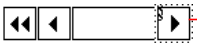
- **To have an active area appear on more than one page, set up the area on a master page rather than on a body page.**
  The active area appears in the background of corresponding body pages. When your reader clicks that area on a body page, FrameMaker looks for a hypertext command on the master page. If you cover the active area with a graphic, or with a text frame that doesn't contain a hypertext command, you mask the active area on the body page where you put that graphic or frame.

  When you draw the text frame on a master page, FrameMaker asks whether you want to create a template frame or a background frame. Text frames for active areas should be background (untagged) text frames.

- **To override a master page command on an individual body page, put a graphic or a different hypertext command over the area on the body page.**
  For example, you can create an inactive, shaded button covering the next-page button on the last body page of each document.

The body page override masks out the active area.

Alternatively, you can place a text frame that contains its own hypertext command over the graphic on the body page.


The body page override could display the first page of a different document.

CREATING NONPRINTING BUTTONS

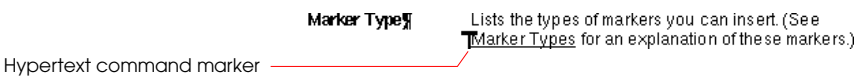
You can create navigation buttons and other such graphics that won't print if your reader prints the document. To make a graphic nonprinting, assign a color to the graphic and then put that color in the Don't Print list in the Set Print Separations dialog box. In the same dialog box, turn on Skip Blank Separation Pages. Make sure Print Separations is on in the Print dialog box and that you click Save Settings Only. For more information on making a color nonprinting and on printing separations, see Chapter 17, "Color."

Because you have to print separations to make a color nonprinting, this technique for creating nonprinting buttons works only if the document is all one color except for the buttons. That way, when the document prints, only one sheet will print for each page.

INSERTING A HYPERTEXT COMMAND

You insert hypertext commands in prepared areas. After you insert a command, the area is active. Hypertext commands let your reader navigate through the view-only documents, display alerts, execute operating system commands, start other applications, close documents, and exit FrameMaker.

You use markers to insert hypertext commands.

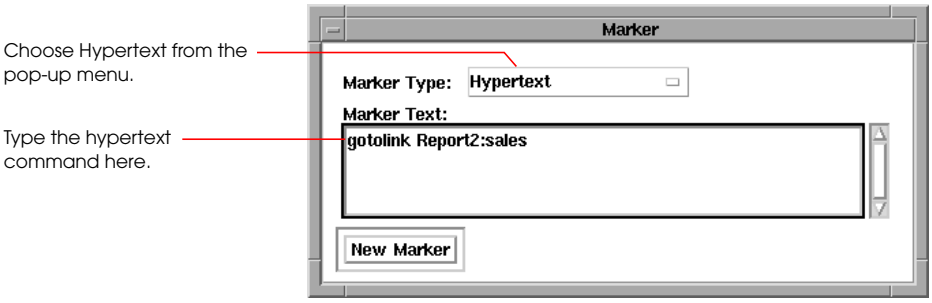


After inserting a hypertext command, you can edit the marker or delete it at any time.

To insert a hypertext command

You use a marker to insert a hypertext command in a prepared area. When a reader clicks an active area, FrameMaker highlights the area and executes the command. If you insert a hypertext command into an otherwise empty text frame over a graphic, the entire text frame becomes active. When the reader clicks an active text frame, FrameMaker highlights the entire frame.

1. **Click in a prepared area where you want to insert a hypertext command.**
   If you're inserting a command in a text area, later text editing will be easier if your marker is at the beginning or end of a word.
2. **Choose Marker from the Special menu.**
3. **Choose Hypertext from the Marker Type pop-up menu and type the actual hypertext command.**



Hypertext commands must be typed lowercase. The optional parameters such as *filename* and *linkname* can be uppercase or lowercase, but they are case-sensitive. A hypertext command can be up to 255 characters long. For a list

of hypertext commands, see "Hypertext commands" on page 27-40. For information on individual commands and their syntax, see "Using specific hypertext commands" on page 27-11.

4 **Click New Marker.**
If Text Symbols is on in the View menu, a marker symbol (T) appears at the insertion point.

To edit a hypertext command

When you test your hypertext system, you may need to go back and edit some commands. If the document is in View Only format, you must change it back to Normal format before you can edit the hypertext commands.

1 **If the document is in View Only format, press Esc F I (lowercase *L*) k to change it to Normal format.**

2 **Choose Marker from the Special menu to display the Marker window.**

3 **In the document, select the marker with the command you want to change.**
To select a marker in an otherwise empty text frame, triple-click anywhere in the frame. You can also use the Find command to find and select hypertext markers.

4 **In the Marker window, edit the command in the Marker Text text box.**

5 **Click Edit Marker.**

To delete a hypertext command

When you test your hypertext system, you may need to delete a command. If the document is in View Only format, you must change it back to Normal format before you can delete a hypertext command.

1 **If the document is in View Only format, press Esc F I (lowercase *L*) k to change it to Normal format.**

2 **Select the marker you want to remove.**
To select a marker in an otherwise empty text frame, triple-click anywhere in the frame. You can also use the Find command to find and select hypertext markers.

3 **Press Delete.**

4 **To change the document to View Only format, press Esc F I (lowercase *L*) k.**

USING SPECIFIC HYPERTEXT COMMANDS

You can use FrameMaker hypertext commands to set up a navigable hypertext system such as FrameMaker online Help. FrameMaker Help uses most of the hypertext commands described in the following pages. For a list of the hypertext commands you can use, see "Hypertext commands" on page 27-40.

To examine FrameMaker Help

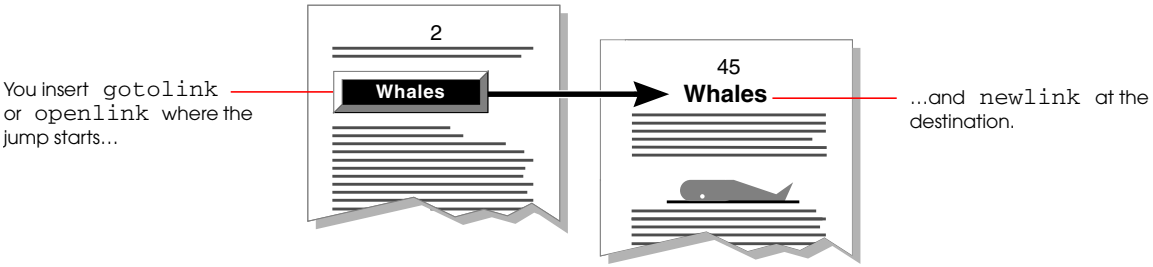
Before you set up your online system, you may find it helpful to examine FrameMaker Help.

1. **Click Help in the main FrameMaker window and find a page you want to view.**
2. **Press Esc F l (lowercase *L*) k to change it to Normal format.**
3. **Turn on borders and text symbols.**
4. **Use the Marker window to view the hypertext commands.**

   You may need to display the master page or reference page to view some of the commands.

To create a link to a topic

You can set up a simple link from one location in a hypertext document to another location in the same document or in a different document. You use either the `gotolink` or the `openlink` command to specify the topic you want to display, and you use the `newlink` command to mark the spot on the referenced page. Every `gotolink` and `openlink` command must have a corresponding `newlink` command.



FrameMaker displays the referenced information in the same window when you use the `gotolink` command. It displays the information in a new window when you use the `openlink` command. For example, you can use `openlink` commands to open sample documents that readers can use independently of the main documents.

1 **Insert either a `gotolink` or an `openlink` command in the active area where you want to initiate the jump.**
The syntax of each command is

```
gotolink filename:linkname
openlink filename:linkname
```

where *filename* is the name of the document you want to display and *linkname* is any descriptive word or phrase that you'll also use in the corresponding `newlink` command. If the topic you want to display is in the current document, you don't need to include the filename and colon in the command. For information on including a pathname, see "Including a pathname in a hypertext command" on page 27-12.

2 **Insert a `newlink` command in the location you want FrameMaker to display.**
The syntax of this command is

```
newlink linkname
```

where *linkname* is the same descriptive word or phrase that you used in the corresponding `gotolink` or `openlink` command.

The linkname in the `newlink` command must match the linkname in the corresponding `gotolink` or `openlink` command. For example, a linkname with a trailing space differs from a linkname without a trailing space. Also, the linkname is case-sensitive; *Changing Units* is not the same as *changing units*.

INCLUDING A PATHNAME IN A HYPERTEXT COMMAND

The filename option in hypertext commands can contain a pathname. In a pathname, directory levels are separated by a slash (/). The pathname can include shell environment variables, such as `$HOME`, to indicate the reader's home directory.

If your hypertext documents will be used on several platforms, use filenames that are valid on all the platforms. For information on file-naming requirements on different platforms, see the online manual *Using Frame Products on Multiple Platforms*.

Relative pathnames FrameMaker searches for a relative pathname beginning in the directory that contains the current document. To go up one directory level, use two periods (..). For example, suppose a hypertext command refers to a document named `myfile` that is stored in a directory named `training`. If the `training` directory is in the same directory as the current document, use the pathname `training/myfile`. If the `training` directory is at the same level as the directory that contains the current document, use `../training/myfile`.

Absolute pathnames FrameMaker searches for an absolute pathname beginning at the top of the file system. Absolute pathnames begin with a slash.

EXAMPLE

The command `gotolink mammals:whales` finds the location in the document `mammals` that contains the hypertext command `newlink whales`. FrameMaker displays the page in the current window.

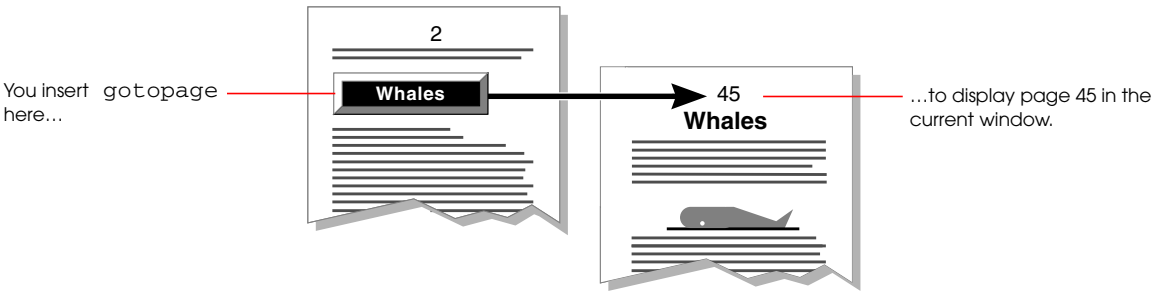
CREATING LINKS BY USING CROSS-REFERENCES

You can set up simple links by using cross-references. When the reader clicks a cross-reference in a view-only document, FrameMaker treats the cross-reference the same as a `gotolink` command. If a cross-reference happens to be present in the same text area as a hypertext command, the cross-reference link takes precedence over the hypertext command.

You can use MIF to specify that cross-references should not be active in your hypertext document. You can also specify that clicking an active cross-reference causes FrameMaker to open a new window. For information on using MIF to customize hypertext documents, see the online manual *MIF Reference*.

To create a link to a specific page

You can set up a simple link from a location in a hypertext document to a specific page in the same document or in a different document. You can use either the `gotopage` or the `openpage` command to specify the page you want to display.



FrameMaker displays the referenced page in the same window when you use the `gotopage` command. It displays the information in a new window when you use the `openpage` command.

You can also use a variation of the `gotolink` command to display the first or last page of a document. You can use the `previouspage` and `nextpage` commands to display the previous and next pages.

- **To display a specific page of a document, put either a `gotopage` or an `openpage` command in the active area where you want to initiate the jump.**
  The syntax of each command is

  ```
  gotopage filename:pagenumber
  openpage filename:pagenumber
  ```

  where *`filename`* is the name of the document you want to display and *`pagenumber`* is the number of the page you want to display. When the page you want to display is in the current document, you don't need to include the filename and colon in the command. For information on including a pathname, see "Including a pathname in a hypertext command" on page 27-12.

- **To display the first or last page of a document, use the `gotolink firstpage` or `gotolink lastpage` command.**
  The syntax of each command is

  ```
  gotolink filename:firstpage
  gotolink filename:lastpage
  ```

  where *`filename`* is the name of the document you want to display. When the page you want to display is in the current document, you don't need to include the filename and colon in the command. For information on including a pathname, see "Including a pathname in a hypertext command" on page 27-12.

- **To display the previous or next page of a document, use the `previouspage` or `nextpage` command.**
  The syntax of each command is

  ```
  previouspage
  nextpage
  ```

  If the first page of the document is already displayed, `previouspage` has no effect. If the last page of the document is displayed, `nextpage` has no effect.

EXAMPLE OF GOTOPAGE

The command `gotopage 8` displays page 8 of the current document.

The command `gotopage mammals:8` displays page 8 of the document `mammals`.

EXAMPLES OF GOTOLINK

The command `gotolink firstpage` displays the first page of the current document.

The command `gotolink mammals:lastpage` displays the last page of the document `mammals`.

EXAMPLE OF PREVIOUSPAGE AND NEXTPAGE

You can use the `previouspage` and `nextpage` commands on master pages for displaying the previous and next pages.

RESIZING THE DOCUMENT WINDOW AUTOMATICALLY

FrameMaker displays referenced information in a window resized to fit the page when you use the `gotolinkfitwin` or `openlinkfitwin` command. For example, a document containing a `gotolinkfitwin` command on a portrait page will resize the window to display the landscape page containing the corresponding `newlink` command.

The syntax of the `gotolinkfitwin` and `openlinkfitwin` commands is identical to that of the `gotolink` and `openlink` commands.

To create a way to open a new, unnamed document

You can create a link to another document and have FrameMaker open the document in another window as a new, unnamed document. For example, you can create an online system for your site's document templates. A user can choose a template from a list or pop-up menu to open the template as a new, unnamed document.

- **To open a new, unnamed document, use the `opennew` command.**

  The syntax for this command is

  `opennew` *`filename`*

  where *`filename`* is the name of the document you want to open. For information on including a pathname, see "Including a pathname in a hypertext command" on page 27-12.

To create a way to retrace steps

FrameMaker keeps track of each page the reader jumps to in a document window—up to 69 jumps—by storing the jumps on a *stack,* with the most recent jump on top. A reader can retrace steps by jumping to previous locations on the stack. For information on how each hypertext command affects the stack, see "The hypertext stack" on page 27-16.

- **To display the previous location in the stack, use the `previouslink` command.** The syntax for this command is

  `previouslink` *`filename`*`:`*`linkname`*

  where *`filename`* and *`linkname`* define the location FrameMaker should display when the stack is empty. If the stack is empty, and if you haven't provided a filename and linkname, FrameMaker leaves the current page displayed. For information on filenames and linknames, see "To create a link to a topic" on page 27-11. For information on including a pathname, see "Including a pathname in a hypertext command" on page 27-12.

THE HYPERTEXT STACK

Not all hypertext commands affect the stack.

`alert` Has no effect.

`alerttitle` Has no effect.

`gotolink` Stores the current location on the stack before jumping.

`gotolinkfitwin` Stores the current location on the stack before jumping.

`gotopage` Stores the current location on the stack before jumping.

`matrix` Commands in the matrix have the same effect on the stack as they would elsewhere.

`message system` Has no effect.

`newlink` Has no effect.

`nextpage` Stores the current location on the stack before displaying the next page.

`openlink` Creates a separate stack for the newly opened window, and leaves the stack in the current window unchanged.

`openlinkfitwin` Creates a separate stack for the newly opened, resized window, and leaves the stack in the current window unchanged.

`opennew` Has no effect.

`openpage` Creates a stack for the newly opened window, and leaves the stack in the current window unchanged.

`popup` Commands in the pop-up menu have the same effect on the stack as they would elsewhere.

`previouslink` Displays the last location stored on the stack.

`previouslinkfitwin` Displays the last location stored on the stack.

`previouspage` Stores the current location on the stack before displaying the previous page.

EXAMPLE

You can use the `previouslink` command on master pages to display the previous location in the stack.

This active area contains the `previouslink` command.

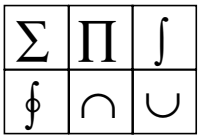
RESIZING THE DOCUMENT WINDOW AUTOMATICALLY

FrameMaker displays referenced information in a window resized to fit the page when you use the `previouslinkfitwin` command. For example, a document containing a `previouslinkfitwin` command on a portrait page will resize the window to display the landscape page specified in the stack.

The syntax of the `previouslinkfitwin` command is identical to that of the `previouslink` command.

To create a matrix of links over a graphic

You can draw a text frame over a graphic and create a matrix of equal-sized cells that correspond to hypertext commands. When a reader clicks a matrix item in a hypertext document, FrameMaker highlights the cell and executes the corresponding hypertext command. For example, the matrix could be a group of math symbols.



A matrix of six cells

If the reader were to click one of the math symbols, FrameMaker would highlight the area around the symbol and execute the corresponding hypertext command. For details on how this sample matrix would be set up, see "Example," next.

1 **Put the graphic in your document.**
The graphic should be appropriate for setting up as a matrix of equal-sized cells such as the sample math symbols.

2 **Prepare the graphic to be an active area.**
Draw a single text frame around the entire graphic; you'll specify the dimensions of the matrix in the hypertext command you insert. For information on preparing a graphic to be an active area, see "To prepare a graphic" on page 27-7.

3 **Insert a single hypertext `matrix` command in the text frame, leaving the rest of the frame empty.**
The syntax for this command is

`matrix rows columns flowname`

where *`rows`* and *`columns`* are the numbers of rows and columns in the matrix, and *`flowname`* is the tag of a text frame you'll create on a reference page. The flowname cannot contain embedded spaces.

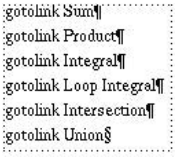
You'll specify the individual hypertext commands for the matrix cells in the reference page text frame.

4 **Draw a text frame on a reference page and assign a flow tag that matches the flowname in the `matrix` command.**
For information on using the Text Frame tool to draw a text frame, see "To add a text frame" on page 13-26. For information on assigning flow tags, see "To change a flow tag" on page 20-9.

5 **Type one hypertext command in each paragraph in the text frame.**
The commands should correspond to the items in the first row of the matrix, from left to right, followed by the second row, and so on. Each command must fit on one line. You can resize the text frame if necessary.

EXAMPLE

For the math symbols matrix shown earlier, the `matrix` command is `matrix 2 3 MathSymbols` because the matrix contains 2 rows and 3 columns, and the corresponding hypertext commands are in a reference page text frame tagged MathSymbols. The text frame appears on the reference page as follows:



To create a pop-up menu of links

Your hypertext document can display a pop-up menu from which readers can choose an item that links to related information. When the reader points on an active area that contains the `popup` command and holds down the mouse button, FrameMaker displays the pop-up menu you define. For example, a document on marine mammals could use a pop-up menu to display topics.

The reader can choose Seals from the pop-up menu to display information on seals.

For details on how the sample marine mammals pop-up menu would be set up, see "Example of a pop-up menu and submenu" on page 27-20. For information on creating a hypertext submenu, see "To create a submenu of links," next.

1. **Create the graphic button the reader will press to display the pop-up menu.**

2. **Prepare the graphic to be an active area.**
   Draw a single text frame around the entire graphic. For information on preparing a graphic to be an active area, see "To prepare a graphic" on page 27-7.

3. **In the text frame, insert a single `popup` command and leave the rest of the frame empty.**
   The syntax for this command is

   `popup` *`flowname`*

   where *`flowname`* is the tag of a text frame you'll create on a reference page. You'll specify the items and hypertext commands for the pop-up menu in the reference page text frame. The flowname cannot contain embedded spaces.

4. **Draw a text frame on a reference page and assign a flow tag that matches the flowname in the `popup` command.**
   For information on using the Text Frame tool to draw a text frame, see "To add a text frame" on page 13-26. For information on assigning flow tags, see "To change a flow tag" on page 20-9.

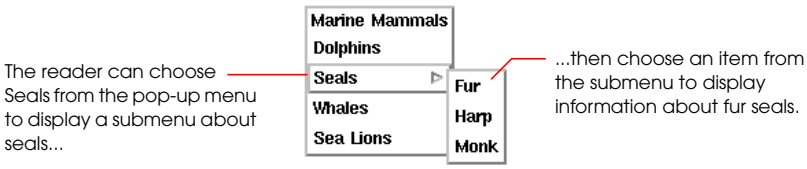
5. **Type the menu name in the flow and press Return.**
   This is the name that will appear at the top of the pop-up menu.

6 **Type a menu item in each subsequent paragraph.**
Each subsequent single-line paragraph in the flow contains an item that will appear in the pop-up menu. If necessary, widen the text frame so that each item fits on a single line.

7 **Insert a hypertext marker in each line except the line that contains the menu name.**
When your reader chooses an item from the pop-up menu, FrameMaker performs the corresponding hypertext command.

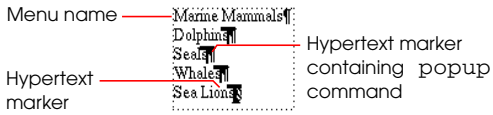
To create a submenu of links

A hypertext pop-up menu can display a submenu from which readers choose an item that links to related information. When the reader points on a pop-up menu item that contains the `popup` command and holds down the mouse button, FrameMaker displays the submenu you define. For example, a pop-up menu on marine mammals could use a submenu on seals to display subtopics.



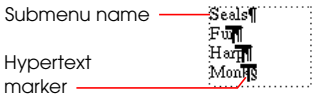
EXAMPLE OF A POP-UP MENU AND SUBMENU

For the Marine Mammals pop-up menu shown on page 27-19, the menu name is Marine Mammals. The text frame that contains the menu items and markers appears as follows:



You can use a `gotolink` command in each menu item to display related information, an `alert` or `alerttitle` command to provide a short message to your readers, or a `popup` command to display a submenu of items.

For the Seals submenu shown on page 27-20, the submenu name is Seals. The text frame that contains the submenu items and markers appears as follows:



You can also use a `gotolink`, `alert`, or `alerttitle` command in a submenu item. However, you can't use a `popup` command in a submenu item.

For details on how the sample marine mammals submenu would be set up, see "Example of a pop-up menu and submenu" on page 27-20. For information on creating a pop-up menu, see "To create a pop-up menu of links" on page 27-19.

1 **Locate on the reference page the text frame that describes the pop-up menu for which you want to create a submenu.**

2 **In the text frame for the pop-up menu, insert a single hypertext `popup` command in the line for which you want the submenu to appear.**
The syntax for this command is

`popup` *`flowname`*

where *`flowname`* is the tag of a text frame you'll create on a reference page. You'll specify the items and hypertext commands for the submenu in the reference page text frame. The flowname cannot contain embedded spaces.

For example, to create a Seals submenu in the Seals entry, insert a hypertext marker that contains the command `popup SealSubMenu`.

This step and the steps following are similar to the steps for creating a pop-up menu of links.

3 **Draw a text frame on a reference page and assign a flow tag that matches the flowname in the `popup` command.**
For information on using the Text Frame tool to draw a text frame, see "To add a text frame" on page 13-26. For information on assigning flow tags, see "To change a flow tag" on page 20-9.

4 **Type the submenu name in the flow and press Return.**
Type a submenu name that matches the item in the pop-up menu.

5 **Type a submenu item in each subsequent paragraph.**
Each subsequent single-line paragraph in the flow contains an item that will appear in the submenu. If necessary, widen the text frame so that each item fits on a single line.

6 **Insert a hypertext command in each line except the line that contains the submenu name.**
You can use a `gotolink`, `alert`, or `alerttitle` command in a submenu item. However, you can't use a `popup` command in a submenu item.

When your reader chooses an item from the submenu, FrameMaker performs the corresponding hypertext command.

To create an alert message

You can use a hypertext command to display an alert box that contains a title and a message. You can also specify a default title for all hypertext alert boxes in a document.

- **To display a hypertext alert box with the title *FrameMaker—Alert*, use the `alert` command.**
  The syntax for this command is

  `alert` *`message`*

  where *`message`* is the text you want to display in the alert box. The *`message`* can be up to 249 characters long.

- **To display an alert box with a title other than *FrameMaker—Alert*, use the `alerttitle` command.**
  The syntax for this command is

  `alerttitle` *`title`*`:`*`message`*

  where *`title`* is the title of the alert box and *`message`* is the text you want to display in the alert box. A colon separates the text that appears in the alert box's title bar from the text that appears in the alert box. The total number of characters in *`title`* and *`message`* cannot exceed 243 characters.

SPECIFYING A DEFAULT TITLE FOR ALERTS IN A DOCUMENT

You can specify a default title other than *FrameMaker—Alert* for all hypertext alert boxes in a document created with the `alert` command. To do so, draw a text frame on a reference page, assign it the flow tag `AlertTitle`, and type the default title in the text frame.

For example, if the default title `Not Available Online` appears in a flow tagged AlertTitle on the reference page, that title, not FrameMaker—Alert, will appear in the title bar of any alert box created with the `alert` command.

The default title will also appear in the title bar of any alert box created with the `alerttitle` command in the following form, without a title:

`alerttitle :`*`message`*

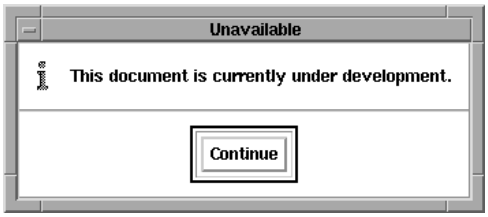
If you provide a title before the colon, it overrides the default title.

For information on using the Text Frame tool to draw a text frame, see "To add a text frame" on page 13-26. For information on assigning flow tags, see "To change a flow tag" on page 20-9.

EXAMPLE

To display the following alert box when the reader clicks an active area, you use this hypertext command.

```
alerttitle Unavailable:This document is currently under
development.
```



To create a way to close documents

The two hypertext commands for closing documents work just as the Close and Close All Open Files commands on the File menu.

- **Use the `quit` command to close the current view-only document.**
  The syntax for this command is

  ```
  quit
  ```

- **Use the `quitall` command to close all open view-only documents.**
  The syntax for this command is

  ```
  quitall
  ```

  The `quitall` command also closes view-only documents that have already been closed to an icon.

SAVING CHANGES

If the document contains unsaved changes—for example, when the reader changes the document to Normal format—FrameMaker prompts the reader to save the document before closing.

To create a way to exit FrameMaker

The hypertext command for exiting FrameMaker works the same as the Exit command in the main FrameMaker window.

- **Use the `exit` command to exit FrameMaker.**
  The syntax for this command is

  ```
  exit
  ```

  ### SAVING CHANGES

  If the document contains unsaved changes—for example, when the reader changes the document to Normal format—FrameMaker prompts the reader to save the document before closing.

To create a way to execute commands

You can use hypertext commands to start other applications and perform the commands you specify. For example, your reader can start a database application from a FrameMaker view-only document to retrieve and display data.

You can also use hypertext commands to execute UNIX commands. For example, the reader can click an active area to create a particular directory in the current directory.

- **To send messages to an application that is already running, use the `message` command.**
  The `message` command sends messages to FrameMaker clients by way of the Frame Application Program Interface™ (API). For information on using the `message` command, see the *FDK Programmer's Guide,* which is included in the Frame Developer's Kit™.
- **To execute a UNIX command, use the `message system` command.**
  The syntax for this command is

  ```
  message system command
  ```

  where *`command`* is the text of any UNIX command you can type in an xterm window.

EXAMPLE

The command `message system ls $FMDOCDIR` causes FrameMaker to list the contents of the directory in which the document resides when the reader clicks an active area that contains the command.

In this example, FrameMaker passes the command to `sh(1)` for execution; `stdout` and `stderr` are redirected to your xterm window. FrameMaker waits for the command, script, or program to finish before continuing.

USING THE $FMDOCDIR AND $FMDOCNAME ENVIRONMENT VARIABLES

You can use the environment variables `$FMDOCDIR` and `$FMDOCNAME` with the `message system` command. When the reader clicks an active area that contains the command, `$FMDOCDIR` is set to the directory that contains the current document and `$FMDOCNAME` is set to the name of the current document.

For example, the command

```
message system cp /HypertextDir/Data $FMDOCDIR
```

copies the file named `Data` from the `HypertextDir` directory to the directory that contains the current document.

The command

```
message system cp /HypertextDir/$FMDOCNAME.Data $FMDOCDIR
```

copies the file named the same as the current document with the extension `Data` from the `HypertextDir` directory to the directory that contains the current document.

To test a hypertext document

After you've written the document and inserted the hypertext commands, you should test the commands to make sure that all of your links are set up correctly, that the pop-ups and matrix commands work correctly, and so on. For a list of common errors, see "Debugging tips" on page 27-26.

- **To activate hypertext commands without changing the document to View Only format, Control-right-click active areas.**

  FrameMaker responds as if the document were view-only; the hypertext command is executed and the appropriate page is displayed.

- **To speed up cross-checking of links between documents, display both documents in separate windows.**
  To force a new window to open, Control-Shift-right-click an active area if the document is *not* view-only; Shift-click the active area if the document is view-only.
- **To quickly check the text of hypertext commands, generate a list or index of hypertext markers.**
  The generated list will contain the text of all hypertext markers inserted on body pages in the document and their page numbers. Use the generated list to review the text of alerts and to verify that each `gotolink` and `openlink` command has a corresponding `newlink` command.

  For information on generating lists, see Chapter 22, "Generated Lists."

DEBUGGING TIPS

You may come across these common errors when testing a hypertext document.

If you see this	It could mean
The current page continues to be displayed when you click an active area.	The `gotolink` or `openlink` command's corresponding `newlink` command is missing or contains an incorrect linkname.
	You accidentally used a marker type other than Hypertext when you inserted the hypertext command.
	You have several hypertext markers next to one another.
The first page of the referenced document is displayed rather than the intended page.	The corresponding `newlink` command is missing, but the `gotolink` command contains a valid filename.
	The `gotopage` command contains an invalid page number.
The wrong page is displayed.	You may have used the same linkname twice.
The entire text frame over a graphic doesn't highlight when clicked.	There is an extra character or marker in the text frame. Look for and delete the character or marker.
An item is missing from a pop-up menu.	The hypertext command for that item is not correct. If no commands are correct, the pop-up menu does not appear at all.

ADDING HYPERTEXT LINKS TO GENERATED FILES

When you generate an index or list such as a table of contents, FrameMaker can insert hypertext links for jumping from the generated file to locations in the source document—that is, in the document that is the source of the generated file. These links provide easy access to online information; you can click a topic or page number in the generated file and FrameMaker displays the appropriate page in the referenced document.

A common use of generated hypertext documents is to provide a table of contents for online documents. You can change the generated table of contents to View Only format and distribute it with your online documents. Another use of generated hypertext lists or indexes is for debugging documents. For example, when creating an index for a book file, you can generate the index with hypertext links and then quickly fix index marker errors by jumping to the exact locations of the markers.

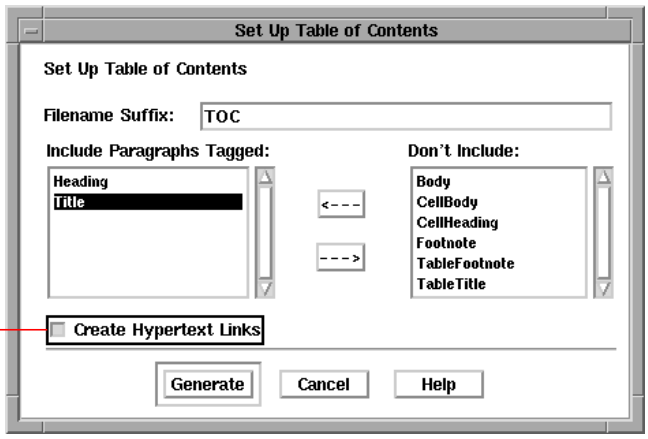
There are two FrameMaker commands that generate documents. Generate/Book generates documents such as tables of contents, lists of figures, and indexes. Compare Documents generates composite and summary documents.

To generate a hypertext document

The Generate/Book command has set up dialog boxes in which you specify what you want included in the generated list or index. Similarly, the Compare Documents command has a dialog box for specifying what you want included in the summary and composite documents. After you generate a hypertext document, you can add it to your online system. For details, see "To incorporate generated files into an online system" on page 27-32.

- **To generate a hypertext document from an individual FrameMaker document, turn on Create Hypertext Links in one of the Set Up dialog boxes of the Generate/Book**

command or in the Compare Options dialog box of the Compare Documents command.



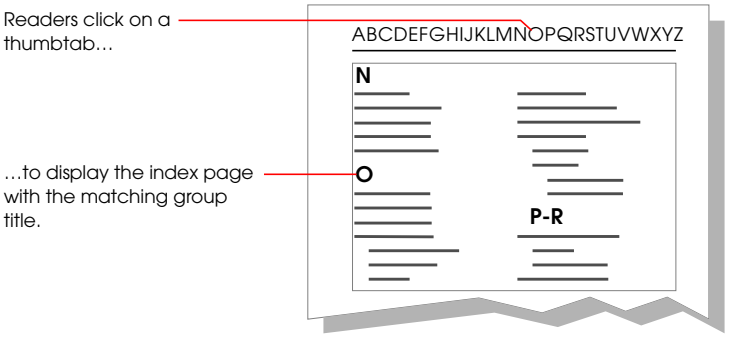
Make sure Create Hypertext Links is on.

For complete information on using the Generate/Book command to generate lists and indexes, see Chapter 22, "Generated Lists," and Chapter 23, "Indexes." For complete information on using the Compare Documents command, see Chapter 25, "Revision Management."

- **To generate a hypertext document from a book file, use the Set Up File command on the book window's File menu.**
  For instructions on using the Set Up File command, see "To change the setup of files in a book" on page 24-19.

To add thumbtabs to a generated index

You can make a generated online index easier to navigate by adding thumbtabs. Readers click on a thumbtab letter to display the page in the index that contains entries that start with that letter.



For information on generating indexes, see Chapter 23, "Indexes."

1 **With Create Hypertext Links on in the Set Up dialog box for the index, generate the index.**
For details, see "To generate a hypertext document" on page 27-27.

2 **On the index master page, use the Text Line tool to type the thumbtab letters.**
Choose Master Pages from the View menu to display master pages. For details on using the Text Line tool, see "To add a text line" on page 13-25.

3 **Draw a text frame over each thumbtab letter.**
For details on drawing a text frame, see "To add a text frame" on page 13-26.

4 **Insert a `gotolink` command in the text frame for each thumbtab letter.**
For example, in the text frame over the thumbtab letter *A,* insert the hypertext command `gotolink A`. The `A`, and the other alphabetical *group titles* in an index, are automatically treated as links when you generate the index with hypertext markers.

If the index contains a collapsed group title, such as *P–R,* insert the same `gotolink` command in the text frame for each of the thumbtab letters in the range. For example, insert `gotolink P-R` in the three text frames for *P, Q,* and *R*.

For details on inserting a hypertext command, see "To insert a hypertext command" on page 27-9. For more information on group titles, see "To change entry groupings and group titles" on page 23-26.

5 **Save the index in View Only format.**

To activate a hypertext command in a Normal-format document

When you generate a hypertext document, FrameMaker opens the document in Normal format. Because it's not a view-only document, you can't just click an active area to activate its hypertext command. If you don't intend to change the document to View Only format, you can still activate the hypertext commands. Use the following key combination.

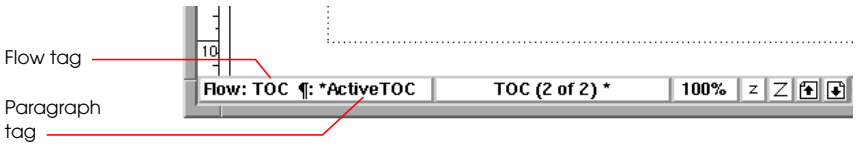
- **Control-right-click the active area.**

To control how FrameMaker displays the source document

When you click an active area in a generated hypertext document, FrameMaker opens a new window and displays the correct page in the source document—the referenced document that is the source of the generated file. The specific item on the page is highlighted and centered in the window. You can change how FrameMaker displays the referenced document. For example, FrameMaker can display the referenced document in the current window. That way, the generated file can be merged into a larger online system.

1. **Generate the hypertext document.**
   For details, see "To generate a hypertext document" on page 27-27.

2. **In the generated file, display the reference page that contains the special flow for the list or index.**
   The flow tag of the special flow is the same as the document's suffix. For example, the special flow for a table of contents is tagged TOC, the special flow for an index is tagged IX, and so on. To determine a flow's tag, click in the text frame and look in the Tag area at the bottom of the document window.



3. **In the special flow, find the paragraph that controls how the referenced document is displayed.**
   In a table of contents, the paragraph's tag is ActiveTOC; in an index, it's named ActiveIX; and so on. The paragraph will look something like this:
   `gotoObjectId <$relfilename>:<$ObjectType> <$ObjectId>`

   To determine a paragraph's tag, click in the paragraph and look in the Tag area at the bottom of the document window.

4 **Edit the paragraph so that it contains the display command you want.**
For a list of the commands you can use, see "Display commands for generated hypertext documents" on page 27-31. In addition to the commands in the list, you can use the `message` command to send messages to applications you've created with the Frame Application Program Interface (API). For details, see the *FDK Programmer's Guide*, which is included in the Frame Developer's Kit.

5 **Save the generated file and then regenerate it from the source document.**

OVERRIDING THE GENERATED FILE'S DISPLAY COMMAND

You can also specify how a specific document is displayed, overriding the display command contained in the ActiveTOC or ActiveIX paragraph in the file generated from that document. For example, you may want a generated index that references several files, including a glossary file, to display the glossary in one window and all the other files in another window.

DISPLAY COMMANDS FOR GENERATED HYPERTEXT DOCUMENTS

When the reader clicks an active area in a generated hypertext document, FrameMaker displays the correct page in the referenced document. The following table lists some of the hypertext commands you can use for controlling how the referenced document is displayed. (The `gotoObjectId` command is a special hypertext command used only in generated files.) You should type the commands exactly as shown. Use the `<$relfilename>` building block to have FrameMaker create a relative pathname from the generated file to the other document. Otherwise, use `<$fullfilename>` for a full pathname. (The examples in the following table show only the `<$fullfilename>` building block.)

To display	Type
The highlighted item centered in the current window	`gotoObjectId <$fullfilename>:<$ObjectType> <$ObjectId>`
The highlighted item centered in a new window	`openObjectId <$fullfilename>:<$ObjectType> <$ObjectId>`
The page in the current window with nothing highlighted	`gotopage <$fullfilename>:<$pagenumonly>`
The page in a new window with nothing highlighted	`openpage <$fullfilename>:<$pagenumonly>`
An alert that displays the filename of the referenced document	`alert <$fullfilename>`

To specify the display command for a document, start by drawing a text frame on its reference page and assigning it the flow tag `HypertextLinks`. In the text frame, type either `gotoObjectId` or `openObjectId`. Then save the document and regenerate. When you click in the generated file, the referenced document will be displayed using the command specified in the `HypertextLinks` flow on the referenced document's reference page, rather than using the command in the ActiveTOC or ActiveIX paragraph in the generated file.

To incorporate generated files into an online system

If you're simply using the generated hypertext document as a debugging tool, the document is ready to use. If, however, the generated file is going to be part of a hypertext online system, there are some things you may want to do to enhance its usability.

- **Set up links from the referenced documents back to the generated file.**
  Use any of the hypertext commands. For example, you can create an Index or Table of Contents button that jumps back to the generated file.
- **Add active areas to the master pages of documents for navigating through the online system.**
  For example, you can create buttons for paging forward and backward.
- **Add links to other parts of the online system in the source documents and in generated files.**
- **Change the generated file to View Only format and distribute the online documents.**

WORKING IN VIEW-ONLY DOCUMENTS

When you create an online system, you may need to tell your readers how to use it, especially if they're not experienced FrameMaker users. For example, you may need to tell them how to navigate through your system or how to open more than one document window.

You distribute online documents in View Only format. Readers can view, but not edit, a view-only document.

To change a document to View Only format

When you finish preparing a hypertext document, change the document to View Only format. This locks the document so readers won't be able to make any changes to it. If you need to edit a view-only document, you must first change it back to a Normal-format document. For tips on the things you should do before making a document view-only, see "View-only guidelines" on page 27-33.

- **To save a document in View Only format, choose Save As from the File menu, choose View Only from the Format menu in the Save As dialog box, and click Save.**
- **To change a document to View Only format without saving it, press Esc F l (lowercase *L*) k.**
- **To change a view-only document to Normal format, press Esc F l (lowercase *L*) k.**

VIEW-ONLY GUIDELINES

Readers will see the contents of a view-only document exactly as it appeared when you made it view-only. Before changing a document to View Only format, use the View menu to turn off the display of the grid, the ruler, text symbols, and borders.

If the document will be used across a network, set the file permissions so that readers don't have write permission to the document. This prevents readers from making changes to the document should they change it to Normal format.

MAKING BOOK FILES VIEW-ONLY

You can't save a book file in View Only format. However, if a reader opens a book file from FrameReader or FrameViewer, it will automatically open in View Only format.

HIGHLIGHTED MARKERS IN VIEW-ONLY DOCUMENTS

When you click an active area in a view-only document, FrameMaker doesn't highlight the corresponding cross-reference marker or hypertext marker that contains the corresponding `newlink` command. (If the document is in Normal format, the marker does highlight.) To highlight the marker in a view-only document, set the value of the document's `DViewOnlySelect` MIF statement to `Yes`. For more information, see the online manual *MIF Reference*.

To navigate to specific pages

Readers can display pages in view-only documents in a variety of ways. If you've customized your view-only window environment, some viewing methods may not be available.

- **Click any active area.**
- **Click the page buttons in the window border.**
  If you customized your view-only window environment, the page buttons may not be available.
- **Use the scroll bar.**
- **Use the commands on the Navigation menu.**
- **Use the Viewer menu.**
  Point inside the view-only document window and hold down the right mouse button. FrameMaker displays the Viewer menu, from which you can choose where you want to jump.

To go backward and forward in the stack

The reader can jump back to previous locations in the stack and then jump forward again. For information on the hypertext command stack, see "To create a way to retrace steps" on page 27-16.

- **To jump backward in the stack, click an active area with a `previouslink` or `previouslinkfitwin` command, or choose Go Back from the Navigation menu.**
- **To jump forward in the stack, press Esc v N.**
  You can jump forward in the stack only if you have previously jumped backward.

To open a new window

If you use a `gotolink` command to display a referenced document in the current window, the reader can force FrameMaker to open a new window instead.

- **Shift-click an active area to open a new window for displaying the referenced document.**

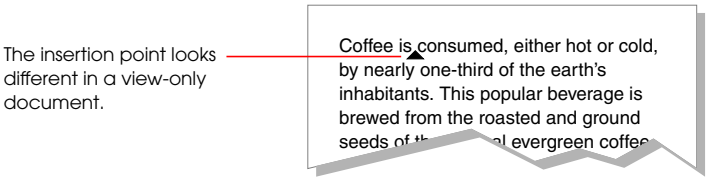
To use menu commands

Some FrameMaker commands are available in view-only documents. For example, you can copy text and graphics from a view-only document and paste them in a Normal-format document, search for text and paragraph tags, and print.

View-only document windows have three FrameMaker menus: File, Edit, and Navigation. If you customized your view-only window environment, some commands may not be available. For information on disabling commands, see the online manual *MIF Reference*.

In order to use some menu commands, you have to place an insertion point. Other menu commands, such as Copy, require that you select items.

- **To place the insertion point or to select an object in a view-only document, Control-click.**
  Control-clicking in a view-only document is the same as clicking in a Normal-format document.



- **To select in a view-only document, Control-drag.**
  Control-dragging in a view-only document is the same as dragging in a Normal-format document.

CONVERTING FRAMEMAKER FILES TO ADOBE ACROBAT FILES

You can convert a FrameMaker document or book file to an Adobe Acrobat document, distribute it in that form, and use Acrobat Exchange or Acrobat Reader to view it. If the FrameMaker document (or the set of FrameMaker documents listed in the FrameMaker book file) has cross-references or hypertext commands, FrameMaker converts them to the corresponding Acrobat links when you print from FrameMaker to a PostScript file. FrameMaker hypertext alert messages are converted to Acrobat notes. FrameMaker also supports Acrobat bookmarks and article threads.

Adobe Acrobat documents use the Portable Document Format (PDF). You prepare a FrameMaker document for conversion by printing it to a PostScript file, and use the Adobe Acrobat Distiller application to convert the PostScript file to a PDF file. For more information on Acrobat Distiller, Acrobat Exchange, or Acrobat Reader, see the Adobe documentation for those applications.

For a list of items to consider when preparing to create PDF files, see “Considerations and limitations” on page 27-38.

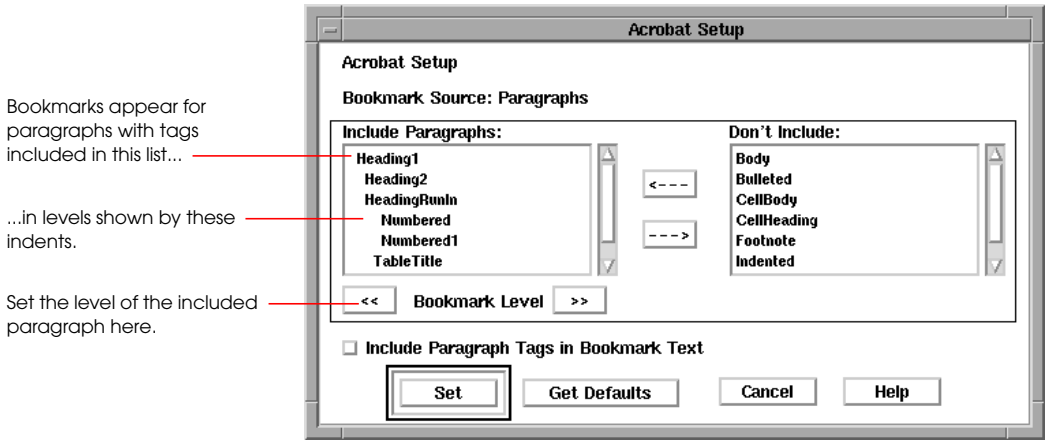
To prepare a document for conversion

As a first step in producing a PDF file for an Acrobat document, you create a PostScript file. For a FrameMaker document, you print the entire document as a single PostScript file. For a FrameMaker book file, you print the documents listed in the book file as a single PostScript file or as a set of PostScript files. In either case, you print both odd- and even-numbered pages in front-to-back order, without separations, and without skipping blank pages. As part of the process, you specify the paragraphs that will appear as bookmarks for the Acrobat document, and specify their hierarchy.

For information on printing a FrameMaker document as a PostScript file and other printing settings, see “To customize printing” on page 2-39. For information on printing files from a book, see “To print files” on page 24-24.

1. **Choose Print from the File menu.**
   If you’re printing a book file, move the desired files to the Print scroll list in the Print Files in Book dialog box and click Print.
2. **In the Print dialog box, turn on Generate Acrobat Data.**
3. **Click Acrobat Setup.**

4 Move paragraph tags between scroll lists as necessary.



The paragraphs in the Include Paragraphs scroll list will have bookmarks in the PDF file. FrameMaker uses the paragraph formatting of the document to determine default settings—which tags initially appear in which of the two lists.

To move a tag between scroll lists, select the tag and click an arrow, or double-click the tag. To move all the tags from one scroll list to the other, Shift-click an arrow.

To return the scroll lists to the default settings, click Get Defaults.

5 Change bookmark levels for the included paragraphs as necessary.

The hierarchy of the bookmarks in the PDF file will reflect the indentation levels of the paragraphs in the Include scroll list. FrameMaker uses the paragraph formatting of the document to determine default indents. To move the level of an item, select it and click a Bookmark Level arrow. To change the level of all items, Shift-click a Bookmark Level arrow. If the indent for a tag exceeds six levels, *n*> precedes the paragraph tag, where *n* is the indentation level of the paragraph tag. The maximum level for a bookmark is 50.

Only first-level bookmarks will be visible when the PDF file is first displayed.

6 **Click Set.**

7 **In the Print dialog box, turn on Print Only to File and type a pathname and filename in the text box.**
To ensure that links to other PDF files will work, don't change the default filename for the PostScript file for a document.

If you're creating a PostScript file for a book, you can improve the performance of the resulting PDF file by creating a separate PostScript file (and thus a separate PDF file) for each file in the book, rather than a single PostScript file for the entire book. To do so, type an asterisk (*) for the filename in the Print Only to File text box. FrameMaker creates a PostScript file for each file in the book at the pathname specified. For information on the advantages of creating a separate PostScript file for each file in a book, see "Considerations and limitations" on page 27-38.

If your documents will be used on several platforms, make sure the filenames for your FrameMaker documents are valid on all the platforms. For information

CONSIDERATIONS AND LIMITATIONS

There are a few items to bear in mind before converting a FrameMaker document to an Acrobat document.

Acrobat 2.0 Some Acrobat 2.0 features aren't available with converted FrameMaker documents.

- Article threads always follow a document's page order, even if the FrameMaker document's text flows from back to front.
- If the PDF file for a book file was created from a single PostScript file, you can't link from an external document into the book file. To permit links from external documents to documents within a book, print the book as separate PostScript files, either by printing the files individually or by printing them as a book file and specifying an asterisk (*) for the book file's PostScript filename. Creating separate PostScript files for large book files can also improve display performance of the resulting PDF files.

Acrobat 1.0 Some Acrobat 2.0 features aren't available if you create a PDF file from a FrameMaker document with version 1.0 of the Distiller or view it with version 1.0 of the Reader or Exchange application. For example, links to external files, the display of files containing pages in both landscape and portrait orientation, and article threads will not work.

Graphics For optimal display of bitmap graphics, import them into the FrameMaker document at a dpi value that divides evenly into the resolution of the intended display device. For more information, see "Suggested scaling options" on page 16-8. To improve the display performance of PDF files, avoid using complex master pages that contain multiple complex graphics.

Filenames Don't change the default filename when printing to a PostScript file. Altering the filename disables links to and from the other files.

on file-naming requirements on different platforms, see the online manual *Using Frame Products on Multiple Platforms*.

8 **Click Print.**

FrameMaker creates one or more PostScript files. Use the Acrobat Distiller application to convert the PostScript files to PDF files. After using the Distiller application, the name of the PDF file it creates should be identical to the original FrameMaker file except for the `.pdf` extension.

TEXT FLOW TAGS AND ARTICLE THREAD NAMES

Each tagged text flow that appears on a body page of a FrameMaker file becomes a thread in the PDF file after conversion. The name of the thread in the PDF file is the same as the flow tag in the FrameMaker file.

PARAGRAPHS AND LEVELS INCLUDED BY DEFAULT

FrameMaker uses the paragraph format settings of the document to determine which paragraph tags appear in the Include Paragraphs scroll list and how they are indented. For example, a paragraph that starts at the top of a column may appear in the Include scroll list with no indent (to create a top level bookmark), a paragraph that straddles columns may appear indented one level, an autonumbered paragraph may appear indented two levels, and so on.

CHECKING BOOKMARK SETUP

You can check the assigned levels of bookmarks in the draft of a PDF file by including paragraph tags along with the paragraph text in the bookmarks. To do so, turn on Include Paragraph Tags in Bookmark Text in the Acrobat Setup dialog box. Turn this option off when you print the final draft of the document.

HYPERTEXT COMMANDS

This list summarizes the hypertext commands. Each command and its syntax are described in detail in "Using specific hypertext commands" on page 27-11.

`alert` Displays an alert box.

`alerttitle` Displays an alert box with a user-defined title.

`exit` Exits the FrameMaker application.

`gotolink` Displays the location in the current or a different document that contains a corresponding `newlink` command. The page is displayed in the current window.

`gotolink firstpage` Displays the first page of the current or a different document.

`gotolink lastpage` Displays the last page of the current or a different document.

`gotolinkfitwin` Executes a `gotolink` command and then resizes the window to fit the document page displayed.

`gotopage` Displays a specific page in the current or a different document. The page is displayed in the current window.

`matrix` Allows the reader to choose from matrix items that activate hypertext commands.

`message` Sends a message to another application that is already running.

`message system` Executes a UNIX shell command.

`newlink` Marks the location that will be displayed when either the `gotolink` or the `openlink` command is activated.

`nextpage` Displays the next page of the current document.

`openlink` Displays the page in the current or a different document that contains a corresponding `newlink` command. The page is displayed in a new window, leaving the current window open.

`openlinkfitwin` Executes an `openlink` command and then resizes the new window to fit the document page displayed.

`opennew` Opens a different document as a new, unnamed document. The document is displayed in a new window, leaving the current window open.

`openpage` Displays a specific page in the current or a different document. The page is displayed in a new window, leaving the current window open.

`popup` Displays a pop-up menu of items, each containing a hypertext command.

`previouslink` Displays the last location the reader viewed.

`previouslinkfitwin` Executes a `previouslink` command and then resizes the window to fit the document page displayed.

`previouspage` Displays the previous page of the current document.

`quit` Removes the current window from the screen.

`quitall` Removes all view-only windows from the screen.

PART VIII

Equations

28

CREATING EQUATIONS

Creating mathematical expressions and equations

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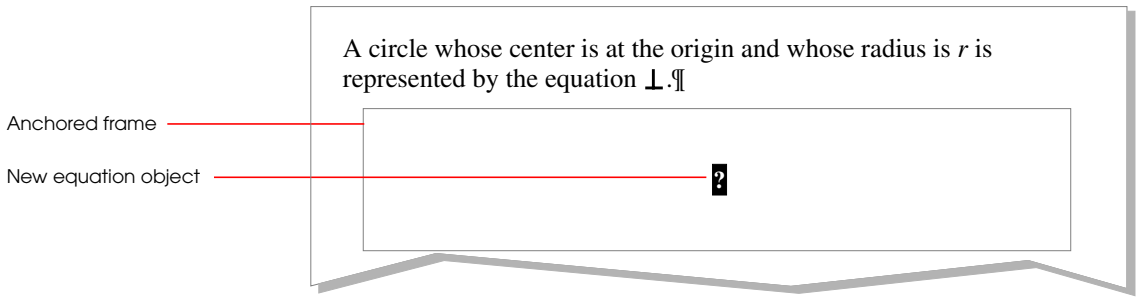
28 CREATING EQUATIONS

FrameMaker provides a full palette of math elements to streamline the creation of typeset equations. You create an equation by inserting an equation object of a particular font size in a document and then inserting the math elements—numbers, symbols, operators, and so on—in the object.

You start with an equation object

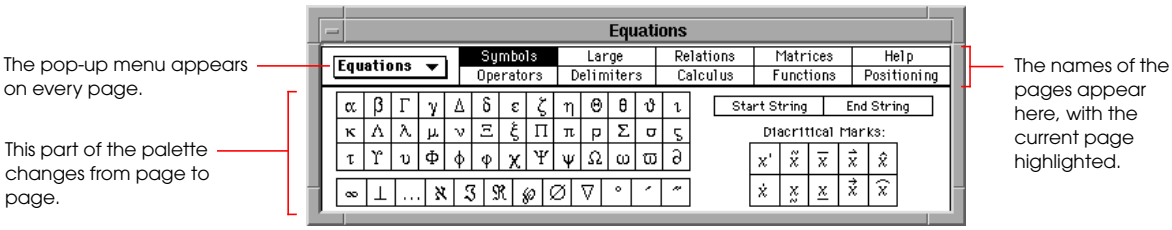
When you create an equation, you choose a font size—Small, Medium, or Large. FrameMaker inserts the new equation object in an anchored frame, and you work with the equation there.



You use a palette to insert math elements

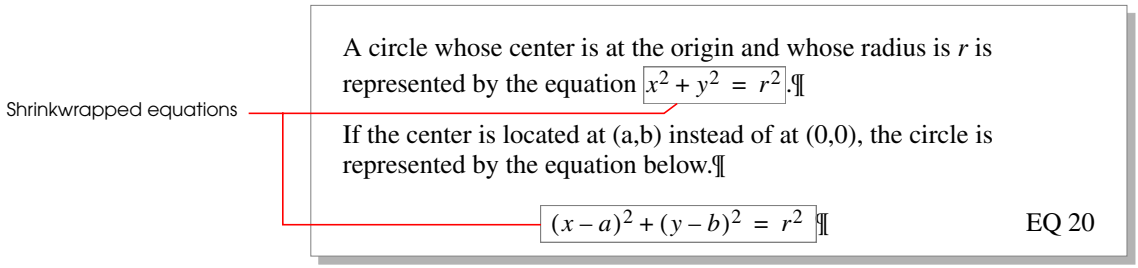
The Equations palette contains the commands you use to create and change equations, as well as the symbols, operators, functions, and

other math elements you insert in equations. As you insert and edit elements, the equation's mathematical syntax adjusts automatically.



If the Equations palette doesn't include a math element you need, you can create your own. If FrameMaker displays an element in a form that doesn't match what you want, you can change the element's definition.

When you finish the equation, you shrinkwrap it in the anchored frame so it takes up as little space as possible.



You can format and evaluate equations

After you create equations, you can change their format—their fonts, their alignment, and the exact positioning of their math elements and the amount of white space around them. Or you can use commands on the Equations palette to evaluate the equation mathematically.

In this chapter

This chapter shows you how to create an equation object and then insert and edit math elements in the equation. It also shows you how to create custom math elements and change the definition of built-in elements. Chapters 29 and 30 show you how to format equations and how to evaluate them mathematically.

CREATING EQUATIONS

You can put an equation in line with paragraph text or on display in a paragraph of its own. Either way, FrameMaker creates an anchored graphic frame for the equation.

You can also position an equation with other objects in an existing graphic frame, anchored or unanchored.

In line

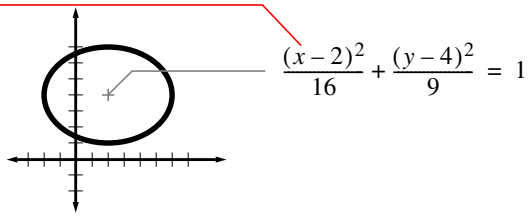
Display

In a graphic frame with other objects

Suppose that the axes of an ellipse lie along the lines $x = x_0$ and $y = y_0$. The ellipse is represented by the following equation.

$$\frac{(x - x_0)^2}{a^2} + \frac{(y - y_0)^2}{b^2} = 1 \qquad \text{EQ 21}$$

For example, the ellipse shown below has axes of $x = 2$ and $y = 4$. Its horizontal axis is 8 units long. Its vertical axis is 6 units long.



$$\frac{(x - 2)^2}{16} + \frac{(y - 4)^2}{9} = 1$$

To create an equation, you first insert an equation object in the document and then insert math elements in the equation. While this section describes how to create equations, it doesn't provide detailed instructions on inserting math elements. For that information, see "Inserting math elements in an equation" on page 28-8.

When working with an equation, zoom in until the characters in the equation are easy to read.

To create an in-line equation

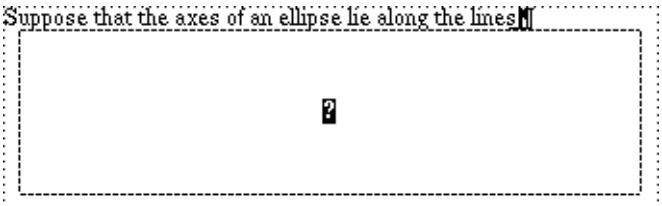
An in-line equation appears in line with paragraph text.

1 **Click in text where you want to insert the equation.**
If the text is in a rotated text frame, unrotate it first by pressing Esc g 0 (zero).

2 **Click the Equations button Σ at the right side of the document window.**
You can also choose Equations from the Special menu to display the Equations palette.

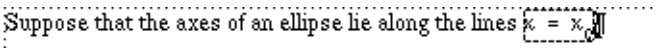
3 **On the Equations palette, choose one of the New Equation commands from the Equations pop-up menu.**
Small, Medium, or Large specifies the font sizes used in the new equation.

A new equation object appears as a question mark in an anchored frame below the line with the insertion point. The first math element you insert replaces the question mark prompt.



4 **Insert the math elements in the equation.**
Type them or click items on the Equations palette. For details, see "Inserting math elements in an equation" on page 28-8.

5 **Choose Shrink-Wrap Equation from the Equations pop-up menu.**
This shrinks the frame around the equation and puts the equation on the line of text at the anchor symbol.



6 **If the equation seems too close to the text on either side, insert a space before or after the frame.**
FrameMaker treats the frame that contains an in-line equation as a character and doesn't provide any extra space around it.

7 **To close the Equations palette, point in it and press Control-x Control-c.**

IF THE EQUATION IS TOO TALL FOR THE LINE

To open up more space above or below the equation, turn off fixed line spacing using the Line Spacing pop-up menu on the formatting bar. For details, see "To specify custom line spacing" on page 4-19.

To create a display equation

A display equation appears in a paragraph of its own.

1 **Click in an empty paragraph.**
If you need to add a new empty paragraph, press Return at the end of the paragraph above where you want the equation.

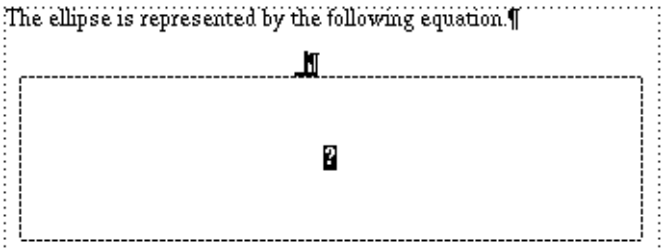
2 **Choose an existing paragraph format from the Paragraph Format pop-up menu in the formatting bar or set up your own format.**
The paragraph format determines the alignment (left, right, or center), vertical spacing, and any autonumber for the paragraph that contains the equation.

If you created the document from a FrameMaker book or report template, use the format named Equation.

3 **Click the Equations button Σ at the right side of the document window.**
You can also choose Equations from the Special menu to display the Equations palette.

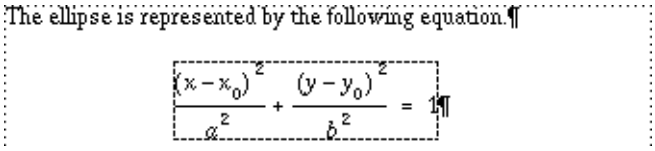
4 **On the Equations palette, choose one of the New Equation commands from the Equations pop-up menu.**
Small, Medium, or Large specifies the font sizes used in the new equation.

A new equation object appears as a question mark in an anchored frame below the empty paragraph. The first math element you insert replaces the question mark prompt.



5 **Insert the math elements in the equation.**
Type them or click items on the Equations palette. For details, see “Inserting math elements in an equation” on page 28-8.

6 **Choose Shrink-Wrap Equation from the Equations pop-up menu.**
This shrinks the frame around the equation and puts the equation in the empty paragraph.



7 **To close the Equations palette, point in it and press Control-x Control-c.**

To create an equation in a graphic frame with other objects

You may want to use an equation to annotate a graphic in a graphic frame or to put more than one equation in a graphic frame. The graphic frames that contain equations can be either anchored or unanchored.

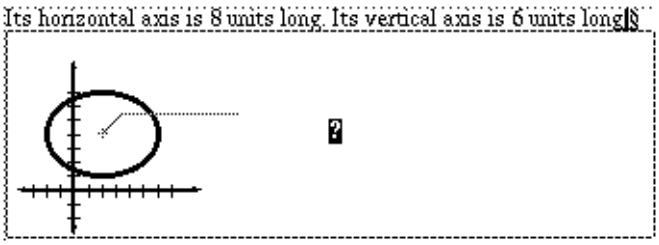
1 **Click the Equations button Σ at the right side of the document window.**
You can also choose Equations from the Special menu to display the Equations palette.

2 **Select a graphic frame or an object in a graphic frame.**
If you select a frame, the equation will appear centered in it.

If you select an object, the equation will appear centered in the frame that contains the object.

3 **On the Equations palette, choose one of the New Equation commands from the Equations pop-up menu.**
Small, Medium, or Large specifies the font sizes used in the new equation.

A new equation object appears as a question mark inside the frame. The first math element you insert replaces the question mark prompt.



4 **Insert the math elements in the equation.**
Type them or click items on the Equations palette. For details, see "Inserting math elements in an equation" on page 28-8.

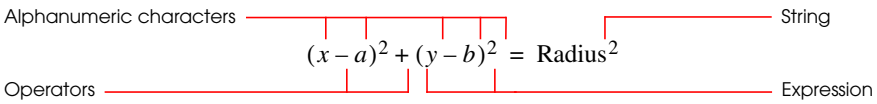
5 **To close the Equations palette, point in it and press Control-x Control-c.**

PLACING THE EQUATION EXACTLY WHERE YOU WANT IT

You move the equation as you do any object: Control-click the equation to select it and then drag it. You can also position it precisely with the arrow keys or with the Object Properties command on the Graphics menu. For details, see "To move an object" on page 14-4 and "To specify the exact position of an object" on page 14-5.

INSERTING MATH ELEMENTS IN AN EQUATION

An equation contains expressions made up of math elements—alphanumeric characters, operators and other mathematical elements from the Equations palette, and strings.



After you create an equation object, you insert math elements in it by typing them or by clicking items on the Equations palette. For details on creating equations, see "Creating equations" on page 28-4. For a description of the math elements on the Equations palette, see "The Equations palette" on page 28-9.

If the element you're typing needs an operand, a question mark prompt (?) appears; otherwise an insertion point appears.

When you insert a math element in an equation, FrameMaker adjusts the mathematical syntax. The result depends upon the *scope of operation*—the selection or the location of the insertion point. For example, when you insert *x* in a fraction, the result depends on whether the numerator, the denominator, or the entire fraction is selected.

If you multiply by *x*	The result is	Explanation
$\frac{2y+7}{4}$ or $\frac{2y+7}{4}$	$\frac{2y+7x}{4}$	Only the 7 is multiplied by *x*.
$\frac{2y+7}{4}$	$\frac{(2y+7)x}{4}$	FrameMaker adds parentheses to show that the entire expression $2y + 7$ is multiplied by *x*.
$\frac{2y+7}{4}$ or $\frac{2y+7}{4}$	$\frac{2y+7}{4}x$	The entire fraction is multiplied by *x*.

Notice that the size of the insertion point in the first and last examples above indicates the scope.

Most mistakes in equations result from an incorrect scope of operation—having too little or too much selected when inserting an element. Be careful to select the range you want before inserting an element.

THE EQUATIONS PALETTE

The Equations palette has nine pages of math elements and commands. To display a page, click its name at the top of the palette.

Symbols Greek characters, atomic symbols, diacritical marks, and strings

Operators Roots, powers, signs, subscripts, superscripts, and logic symbols

Large Sums, products, integrals, intersections, and unions

Delimiters Parentheses, brackets, braces, and substitution

Relations Equal, less than, greater than, similar to, subset of, superset of, and proportional to

Calculus Integrals, derivatives, partial derivatives, gradients, and limits

Matrices Matrices and matrix commands

Functions Trigonometric, hyperbolic, and logarithmic functions; commands for evaluating expressions; and commands for creating and applying rules

Positioning Controls to adjust the position of an expression and the spacing around it; commands to specify alignment; and commands to set and clear manual line breaks

To insert a math element from the keyboard

You insert alphanumeric characters (the letters of the alphabet and the digits *0* through *9*) from the keyboard. You can also insert every item on the Equations palette from the keyboard.

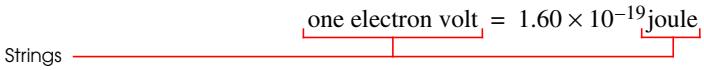
The Equations palette doesn't have to be open when you insert an item from the keyboard.

- **To insert an alphanumeric character, type it.**
- **To insert a symbol that appears on the keyboard, type it.**
  You can type parentheses, brackets, plus signs, equal signs, and so on. If you type an open parenthesis, FrameMaker inserts the closing parenthesis.
- **To insert an element by typing a backslash sequence, type a backslash (\) and the string that identifies the element and then press Return.**
  For example, to insert the symbol for infinity (∞), type `\infty` and press Return. For information on the backslash sequences, see the shortcuts in FrameMaker online Help.

  When you insert a built-in function such as *sin,* you don't need to type the backslash.
- **To insert an element using a shortcut, press the sequence of keys.**
  For information on the shortcuts, see FrameMaker online Help.

To insert a string

A string is a series of characters that FrameMaker interprets as a unit.



Unlike characters that make up an expression, the characters in a string do not usually appear in italics and are not multiplied together.

1. **Click Start String on the Symbols page.**
   You can also type an apostrophe (') or a double quotation mark (") to start the string.

   Two double quotation marks ("") appear.
2. **Type the text of the string.**
   The quotation marks disappear, and the text appears as you type.
3. **Click End String on the Symbols page.**
   You can also press Return to end the string.

USING EVALUATION COMMANDS WITH STRINGS

Strings have no mathematical meaning in FrameMaker. For example, evaluation commands can evaluate the function *tan* but not the string "tan".

TO INSERT A STRAIGHT APOSTROPHE OR DOUBLE-QUOTE IN A STRING

To insert a straight apostrophe or straight double-quote in a string in an equation, hold down the Control key while pressing the appropriate key or keys.

To insert a horizontal or vertical list of expressions

An equation object usually contains one equation or expression. But you can set up a horizontal or vertical list in which several expressions are all in the same object. An equation object can contain just a list of expressions, or the list can be part of a larger expression.

Horizontal list — $2xy \quad 3ab$

Vertical list aligned on equal signs —
$$y = (x-3)^2$$
$$= x^2 - 6x + 9$$

FrameMaker aligns the expressions in the list automatically. When you move the list, all the expressions maintain their relative positions. For information on changing the alignment of items in a list of expressions, see "To align items in a vertical list or multiline equation" on page 29-9.

When you select a list, all the expressions in the list are selected as one object.

1. **Select the expression you want to be the first item in the list.**
2. **Click the horizontal list element [? ?] or vertical list element [?/?] on the Operators page.**

A horizontal or vertical list appears. The selected expression is the first item in the list. A second item appears in the list as a question mark prompt.

Before clicking	After clicking	Explanation
?	? ?	Horizontal list
abc	abc ?	Vertical list
ab?	$ab\binom{c}{?}$	Vertical list as part of a larger expression

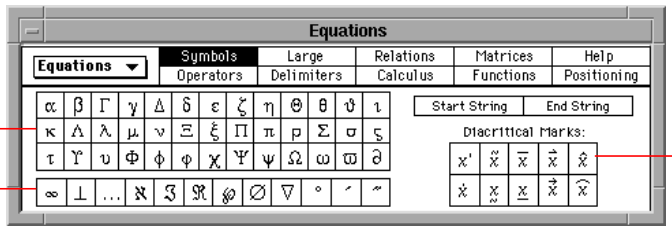
When more than one question mark prompt appears, press Tab to move from one prompt to another.

ADDING AN ITEM TO A HORIZONTAL OR VERTICAL LIST

To add an item to a horizontal or vertical list, select one of the items in the list and click the horizontal list element [? ?] or vertical list element [?/?] on the Operators page.

To insert a symbol

The Symbols page on the Equations palette contains the Greek alphabet, other symbols, and diacritical marks.



The Symbols page doesn't include Greek letters that have Roman-alphabet equivalents, such as the uppercase alpha *(A)*.

1 **Select an expression or put the insertion point in an equation.**

2 **Click an element on the Symbols page.**
Click the dot or prime button once for each dot or prime diacritical mark you want to insert.

Greek letters and atomic symbols appear at the insertion point or question mark prompt or are multiplied by the selection. Diacritical marks appear on the element to the left of the insertion point or on the selected expression.

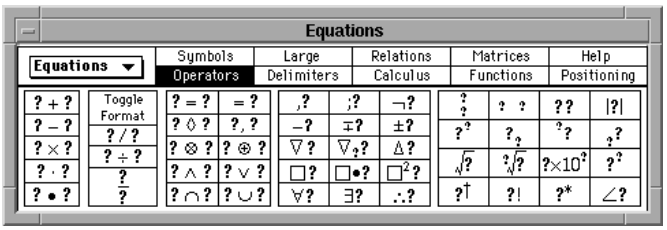
Before clicking	After clicking
$y + 7$	$y + 7\pi$
$y + 7$	$(y + 7)\,\pi$

SUMMATION AND PARTIAL DIFFERENTIAL SYMBOLS

For a summation, product, or partial differential element that FrameMaker can interpret and manipulate mathematically, insert the elements from the Large page and Calculus page rather than from the Symbols page, because elements from the Symbols page are not evaluated.

To insert an operator

The Operators page on the Equations palette contains commonly used operators—addition, subtraction, multiplication, and division—as well as roots, powers, signs, subscripts, superscripts, and logic symbols.



1. **Select an expression or put the insertion point in an equation.**
2. **Click an element on the Operators page.**

Before clicking	After clicking
$2x$	$2x + ?$
$2x$	$2(x + ?)$

When more than one question mark prompt appears, press Tab to move from one prompt to another.

DIVISION OPERATORS

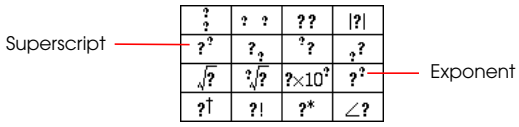
FrameMaker creates a fraction when you insert a horizontal or vertical division sign. If you make a selection first, the selection becomes the numerator.

Before clicking	After clicking
$3xy$	$3x\frac{y}{?}$
$3xy$	$3\frac{xy}{?}$

You change the division operator to a slash (/), a horizontal bar (–), or a division symbol (÷) by using Toggle Format on the Operators page. For details, see "To toggle an element's format" on page 28-25.

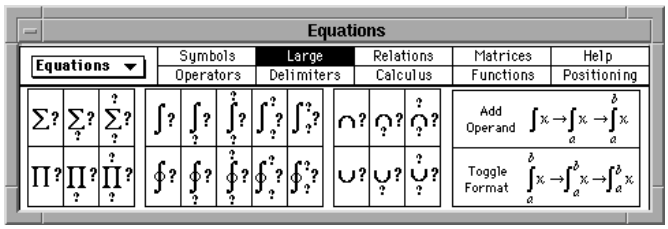
EXPONENTS AND SUPERSCRIPTS

FrameMaker can evaluate exponents, but not superscripts, mathematically.



To insert a large element

The Large page on the Equations palette contains sums, products, integrals, intersections, and unions.



1. **Select an expression or put the insertion point in an equation.**
2. **Click an element on the Large page.**
   FrameMaker places the element at the insertion point or applies it to the selection.

Before clicking	After clicking

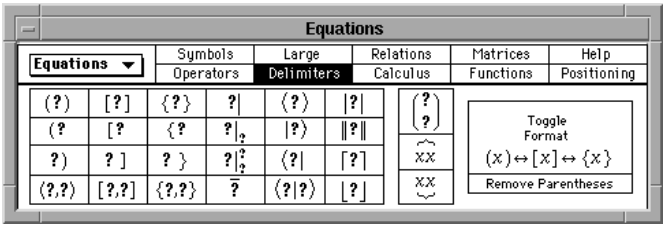
When more than one question mark prompt appears, press Tab to move from one prompt to another.

ADDING OPERANDS

You can add an operand after inserting a math element on the Large page. For details, see "To add an operand to an element" on page 28-19.

To insert a delimiter

The Delimiters page contains delimiters such as parentheses, brackets, and braces.



1 **Select an expression, or put the insertion point in an equation.**

2 **Click an element on the Delimiters page.**

FrameMaker places delimiters at the insertion point or around the selection.

Before clicking	After clicking
2x	2x(?)
2x	2(x)

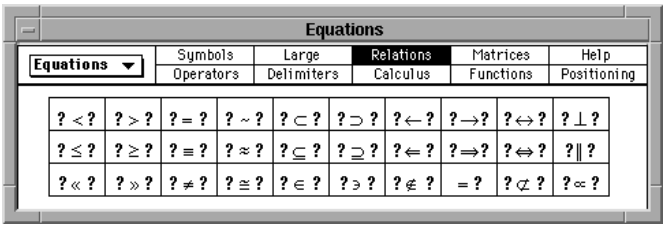
When more than one question mark prompt appears, press Tab to move from one prompt to another.

TOGGLING THE FORMAT OF PARENTHESES

You can also represent parentheses as brackets ([and]) or braces ({ and }). For details, see "To toggle an element's format" on page 28-25.

To insert a relation

The Relations page contains relation symbols such as =, <, >, ≈, ≡, ∈, ⊃, and ⊂.



1 **Select an expression or put the insertion point in an equation.**

2 **Click an element on the Relations page.**

All relation symbols—except the binary equal sign ? = ?—apply to the character to the left or right of the insertion point or to the selection. When you insert a relation symbol between multiplied elements, it applies to the elements on either side of the insertion point.

Before clicking	After clicking
abc	$ab\,(c \approx \square)$
$a\boxed{bc}$	$a\,(bc \approx \square)$
$ab\boxed{c}$	$ab \approx c$

When more than one question mark prompt appears, press Tab to move from one prompt to another.

EQUAL SIGNS

Binary equal signs ? = ? appear to the right of the current expression. When the insertion point or selection is in a subscript or superscript, the equal sign appears in the subscript or superscript.

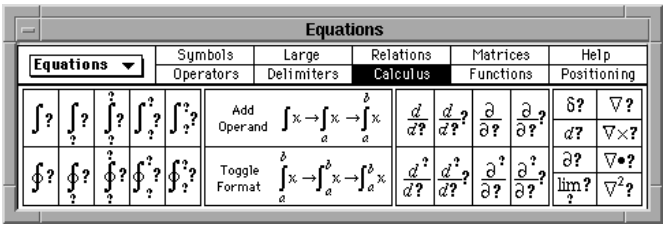
Before clicking	After clicking
$2x + 3y$	$2x + 3y = \square$
	$2x_{p = \square} + 3y$

To insert a binary equal sign at the insertion point rather than to the right of the expression, press Esc m =.

Before	After
$\frac{a}{b}$	$\frac{a}{(b = ?)}$

To insert a calculus element

The Calculus page contains integrals, derivatives, partial derivatives, gradients, and limits.



1. **Select an expression or put the insertion point in an equation.**
2. **Click an element on the Calculus page.**
   FrameMaker places a calculus symbol at the insertion point or applies it to the selection.

Before clicking	After clicking
$x^{?}$	$x^{2}\int_{?}^{?}$
x^2dx	$\int x^2 dx$

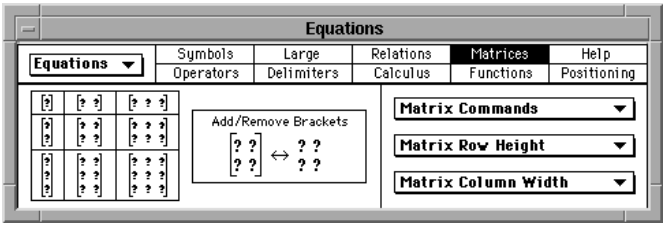
When more than one question mark prompt appears, press Tab to move from one prompt to another.

CHANGING THE POSITION OF OPERANDS IN AN INTEGRAL

To change the position of operands, use the Toggle Format button. For details, see “To toggle an element’s format” on page 28-25.

To insert a matrix

The Matrices page contains elements for matrices ranging in size from 1 by 1 to 3 by 3. After creating a matrix, you can add rows and columns. For details, see "To change a matrix" on page 28-26.



1 **Select an expression or put the insertion point in an equation.**

2 **Click an element on the Matrices page.**

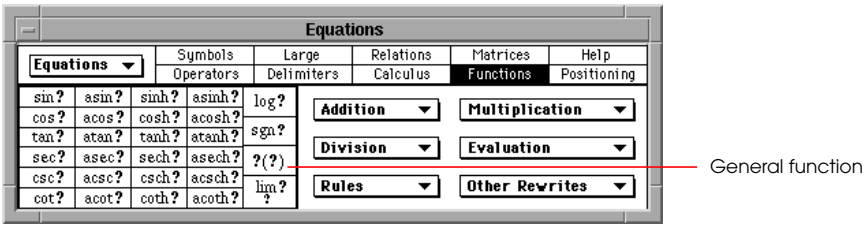
FrameMaker places a matrix at the insertion point or selection. When an expression is selected, it becomes the first cell in the matrix.

Before clicking	After clicking
3x	3x [? ? ? ?]
3x	3 [x ? ? ?]

When more than one question mark prompt appears, press Tab to move from one prompt to another.

To insert a function

The Functions page contains trigonometric, hyperbolic, and logarithmic functions and also the sgn, limit, and general functions.



1 **Select an expression or put the insertion point in an equation.**

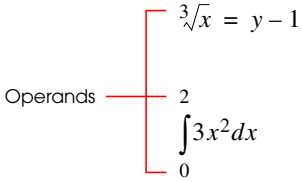
2 **Click an element on the Functions page.**
FrameMaker places functions at the insertion point or at the selection. When an expression is selected, the expression becomes the argument of the function (except for the limit and general functions).

Before clicking	After clicking
π	$\pi \sin(?)$
π	$\sin \pi$

When more than one question mark prompt appears, press Tab to move from one prompt to another.

To add an operand to an element

Radical symbols, gradient symbols, and logarithms can have one or two operands. Integrals and other symbols on the Large and Calculus pages can have one, two, or three operands.



You can add operands to these elements without starting over.

1 **Click or select anywhere in the expression with the element.**

2 **Click Add Operand on the Large or Calculus page.**
A question mark prompt appears where the new operand will go.

3 **Click on the Equations palette or type to insert the operand.**

$$\sum_{n=1}^{10} Ax_n$$

To insert a custom math element

You can insert custom math elements that have been defined for a document. For example, you may want to use additional operators that aren't built into FrameMaker. For details on defining custom math elements, see "Creating and changing math element definitions" on page 28-27.

1 **On the Equations palette, choose Insert Math Element from the Equations pop-up menu.**

2 **In the Insert Math Element dialog box, select the element name and click Insert.**

USING EVALUATION COMMANDS WITH CUSTOM MATH ELEMENTS

Custom math elements have no mathematical meaning in FrameMaker. For example, a custom math element for an operator will be treated as an operator in an equation, but FrameMaker will not be able to evaluate it.

EDITING EQUATIONS

You can edit an equation as you edit text—adding, changing, and removing math elements, and cutting, copying, and pasting them. And you can remove extra delimiters and rearrange elements. As you edit an equation, FrameMaker adjusts the syntax of the equation as necessary.

You can change a matrix—add or delete rows and columns, delete brackets, and change row height and column width.

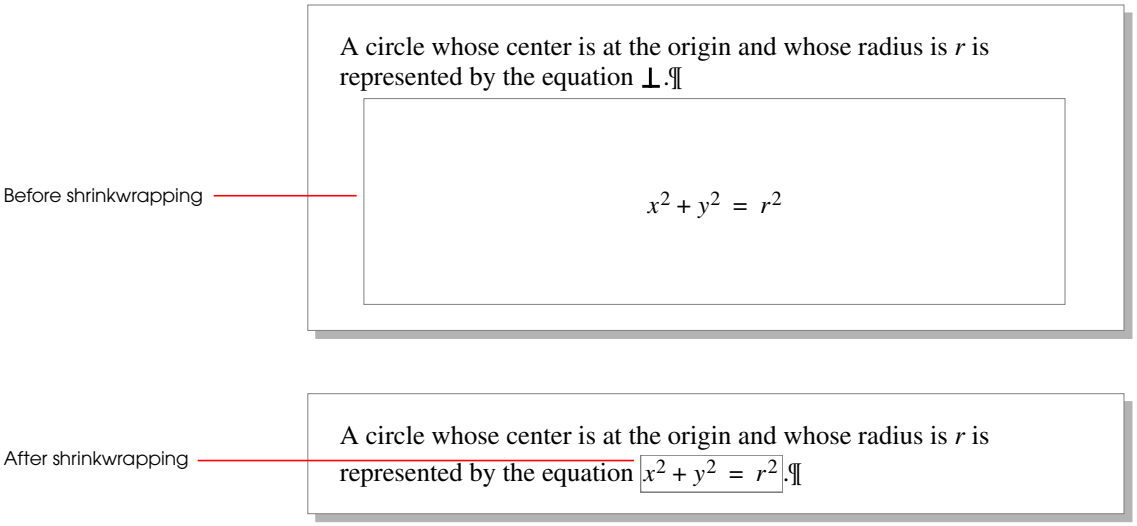
You can also choose among several representations for some math elements such as parentheses, and you can add operands to others such as integrals and summations.

If your equation is shrinkwrapped, unwrap the equation before editing it. This makes the anchored frame full-sized again, giving you more room to work.

If you decide not to keep a change, you can undo it just as you would undo a text change—by using Undo on the Edit menu.

To shrinkwrap an equation

Shrinkwrapping an equation shrinks the surrounding anchored frame so that it's just large enough for the equation and puts the frame at the insertion point.



Shrinkwrap an equation when you finish working with it so that the equation doesn't take up any more space than it needs and so that it aligns with the baseline of the surrounding text.

1. **Click in the equation or select its frame.**
2. **On the Equations palette, choose Shrink-Wrap Equation from the Equations pop-up menu.**

   FrameMaker resizes the frame, positions it at the anchor symbol, and puts the insertion point after the frame.

   The edges of a shrinkwrapped equation may not appear on the screen, but they will appear in the printed document.

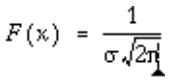
UNWRAPPING AN EQUATION

You unwrap an equation to enlarge the anchored frame for easier editing. Click in the equation or select its frame, and choose Unwrap from the Equations pop-up menu on the Equations palette. FrameMaker enlarges the frame, places it below the current line, and puts the insertion point in the equation.

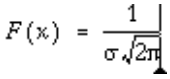
To place and move the insertion point

You need to put the insertion point in an equation before editing it.

- **To put the insertion point next to a specific character, click as close as possible to the character.**



- **To put the insertion point next to an entire equation, click at the far right end of the equation.**



Notice that the size of the insertion point varies depending on its location in the equation. This helps you determine whether the insertion point is in the right place.

- **To move the insertion point, use the arrow keys.**

Direction	Key to press
Right	Right arrow
Left	Left arrow
From beside a fraction to its numerator	Down arrow

To select part of an equation

When you insert an element, the selection defines the scope of operation for the element. At other times, the selection identifies the part of an equation you want to edit, format, or evaluate.

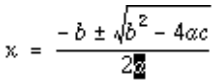
As you select elements in an equation, FrameMaker interprets the elements mathematically. In $b^2 - 4ac$, for example, FrameMaker interprets b^2 and $-4ac$ as *expressions*. The expression $-4ac$ is made up of subexpressions.

You can select any subexpression or expression in an equation.

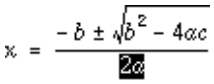
- **To select part of an equation using the mouse, drag through the elements you want to include.**

Selecting in an equation is similar to selecting text elsewhere in FrameMaker. However, as you drag, notice that the selection jumps to include the next subexpression.

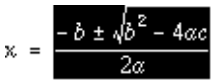
- **To extend the selection using the keyboard, press the space bar.**
  The selection expands to include the next higher expression.



If you start with the *a* selected…



…pressing the space bar once extends the selection to include the *2*…



…and pressing the space bar twice includes the next higher expression.

In the example, pressing the space bar a third time selects the entire equation.

- **To change the selection, use the arrow and Tab keys.**

Direction	Key to press
Right to the next subexpression	Right arrow
Left to the next subexpression	Left arrow
Right to the next question mark prompt	Tab

To replace an element

You can replace an element or an entire expression.

1. **Select what you want to replace.**

   2x + 3y

2. **Press Delete.**
   The element is removed, and a question mark prompt appears.

   2x + ?

3. **Click on the Equations palette or type to insert the replacement.**
   The new element replaces the prompt.

   2x + 5

To delete an element

You can delete one element at a time or an entire expression at once.

1 **Select what you want to delete.**

2 **Press Delete.**
The element is removed, and a question mark prompt appears.

3 **Press Delete again.**
The prompt disappears. FrameMaker also removes any elements that are no longer necessary—for example, the plus sign in the example.

DELETING AN ENTIRE EQUATION

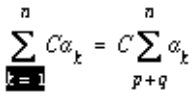
To delete an equation object from the graphic frame that contains it, select the equation (Control-click) and press Delete.

To delete the graphic frame along with the equation, select the frame and press Delete.

To cut, copy, and paste an element

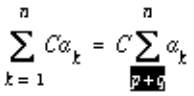
You can cut or copy an element or expression to the FrameMaker Clipboard and then paste it in another part of an equation. You cut and paste an expression to move it somewhere else and copy and paste it to put a copy of it somewhere else.

1 **Select what you want to cut or copy.**



2 **Choose Cut or Copy from the Edit menu.**

3 **Click to place an insertion point or select an expression you want to replace.**



4 **Choose Paste from the Edit menu.**

The element on the Clipboard appears at the insertion point, is applied to the selection, or replaces the question mark prompt.

$$\sum_{k=1}^{n} Ca_k = C\sum_{k=1}^{n} a_k$$

To remove parentheses

After entering or editing an equation, you can sometimes end up with extra delimiters—either because you inserted too many or because FrameMaker inserted ones you didn't want. You can remove extra delimiters from an equation. But if you later use evaluation commands, FrameMaker evaluates the equation as if the delimiters were still present.

- **To remove all parentheses, braces, or brackets in an expression, select the expression and click Remove Parentheses on the Delimiters page.**

Before clicking	After clicking
$(2a(b))$	$2ab$

- **To remove one delimiter, place the insertion point to the right of the delimiter and press Delete.**

  FrameMaker removes the delimiter. If the delimiter has a mate, such as the left parenthesis between a and b in the example, the mate is also removed.

Before	After
$(2a(b)\|)$	$(2ab)$

To toggle an element's format

Some math elements can be represented in more than one way.

For example, parentheses can appear as (x), $[x]$, or $\{x\}$. Division can appear as $x \div y$, x/y, or $\frac{x}{y}$.

You can switch from one format to another without starting over.

1 **Select the entire element.**

2 **Click Toggle Format on the Operators, Large, Delimiters, or Calculus page.**
The command is the same on all four pages and operates on any element with multiple formats. You might need to click more than once for the format you want.

To change a matrix

You can change the number of rows or columns in a matrix and add or remove brackets around it.

You can also allow the width to vary from column to column, depending on the column's contents, or specify that all columns be of equal width.

Similarly, you can allow the height to vary from row to row.

- **To add a row or column to a matrix, put the insertion point in the matrix and then choose Add Row or Add Column from the Matrix Commands pop-up menu on the Matrices page.**

Before Add Column **After Add Column**

Add Row puts a new row at the bottom. Add Column puts a new column at the far right.

- **To delete a row or column from a matrix, select the row or column and press Delete.**

Before **After**

- **To add or remove brackets around a matrix, select the entire matrix and click Add/Remove Brackets on the Matrices page.**

- **To change the row height or column width in a matrix, select the matrix and choose All Equal or Proportional from the Matrix Row Height or Matrix Column Width pop-up menu on the Matrices page.**

$$\begin{bmatrix} x^2 + 2xy + y^2 & x \\ x + y & x + y \end{bmatrix}$$

Proportional column widths

$$\begin{bmatrix} x^2 + 2xy + y^2 & x \\ x + y & x + y \end{bmatrix}$$

Equal column widths

If you choose Proportional, each row will be tall enough to hold the tallest cell in the row. Each column will be wide enough to hold the widest cell in the column. If you choose All Equal, each row will be tall enough to hold the tallest cell in the entire matrix. Each column will be wide enough to hold the widest cell in the entire matrix.

PERFORMING MATRIX OPERATIONS

For instructions on transposing a matrix or performing matrix algebra, see "Matrix Commands pop-up menu" on page 30-4.

CREATING AND CHANGING MATH ELEMENT DEFINITIONS

If you need a math element that doesn't appear on the Equations palette, you can create a custom element of your own. If you want to display an element on the palette—a built-in element—differently in your document, you can redefine the element.

$a \ast b = \sin^{-1} x$

Custom math element — Built-in element, redefined

You can also update all the math element definitions from another document. For details, see "Importing formats into a document" on page 21-12.

Custom math element definitions are stored on a special FrameMath reference page. (The page's name begins with FrameMath.) Each definition is a text line in an unanchored graphic frame whose name is the element name.

To define a math element

You can define a custom math element for a document when you need an element that doesn't appear on the Equations palette—for example, a new operator (✱). However, FrameMaker won't be able to evaluate custom math elements mathematically.

You can also redefine how a built-in math element appears. For example, you may want to redefine the built-in inverse sine function *(asin)* so it appears as sin^{-1}. While you can redefine the appearance of a built-in element, you can't change its behavior—its type. For a description of math element types, see "Math element types" on page 28-30.

1 **Display a FrameMath reference page.**
Choose Reference Pages from the View menu. Then display a FrameMath reference page.

If there's no FrameMath reference page in the document, display a reference page and then choose Add Reference Page from the Special menu. Name the new page FrameMath1. (Capitalize the letters *F* and *M* as shown.)

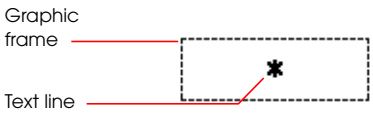
2 **Draw an unanchored graphic frame on the page.**
Use the Graphic Frame tool on the Tools palette. For details, see "To draw an unanchored graphic frame" on page 13-14.

3 **In the Frame Name dialog box, type a name for the element.**
You can use the name of a built-in element or define an entirely new element.

To see the names of built-in elements, place the insertion point in an equation and choose Insert Math Element from the Equations pop-up menu on the Equations palette. In the Insert Math Element dialog box, turn off Show Custom Only.

4 **Add a text line in the graphic frame and create the math element in the text line.**
To add a text line, use the Text Line tool on the Tools palette. For details, see "To add a text line" on page 13-25.

You can type any characters in the text line. You can change their character format using either the Font, Size, and Style submenus or Characters>Designer on the Format menu. You can also change their position by using micropositioning shortcuts. For a complete list of keyboard shortcuts, see Chapter 2, "Keyboard Shortcuts," in the *Quick Reference*.



The math element could be as simple as a single character in a specialized font.

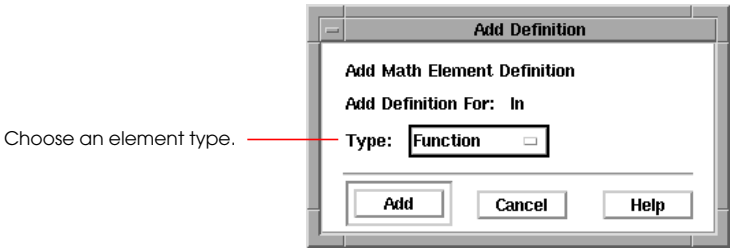
For all math elements except delimiters, the text line represents just the mathematical symbol, not the operands. When you later insert the element in an equation, FrameMaker places the operands in the appropriate places, based on the type of the math element. For example, a large element such as a summation or an integral sign has up to three operands—one above, one below, and one to the right of the symbol.

FrameMaker uses the first text line in the graphic frame for the custom math element, so make sure there's only one text line in the frame.

5 **Select the graphic frame.**

6 **On the Equations palette, choose Add Definition to Catalog from the Equations pop-up menu.**

7 **If you're defining a custom math element, choose an element type from the pop-up menu in the Add Definition dialog box.**

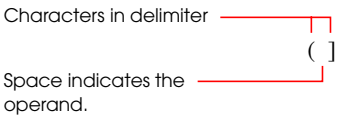


The element type indicates how the element behaves in relation to other elements around it. For example, a plus sign (+) has the type infix, which means that it has two operands, one to the left and one to the right. For information on the types of math elements you can define, see "Math element types" on page 28-30.

8 **Click Add.**

DEFINING A DELIMITER

A custom delimiter can contain only one operand, even though some built-in delimiters contain two or three. To indicate the location of the operand, insert a space in the text line. If you do not insert a space in the text line, FrameMaker places the operand between two copies of the delimiter.



MATH ELEMENT TYPES

You can define elements of the following types.

Type	Example	Number of operands
Atom	α	None
Infix	$\alpha + \beta$	Two, one to the left and one to the right of the element
Prefix	$-\alpha$	One, to the right of the element
Postfix	$\alpha!$	One, to the left of the element
Delimiter	(α)	One
Large	$\sum_{1}^{\infty} x^2$	Up to three, one each above, below, and to the right of the element
Vertical list	α β γ	Two, arranged one above the other
Function	$\sin\alpha$	One, to the right of the element
Limit	$\lim_{x \to \infty} \frac{1}{x^2}$	Up to two, one below and one to the right of the element

You cannot define elements of the following types.

Type	Example
Script	α^2, β_0
Derivative	$\frac{d}{dx}$
Diacritical mark	$\alpha', \ddot{\beta}$
Matrix	$\begin{bmatrix} \alpha & \beta \\ \gamma & \delta \end{bmatrix}$
Roots	$\sqrt{x}, \sqrt[3]{x}$
Substitution	$x\big\|_{x=3}$
Vertical division bar	$\frac{\alpha}{\beta}$
Horizontal list	$xy \qquad x + y$

DEFINING A VERTICAL LIST

The text line that defines a custom vertical list is used as a separator between items in the list.

FINDING THE NAME OF A BUILT-IN ELEMENT

To find the name of a built-in element, choose Insert Math Element from the Equations pop-up menu on the Equations palette. Turn off Show Custom Only in the dialog box and scroll through the element names until you find the one you want. Then click Cancel.

To change a custom math element definition

You can change a custom math element at any time. When you do, FrameMaker shrinkwraps the equations again.

1. **Display the FrameMath reference page that contains the math element.**

   If you inserted the custom math element into an equation, display the reference page by selecting the element in an equation and choosing Update Definition from the Equations pop-up menu on the Equations palette. Then click Go to Frame in the dialog box that appears.

   If you haven't inserted the custom math element into an equation, choose Reference Pages from the View menu. Then display the reference page you want.

2. **Edit the text line that defines the math element.**

   When you display a body page again, FrameMaker uses the modified definition.

DELETING A CUSTOM MATH ELEMENT DEFINITION

To delete a custom math element definition, display the FrameMath reference page that contains the math element and delete the frame. If the element appears in an equation, FrameMaker displays the element name, surrounded by question marks, instead of the element.

29

FORMATTING EQUATIONS

Changing the positioning, alignment, and fonts in equations and expressions

POSITIONING MATH ELEMENTS IN AN EQUATION 29-4

To position an expression precisely 29-4

To change the spacing around an expression 29-5

ALIGNING EQUATIONS 29-7

To change an equation's automatic line-break width 29-7

To change equation line-breaking manually 29-8

To change the alignment of a display equation 29-9

To align items in a vertical list or multiline equation 29-9

To left-, center-, or right-align equations with one another 29-11

To align equations along a point 29-11

To align items in a horizontal list 29-12

To align cells in a matrix 29-13

To check alignment settings 29-14

CHANGING FONT SETTINGS 29-14

To change the character format of an expression 29-14

To change equation font size and spacing throughout a document 29-16

To change the font for Greek characters and symbols 29-16

To change the character format for functions, numbers, strings, and variables 29-17

29 FORMATTING EQUATIONS

You can format equations you've placed in a FrameMaker document by changing fonts, spacing, positioning, and alignment.

Precise control of positioning and spacing

You can change the position of an element and the amount of white space around it.

$$\left(\frac{x-2}{4}\right)^2+\left(\frac{y-4}{3}\right)^2=1$$

Before changing spacing and positioning

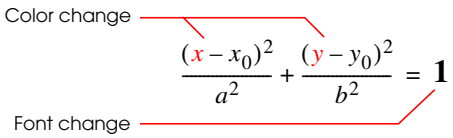
$$\left(\frac{x-2}{4}\right)^{2}+\left(\frac{y-4}{3}\right)^{2}=1$$

After

You can also update the definition of a math element to change the spacing around the element wherever it appears in your document.

Full font control

You can change the character format of elements in an equation—for example, to use color or a special font.



You can change a single equation from one preset size to another or change the font sizes and character formats used for all equations in a document.

Several alignment options

You can control when an equation breaks across lines and how the lines in a multiline equation, or the items in a list or matrix, are aligned.

$$\begin{aligned} 2a + 3b - c &= 2x + 1 \\ 3a - b &= 4x \\ 2b + c &= 3x - 7 \\ 2a - 3b + 7c - 2 &= 2x + 4 \end{aligned}$$

Aligned along the left side of the equal signs

You can also align several equations with one another, even if they appear in different anchored frames.

In this chapter

This chapter shows you how to change the positioning and spacing of elements and the fonts used in equations. It also shows you how to control line breaks in multiline equations and how to align multiline equations, lists, and matrices.

Chapter 28 shows you how to create equations and edit their contents. Chapter 30 shows you how to evaluate equations mathematically.

POSITIONING MATH ELEMENTS IN AN EQUATION

FrameMaker positions math elements according to their mathematical meaning in an equation. In some cases, though, you may want to *micropositon* elements—reposition them so they're closer to or farther from other elements in the equation.

$$\sum_{k=1}^{10} 2k-7$$

Before micropositioning

$$\sum_{k=1}^{10} 2k-7$$

Operands above and below positioned closer to the summation

You can also control the amount of white space on each side of an element—left, right, above, and below.

Default spacing

Space added to the left and right

Space removed from the left and right

Because the size of an element includes the white space around it, you can force FrameMaker to use larger delimiters around an element or expression by increasing the amount of white space above and below it.

Finally, you can update the spacing in a math element definition so the new spacing appears wherever the element appears in the document.

To position an expression precisely

When you microposition an element or expression, its position changes with respect to all other elements in the equation. For example, if you microposition the middle expression closer to the one on the left as shown below, it moves farther away from the one on the right.

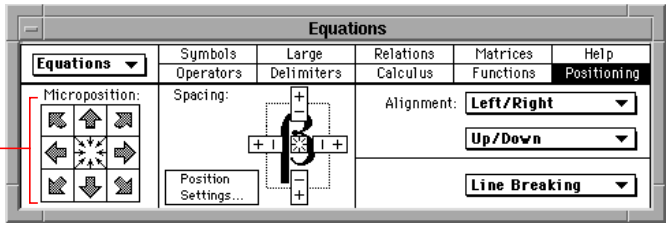
$(x)(x-4)(x-1)$

Before micropositioning

$(x)(x-4)\ (x-1)$

After moving the middle expression to the left

- **To position a selected expression, click a micropositioning arrow on the Positioning page.**



Click as many times as necessary. Each click moves an expression one pixel on the screen. Zoom in for greater precision.

- **To remove micropositioning from a selected expression, click the button at the center of the Microposition area on the Positioning page** .
- **To inspect the position offsets of a selected expression and adjust them numerically, click Position Settings on the Positioning page.**
  The exact offsets appear in the Microposition Offset area of the Math Element Position Settings dialog box.

To change the spacing around an expression

You can change the amount of white space around elements or expressions. For example, you can force FrameMaker to use larger delimiters around an expression by increasing the amount of white space above and below the expression.

$$\left[\sum_{k=1}^{10} 2k-6\right]$$

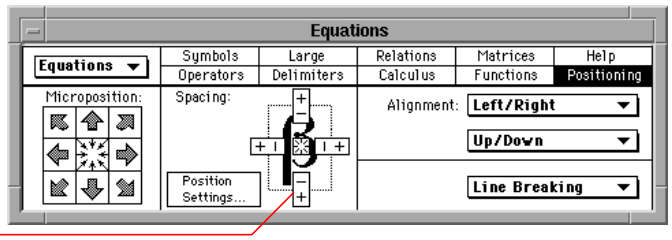
Original spacing

$$\left[\sum_{k=1}^{10} 2k-6\right]$$

Larger brackets

Space added above the top operand and below the bottom one

- **To add or subtract white space around a selected expression, click a spacing control on the Positioning page.**



Click plus (+) to add white space and minus (–) to subtract it.

Click as many times as necessary. Each click adds or subtracts one pixel of space. Zoom in for greater precision.

To change the spacing around a math element of type infix, prefix, postfix, or delimiter, adjust the space around the adjacent math elements instead. For example, to add space on either side of the plus sign in the expression $a + b$, select the a and add space to the right. Then select the b and add space to the left. For a description of math element types, see "Math element types" on page 28-30.

- **To restore the amount of white space around a selected expression to the default spacing, click the button at the center of the Spacing area on the Positioning page** **.**

- **To inspect the spacing values of a selected expression and adjust them numerically, click Position Settings on the Positioning Page.**
  The exact spacing appears in the Spacing area of the Math Element Position Settings dialog box.

CHANGING THE SPACING IN A MATH ELEMENT DEFINITION

You can update some math element definitions—infix, prefix, postfix, large, scripts, and the division bar—with new spacing. When you do, FrameMaker adjusts the spacing around the element wherever it appears in the document and rewraps the equations. For a description of math element types, see "Math element types" on page 28-30.

After you adjust the spacing around the element in an equation, select the element, and choose Update Definition from the Equations pop-up menu on the Equations palette. Then click Update in the Update Definition dialog box.

To reset the spacing in a math element definition to the default spacing, select the element and choose Update Definition from the Equations pop-up menu

on the Equations palette. Then click Get Default in the Update Definition dialog box.

CHANGING THE SPREAD BETWEEN CHARACTERS IN EQUATIONS

You can change the spread—the space between characters—uniformly in all small, medium, and large equations. For details, see "To change equation font size and spacing throughout a document" on page 29-15.

ALIGNING EQUATIONS

You can set an equation to break across lines in an anchored frame when it reaches a particular width. You can change this width at any time. Or you can set a manual line break in an equation to control exactly where the equation breaks to another line. When an equation breaks across lines, the entire equation remains in a single anchored frame.

You can change the alignment of lines in multiline equations, items in horizontal and vertical lists, and cells in matrices.

You can manipulate equation objects as you do other objects. For information on grouping, aligning, distributing, and rotating equations, see Chapter 14, "Editing Illustrations."

To change an equation's automatic line-break width

You can set an equation to break across lines automatically. When you change the line-break width, the equation is reformatted to the new width.

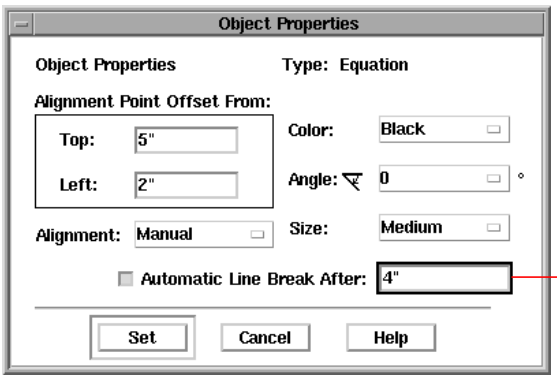
Original equation

$$(x+1)^8 = x^8 + 8x^7 + 28x^6 + 56x^5 + 70x^4 + 56x^3 + 28x^2 + 8x + 1$$

Equation set to break after 1.25 inches

1. **Click in the equation or select any part of it.**
2. **Choose Object Properties from the Graphics menu.**

3 **Edit the value in the Automatic Line Break After text box and click Set.**
The value is preset to the width of the equation's frame.

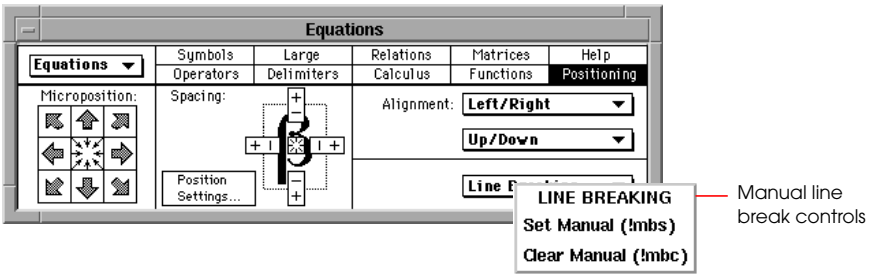


To change equation line-breaking manually

You can force an equation to break across lines at a specific location in the equation.

Don't use manual line breaks to create separate equations. Instead, insert a vertical list of expressions. For more information, see "To insert a horizontal or vertical list of expressions" on page 28-11.

- **To insert a manual line break, click where you want the equation to break into two lines and then choose Set Manual from the Line Breaking pop-up menu on the Positioning page.**



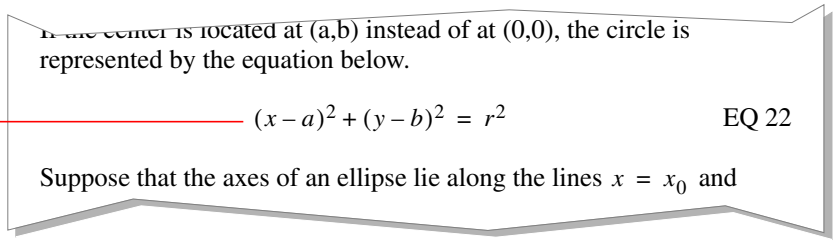
A line-break symbol (❴) appears at the insertion point.

$(x+1)^8 = x^8 + 8x^7 + 28x^6 + 56x^5 +$ ❴ Manual line break
$70x^4 + 56x^3 + 28x^2 + 8x + 1$

- **To remove a manual line break, select the part of the equation that contains the line-break symbol and then choose Clear Manual from the Line Breaking pop-up menu on the Positioning page.**

To change the alignment of a display equation

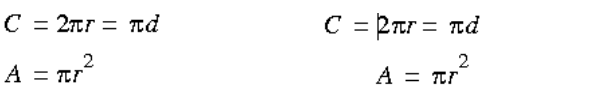
The alignment (left, center, or right) of a display equation is controlled by the format of the paragraph that contains the equation.



1. **Click in the paragraph that contains the equation, not in the equation itself.**
2. **Change the paragraph's alignment.**
   Use the Alignment pop-up menu in the formatting bar or in the Paragraph Designer. For details, see "To align a paragraph" on page 4-14.

To align items in a vertical list or multiline equation

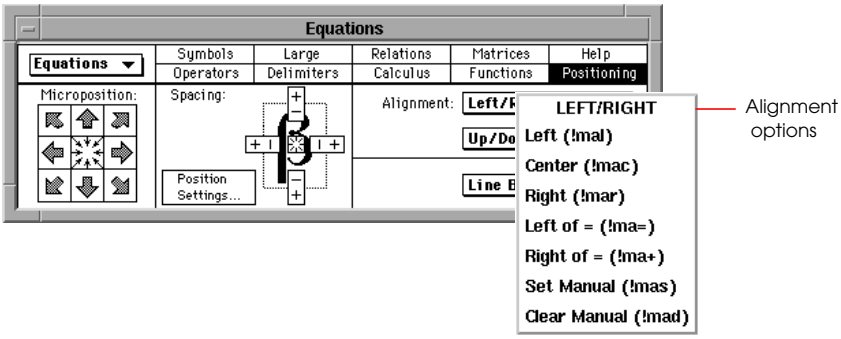
You can automatically align items in a vertical list and lines in a multiline equation along their left or right sides, their centers, or their equal signs. You can also set your own manual alignment points for items in a vertical list and for a multiline equation. Manual alignment points override automatic alignment.



Aligned along the left side of the equation

Aligned along a manual alignment point in the first line

- **To set automatic alignment for a vertical list or multiline equation, click in the equation or list and choose an item from the Left/Right pop-up menu on the Positioning page.**



When you choose Left of = or Right of =, the lines are aligned along one side of an equal sign. A line with no equal sign is aligned along its left side.

- **To set a manual alignment point for an item in a vertical list, click in the item where you want the manual alignment point and choose Set Manual from the Left/Right pop-up menu on the Positioning page.**
  A manual alignment symbol (|) appears at the insertion point. The item aligns with other items in the list at the manual alignment point.
- **To set a manual alignment point for a multiline equation, click in the first line of the equation where you want subsequent lines to align and choose Set Manual from the Left/Right pop-up menu on the Positioning page.**
  A manual alignment symbol (|) appears at the insertion point. Subsequent lines left-align with the manual alignment point.
- **To clear a manual alignment point, select the part of the equation that contains the manual alignment point and choose Clear Manual from the Left/Right pop-up menu on the Positioning page.**
  You can also clear a manual alignment point by setting another.

To left-, center-, or right-align equations with one another

You can align several equation objects with one another in a graphic frame, just as you align other objects. FrameMaker maintains the equation objects' alignment as you edit the equations. For example, if two equations are left-aligned, FrameMaker maintains the left alignment as the equations expand or shrink.

1 **Select the equations to be aligned.**
Make sure that the last equation you select is the one you want to align with.

To select the equations, Control-Shift-click them.

2 **Choose Align from the Graphics menu.**
For information on the Align command, see "To align objects" on page 14-10.

To align equations along a point

You can align several equation objects along a manual alignment point, even when they're in separate graphic frames.

Two equations aligned at a manual alignment point

$$(x+2)^2 = x^2+4x+4$$
$$(x+3)(x-2) = x^2+x-6$$

FrameMaker aligns the equations with the manual alignment point in the first equation object and maintains the equation objects' alignment as you edit the equations. For example, if two equations are left-aligned, FrameMaker maintains the left alignment as the equations expand or shrink.

1 **Set the manual alignment point in one of the equations you want to align.**
You do this in an equation just as you set a manual alignment point in a vertical list.

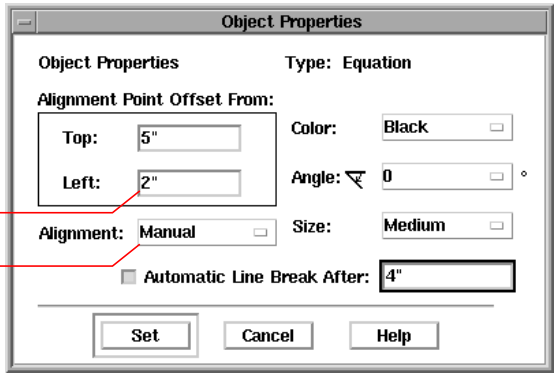
If you don't set a manual alignment point, FrameMaker aligns an equation along its left side by default.

For details about setting a manual alignment point or choosing an automatic alignment, see "To align items in a vertical list or multiline equation" on page 29-9.

2 **Click in the equation.**

3 **Choose Object Properties from the Graphics menu.**

4 **Choose Manual alignment and specify the location of the alignment point within the frame.**



The left offset is the distance from the left edge of the frame to the manual alignment point—for example, the right side of an equal sign.

You don't need to specify the top offset precisely. You can move the equation up or down later, just as you do any other object.

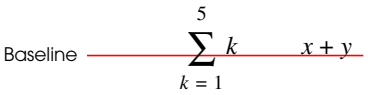
5 **Click Set.**

6 **Repeat steps 1 through 5 for each equation object you want to align.**
Use the same distance from the left edge for each equation, but change the top offset to position the equation vertically in the frame.

If the equations you're aligning are in different anchored frames, make sure the frames' left edges align with one another.

To align items in a horizontal list

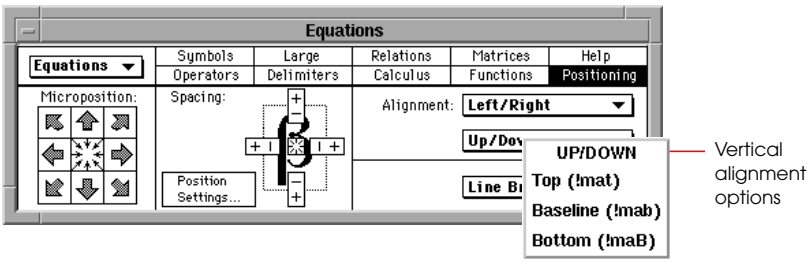
You can align the items in a horizontal list along their tops, bottoms, or baselines.



Baseline-aligned

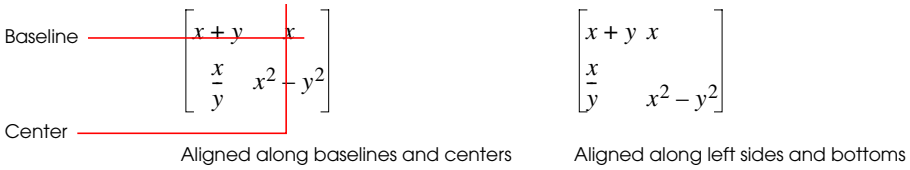
1 **Click in or select part of the list.**

2 **Choose an item from the Up/Down pop-up menu on the Positioning page.**



To align cells in a matrix

You can align the cells in each row of a matrix along their tops, bottoms, or baselines. You can align the cells in each column at the right, left, or center, or along equal signs.



- **To align cells in each row of a selected matrix, choose an item from the Up/Down pop-up menu on the Positioning page.**
  You can select any part of the matrix or just click in it.
- **To align cells in each column of a selected matrix, choose an item from the Left/Right pop-up menu on the Positioning page.**
  You can select any part of the matrix or just click in it.

To check alignment settings

You can inspect the alignment settings for a multiline equation, vertical or horizontal list, or matrix.

1 **Select the entire equation, list, or matrix.**
You can drag through the equation, list, or matrix to select it, or you can put the insertion point in it and press the space bar repeatedly.

2 **On the Positioning Page, click Position Settings.**

CHANGING FONT SETTINGS

A document has font settings that apply to all equations in it. These settings determine the font sizes and spacing for small, medium, and large equations. They also determine the specific character format used for Greek characters and for symbols, functions, numbers, strings, and variables.

You can change these settings at any time, and you can update them from another document. For details, see "Importing formats into a document" on page 21-12. The changes will appear in all equations in the document and in any new equations you add to it.

You can also change the preset size—Small, Medium, or Large—and the color of an entire equation or change the character format of just one element or expression in an equation.

To change the character format of an expression

You can change the character format that FrameMaker uses for individual math elements or expressions. For example, you might want to display an element in a larger point size or in bold.

You can't change the spread, superscript, subscript, underline, overline, strikethrough, change bar, or pair kerning properties for any element. You also can't change the font family for individual Greek characters and symbols and for some operators. For information on changing the font family for all Greek characters and symbols in a document, see "To change the font for Greek characters and symbols" on page 29-15.

- **To change the character format of an element or expression, select it and use the same method you would use with text.**
  For details, see "To choose a font family, style, and size" on page 4-8.
- **To create a superscript or subscript, use the appropriate operator.**
  For details, see "To insert an operator" on page 28-13.
- **To change the spread of characters, microposition them.**
  For details, see "To position an expression precisely" on page 29-4.
- **To put a line over or under an expression, use the diacritical marks on the Symbols page of the Equations palette.**

To change equation font size and spacing throughout a document

You can change the font size and spacing for all small, medium, and large equations in a document. When you do, FrameMaker reformats and rewraps all equations in the document.

1. **On the Equations palette, choose Equation Sizes from the Equations pop-up menu.**
2. **In the Equation Sizes dialog box, specify the font sizes and spread.**
   Spread is expressed as a percentage of the font size. Positive Spread values cause wider spacing around elements; negative values cause narrower spacing.
3. **Click Set.**

RETURNING FONT SETTINGS TO THEIR DEFAULT VALUES

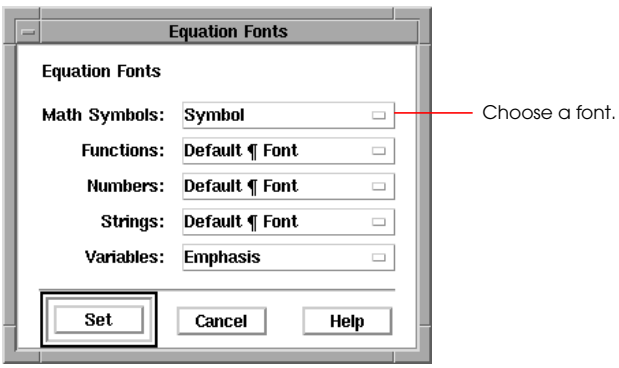
To return the settings to their default values, choose Equation Sizes from the Equations pop-up menu on the Equations palette. Then click Get Defaults.

To change the font for Greek characters and symbols

Greek characters and symbols in equations normally appear in the Symbol font. However, FrameMaker also allows you to use fonts such as Mathematical Pi and Universal Greek if these fonts are installed on your system.

When you change the font, FrameMaker reformats and rewraps all equations in the document.

1. **On the Equations palette, choose Equation Fonts from the Equations pop-up menu.**
2. **Choose one of the available fonts from the Math Symbols pop-up menu and click Set.**



INSTALLING ADDITIONAL MATH FONTS

FrameMaker can display any font that appears in the pop-up menu, but it can print the font only if the printer fonts are available on your system. For information on installing additional fonts for FrameMaker, see the online manual *Managing Frame Products*.

To change the character format for functions, numbers, strings, and variables

Functions, numbers, and strings normally appear in Times. Variables normally appear in Times italic. However, you can change the character format that FrameMaker uses for each of these kinds of elements. For example, you may want to display all elements in Helvetica, with functions in italic and variables in bold.

When you change the character format, FrameMaker reformats and rewraps all equations in the document.

1. **Create the character format you want.**
   Use Characters>Designer on the Format menu. For details, see "To choose a font family, style, and size" on page 4-8 and "Creating and updating character formats" on page 5-17.

   You can't change the spread, superscript, subscript, underline, overline, strikethrough, change bar, or pair kerning properties.
2. **On the Equations palette, choose Equation Fonts from the Equations pop-up menu.**
3. **In the Equation Fonts dialog box, choose the character format you want from the Functions, Numbers, Strings, or Variables pop-up menu.**
   The pop-up menus contain the formats stored in the Character Catalog.
4. **Click Set.**

30

EVALUATING EQUATIONS

Transforming and evaluating mathematical expressions

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Matrix Algebra 30-4

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30 EVALUATING EQUATIONS

After you create an expression or equation, you can transform it by changing its mathematical representation and evaluate it by substituting values and performing computations.

You can transform and evaluate equations

You transform expressions and equations by using commands that change their mathematical representation but not their meaning. For example, you multiply polynomials, factor terms, simplify expressions, and combine fractions.

$y = (x+4)^3$

Expanded — $y = (x+4)(x+4)(x+4)$

Multiplied out — $y = (x+4)(x^2+8x+16)$

Multiplied out again — $y = x^3+12x^2+48x+64$

You evaluate expressions by computing their actual value.

$x^3+12x^2+48x+64\Big|_{x=1}^{3}$

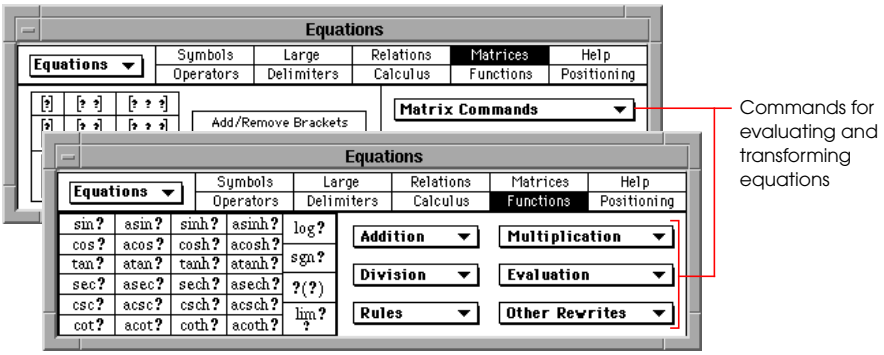
Expanded — $x^3+12x^2+48x+64\Big|_{x=3} - x^3+12x^2+48x+64\Big|_{x=1}$

Value substituted — $343 - 125$

Result computed — 218

Evaluation commands are on the Equations palette

You evaluate and transform expressions by using commands on the Matrices and Functions pages on the Equations palette.



To evaluate an expression, you select it—or part of it—and choose a command from the menu. For example, you might select an expression and then choose Multiply Out from the Multiplication pop-up menu on the Functions page.

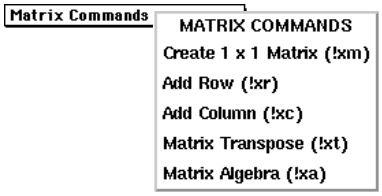
In this chapter

This chapter describes the commands on the Matrix Commands pop-up menu of the Matrices page and the commands on the six pop-up menus of the Functions page.

Chapter 28 and Chapter 29 show you how to insert, edit, and format equations.

MATRIX COMMANDS POP-UP MENU

Use the Matrix Commands pop-up menu on the Matrices page to create, edit, and evaluate matrices.



This section describes the Matrix Transpose and Matrix Algebra commands. For information on the other commands in the menu, see "To change a matrix" on page 28-27.

Matrix Transpose

Transposes the rows and columns of a selected matrix.

Before	After
$\begin{bmatrix} a & b & c \\ d & e & f \end{bmatrix}$	$\begin{bmatrix} a & d \\ b & e \\ c & f \end{bmatrix}$

Matrix Algebra

Performs matrix multiplication and addition and evaluates dot and cross products in a selected matrix.

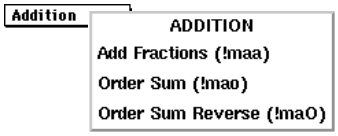
Before	After
$2\begin{bmatrix} a & b \\ c & d \end{bmatrix}$	$\begin{bmatrix} 2a & 2b \\ 2c & 2d \end{bmatrix}$
$\begin{bmatrix} 2 & b \\ c & 2d \end{bmatrix}\begin{bmatrix} a & b \\ c & d \end{bmatrix}$	$\begin{bmatrix} 2a+bc & 2b+bd \\ ac+2cd & bc+2d^2 \end{bmatrix}$
$\begin{bmatrix} 2 & b \end{bmatrix} + \begin{bmatrix} 3 & a \end{bmatrix}$	$\begin{bmatrix} 2+3 & b+a \end{bmatrix}$

Before	After
$\begin{bmatrix} a \\ b \\ c \end{bmatrix} \bullet \begin{bmatrix} a \\ 2 \\ c \end{bmatrix}$	$aa + b2 + cc$
$\begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} \times \begin{bmatrix} a \\ b \\ c \end{bmatrix}$	$\begin{bmatrix} 2c - 3b \\ 3a - 1c \\ 1b - 2a \end{bmatrix}$

After performing matrix algebra, you can use the Simplify command to combine like terms. For details, see “Simplify” on page 30-18.

ADDITION MENU

Use the Addition pop-up menu on the Functions page to add fractions and order polynomials. This section describes the Addition commands in the order they appear on the menu.



Add Fractions

Adds selected fractions, expressing the result as a single fraction. This command also combines like terms.

Before	After
$\frac{1}{3} + \frac{4}{5}$	$\frac{17}{15}$
$\frac{a}{4} + \frac{2a}{3}$	$\frac{11a}{12}$
$\frac{2x}{y} + \frac{3a}{b}$	$\frac{2bx + 3ay}{by}$

If the selected expression contains the sum of more than two fractions, Add Fractions adds only the first two. Use this command repeatedly to combine all the fractions.

Before	Done once	Done twice
$\frac{2x}{y}+\frac{3a}{b}-\frac{2a}{3b}$	$\frac{2bx+3ay}{by}-\frac{2a}{3b}$	$\frac{3b(2bx+3ay)-2aby}{3yb^2}$

Order Sum

Arranges polynomials in decreasing powers of a selected variable. In the example below, you select an x—any x—before choosing Order Sum.

Before	After
$x^3+2x^5-4x^2+1-x$	$2x^5+x^3-4x^2-x+1$

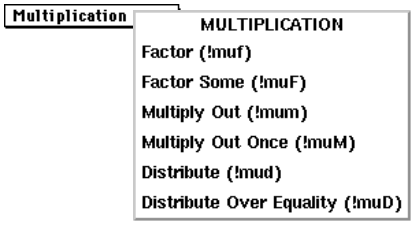
Order Sum Reverse

Arranges polynomials in increasing powers of a selected variable. In the example below, you select an x—any x—before choosing Order Sum Reverse.

Before	After
$x^3+2x^5-4x^2+1-x$	$1-x-4x^2+x^3+2x^5$

MULTIPLICATION MENU

Use the Multiplication pop-up menu on the Functions page to factor terms, multiply out expressions, and distribute multiplication and division over addition. This section describes the Multiplication commands in the order they appear on the menu.



Factor

Factors a selected term out of a product. In the examples below, you select an a—any a—before choosing Factor.

Before	After
$ac + bc$	$a\left(c + \frac{bc}{a}\right)$
$a^2 + 2a + 1$	$a\left(a + 2 + \frac{1}{a}\right)$

Factor Some

Factors a selected term from only those terms that contain it. In the example below, you select the first x before choosing Factor Some.

Before	After
$xy + 2x + v$	$v + (y + 2)x$

Multiply Out

Simplifies the selected expression, distributes multiplication over addition, and expands a selected term raised to a positive integral power.

Before	After
$(a - 3)(2a + 4)$	$2a^2 - 2a - 12$
$(a - 3)(2a + 4)(a^2 + 3)$	$2a^4 - 2a^3 - 6a - 6a^2 - 36$
$(a + 2b)^4$	$a^4 + 8ba^3 + 24a^2b^2 + 32ab^3 + 16b^4$
$a(b + c)(2a + 4)$	$2a^2b + 4ab + 2a^2c + 4ac$

The Simplify command also simplifies the selected expression. For details, see “Simplify” on page 30-18.

Multiply Out Once

Multiplies the first pair of factors on the left side of a selected expression.

Before	After
$a(b+c)(2a+4)$	$ab(2a+4)+ac(2a+4)$

If you use Multiply Out Once several times, the results appear in a different form.

Distribute

Performs a variety of operations depending on the expression you select. Several examples follow.

- Distributes division over addition.

Before	After
$\frac{a+b}{c}$	$\frac{a}{c}+\frac{b}{c}$

Use the Add Fractions command to perform the reverse operation. For details, see “Add Fractions” on page 30-5.

- Distributes multiplication over addition.

Before	After
$a(b+c)$	$ab+ac$

Use the Factor command to perform the reverse operation. For details, see “Factor” on page 30-7.

- Transforms products and quotients involving radicals and exponents into a single expression raised to a power.

Before	After
ab^2	$(\sqrt{ab})^2$
a^3b^2	$(a^{3/2}b)^2$
$a^2\sqrt{b}$	$\sqrt{a^4b}$

Use the Simplify command to perform the reverse operation. For details, see "Simplify" on page 30-18.

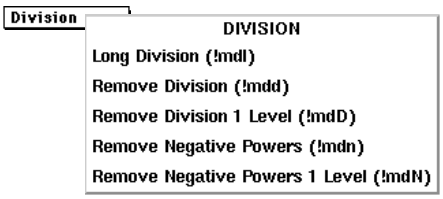
Distribute Over Equality

Performs the same operation on both sides of an equal sign.

Before	After
$(x = y)z$	$xz = yz$
$(x = y) - 5$	$x - 5 = y - 5$
$(x = y)^2$	$x^2 = y^2$

DIVISION MENU

Use the Division pop-up menu on the Functions page to perform long division, convert division to multiplication, and convert negative exponents to positive. This section describes the Division commands in the order they appear on the menu.



Long Division

Performs long division in a fraction that contains a polynomial numerator and denominator.

In the example below, you select an x—any x—before choosing Long Division. You would select an x in the fraction of the first result and choose Long Division again to obtain the second result.

Before	First result	Second result
$\frac{x^2 + 2x + 1}{x + 1}$	$x + \frac{1x + 1}{x + 1}$	$x + 1$

Remove Division

Converts division to multiplication in a selected expression by changing positive exponents to negative and negative exponents to positive.

Before	After
$\frac{x}{y^2}$	xy^{-2}
$\frac{b+\frac{c}{d}}{x}$	$(b+cd^{-1})x^{-1}$

To convert negative exponents into division operators, use the Remove Negative Powers command.

Remove Division 1 Level

Converts division to multiplication, as Remove Division does, but applies only to the first level of operators.

Before	After
$\frac{x}{y^2}$	xy^{-2}
$\frac{b+\frac{c}{d}}{x}$	$\left(b+\frac{c}{d}\right)x^{-1}$

To convert the first level of negative exponents into division operators, use the Remove Negative Powers 1 Level command.

Remove Negative Powers

Converts negative exponents to positive in a selected expression by replacing multiplication with division and division with multiplication.

Before	After
xy^{-2}	$\frac{x}{y^2}$
$(b + cd^{-1})x^{-1}$	$\frac{b + \frac{c}{d}}{x}$

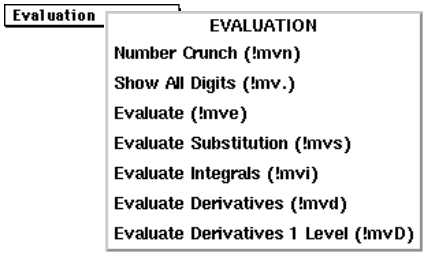
Remove Negative Powers 1 Level

Converts negative exponents to positive, as Remove Negative Powers does, but applies only to the first level. If the selected expression has no negative exponents at the first level, this command has no effect.

Before	After
$(b + c^{-1})^{-2}$	$\frac{1}{(b + c^{-1})^2}$
xy^{-2}	xy^{-2} (no effect)

EVALUATION MENU

Use the Evaluation pop-up menu on the Functions page to evaluate expressions numerically. This section describes the Evaluation commands in the order they appear on the menu.



Number Crunch

Changes integers to floating-point numbers in a selected expression and then evaluates the expression.

Before	After
$\sin\frac{3\pi}{2}$	–1
$\lvert -3 \rvert$	3
$\log(2e^2 - 1)$	2.6230813
$e^2 + 7\pi$	29.380205

Use the Show All Digits command to show up to 15 decimal places in a floating-point number. For details, see “Show All Digits” on page 30-12.

Number Crunch displays NaN (Not a Number) for operations that result in undefined values and Infinity for operations that result in a value too large to calculate. Extremely small numbers may be evaluated to zero.

Before	After
$\frac{1}{0} - \frac{1}{0}$	NaN
$\frac{1}{0}$	Infinity

Show All Digits

Shows the full internal accuracy of a floating-point number.

Before	After
3.1415927 …	3.141592653589793

Evaluate

Evaluates the selected expression. The operations performed depend on the type of expression selected. Several examples follow.

- Rewrites an expression raised to a power less than 20 as a product.

Before	After
a^3	aaa

- Computes the factorial of an integer. If the result is too large to calculate, the result appears as Infinity.

Before	After
5!	120

- Computes the determinant of a 1 x 1 or 2 x 2 matrix.

Before	After
$\left\|\begin{bmatrix} a & b \\ c & d \end{bmatrix}\right\|$	$ad - bc$

- Extracts a term from a sum or product.

Before	After
$\sum_{x=1}^{5} x^3$	$1 + \sum_{x=2}^{5} x^3$

- Evaluates a substitution just as the Evaluate Substitution command does. For details, see "Evaluate Substitution," next.
- Rewrites an Evaluate Between operator as a difference.

Before	After
$x^2\Big\|_{x=6}^{8}$	$x^2\Big\|_{x=8} - x^2\Big\|_{x=6}$

- Rewrites the logarithm of a product as a sum of logarithms and rewrites a logarithm of a power as a product.

Before	After
$\log 2xy$	$\log 2 + \log x + \log y$
$\log a^n$	$n \log a$

- Rewrites a logarithm to a base in terms of natural logarithms.

Before	After
$\log_2 x$	$\frac{\log x}{\log 2}$

- Rewrites a choice function in terms of factorials.

Before	After
$\binom{x}{y}$	$\frac{x!}{y!(x-y)!}$

Evaluate Substitution

Performs a specified substitution and then simplifies the expression. When an Evaluate Between operator is selected, this command rewrites the expression as a difference.

Before	After
$x^2\|_{x=6}$	36
$\sin(2x)\|_{x=0}^{\pi}$	$\sin(2x)\|_{x=\pi} - \sin(2x)\|_{x=0}$

Evaluate Integrals

Rewrites a selected integral with a polynomial integrand. This command converts a definite integral into an indefinite integral evaluated between the upper and lower bounds. Use Evaluate Integrals several times to integrate a polynomial fully.

Before	Done once	Done twice
$\int_1^3 x^2 dx$	$\int (dx)x^2 \Big\|_{x=1}^{3}$	$\frac{x^3}{3}\Big\|_{x=1}^{3}$
$\int_1^3 (x^2 + 3x - 2)dx$	$\int (x^2 + 3x - 2)dx \Big\|_{x=1}^{3}$	$\int (dx)x^2 + \int 3x dx + \int -2dx \Big\|_{x=1}^{3}$

In the second example above, use Evaluate Integrals two more times to fully evaluate the integral.

Done three times	Done four times
$\frac{x^3}{3} + 3\int x dx - 2x \Big\|_{x=1}^{3}$	$\frac{x^3}{3} + \frac{3x^2}{2} - 2x \Big\|_{x=1}^{3}$

Evaluate Derivatives

Evaluates a selected derivative, applying the chain rule to complex expressions when necessary. Evaluates a partial derivative only when all dependencies are explicitly written.

This command treats elements in a total derivative as if they depended on the variable of differentiation. Use the Evaluate command to expand an *n*th derivative before using this command to evaluate it.

Before	After
$\frac{d}{dx}(3x^3 - 2x^2 - 3)$	$9x^2 - 4x$
$\frac{\partial}{\partial x}\sec xy \tan xy$	$y\sec xy\tan^2 xy + y\sec^3 xy$

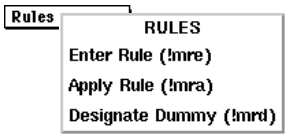
Evaluate Derivatives 1 Level

Evaluates only the first level of a selected derivative.

Before	After
$\frac{d}{dx}(3x^3 - 2x^2 - 3)$	$\frac{d}{dx}3x^3 + \frac{d}{dx}-2x^2 + \frac{d}{dx}-3$
$\frac{\partial}{\partial x}(\sec xy \tan xy)$	$\tan xy \frac{\partial}{\partial x}\sec xy + \sec xy \frac{\partial}{\partial x}\tan xy$

RULES MENU

Use the Rules pop-up menu on the Functions page to store and apply rules that transform expressions. This section describes the Rules commands in the order they appear on the menu.



For example, use Enter Rule to store a rule such as $a = a + 3$. Then use Apply Rule to substitute $a + 3$ for a in another expression.

Enter Rule

Stores a rule for substituting one expression for another. Select the expression you want to store as a rule before you choose Enter Rule. You can store only one rule at a time.

Apply Rule

Substitutes one term or set of terms for another in a selected expression, using the rule stored with the Enter Rule command.

Rule entered	Before rule is applied	After rule is applied
$a = a + 3$	$a^2 - 2ab + b^2$	$(a+3)^2 - 2b(a+3) + b^2$
$x \leftarrow \sqrt{y}$	$3xy + 2x - x^2$	$3y^{3/2} + 2\sqrt{y} - y$

Before you apply a rule that contains a dummy variable, first select the term you want the dummy variable to replace. In the example below, x is the dummy variable in the rule, and the last b in the expression is selected.

Rule entered	Before rule is applied	After rule is applied
$\boldsymbol{x} \leftarrow \sqrt{y}$	$a^2 - 2ab + b^2$	$a^2 - 2ab + \sqrt{y^2}$

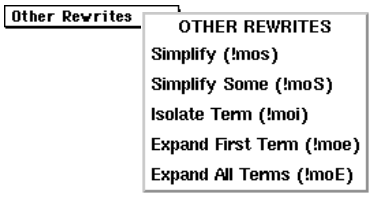
Designate Dummy

Designates a selected term to be a dummy variable. A dummy variable in a rule allows you to substitute the expression on the right side of the rule for any variable, not just the variable explicitly named on the left. A dummy variable appears in boldface. For example, if you designate x in the rule $x = a - 2$ to be a dummy variable, you can substitute $a - 2$ for any variable in an expression, not just x.

Select the term you want to be a dummy variable before you choose Designate Dummy. Then use the Apply Rule command to replace a selected expression with the expression assigned to the dummy variable.

OTHER REWRITES MENU

Use the Other Rewrites pop-up menu on the Functions page to simplify algebraic expressions and to isolate and expand terms. This section describes the menu commands in the order they appear on the menu.



Simplify

Simplifies the selected expression. The operations performed depend on the type of expression selected. Several examples follow.

- Performs integer arithmetic.

Before	After
$c + 0$	c
$4!$	24
$\frac{1}{3} + \frac{2}{5}$	$\frac{11}{15}$

When the result is too large to calculate, it appears as Infinity.

- Groups terms in a sum or product.

Before	After
$2ab + 3ab$	$5ab$
$ab(ac)$	a^2bc
$a^x a^{2x+3}$	a^{3x+3}
$8\frac{\text{km}}{\text{hr}} + 4\frac{\text{km}}{\text{hr}}$	$\frac{8\text{km}}{\text{hr}} + \frac{4\text{km}}{\text{hr}}$

- Divides out common factors in a fraction.

Before	After
$\frac{(ab)^2}{a^2b}$	$1b$
$\frac{2x^3y^2}{6xy^5}$	$\frac{x^2y^{-3}}{3}$

Use the Remove Negative Powers command to remove negative powers from the result. For details, see "Remove Negative Powers" on page 30-11.

- Interprets the complex number i, represented by the Greek letter iota (ι).

Before	After
$\sqrt{-ab}$	$\iota\sqrt{a}\sqrt{b}$

- Distributes exponentiation across multiplication and division.

Before	After
$(xy)^2$	x^2y^2
$\left(\frac{x}{y}\right)^2$	$\frac{x^2}{y^2}$

Note that simplifying $\sqrt{x^2}$ produces x rather than $|x|$.

Simplify Some

Simplifies the selected expression, as the Simplify command does, but does not multiply fractions.

Before	After
$8\frac{\text{km}}{\text{hr}} + 4\frac{\text{km}}{\text{hr}}$	$12\frac{\text{km}}{\text{hr}}$

Isolate Term

Isolates a selected expression on one side of the equal sign. This command does not combine terms or solve for the selected expression. In the examples, you select the first *x* before choosing Isolate Term.

Before	After
$x^3 + x + 2 = 0$	$x = (-x-2)^{1/3}$
$bx + by = c$	$x = \frac{c-by}{b}$
$\log x = z$	$x = e^z$

Expand First Term

Expands the first term of a selected summation or product.

Before	After
$\sum_{x=2}^{4} x^3$	$\sum_{x=3}^{4} x^3 + 8$
$\prod_{x=2}^{5} (x^3 - 2)$	$6 \prod_{x=3}^{5} x^3 - 2$

Expand All Terms

Expands all terms of a selected summation or product.

Before	After
$\sum_{x=2}^{4} x^3$	$8 + 27 + 64$
$\prod_{x=2}^{5} x^3 - 2$	$6(25)62(123)$

APPENDIXES

RESOURCES AND OTHER PRODUCTS

A

As you use FrameMaker, you can turn to many sources for help. In addition to the printed and online documentation mentioned at the beginning of this manual, Frame offers technical support programs, training classes, and other resources that will help you use the application as effectively as possible. You may also want to know about other Frame products that were designed to work with FrameMaker.

This appendix covers these topics.

Topic	Page
Obtaining technical support	A-1
Taking a training class	A-3
Ordering Frame products	A-5
Finding out about third-party products and services	A-8

OBTAINING TECHNICAL SUPPORT

In the United States and Canada, software registration entitles you to 30 days of free technical support, after which you need to subscribe to a support program. The 30 days begin at the time of your first phone call. As a registered user, you will also receive copies of *Frame Focus,* a newsletter with news and information on product updates. When you need support, you can telephone, fax, write, or use an online service to contact Frame Technical Support. Frame will be able to answer your questions most efficiently if you gather key information before you ask for help.

To subscribe to a support program

After the first 30 days of complimentary technical support, you need to subscribe to a support program to continue receiving support. Frame offers a number of fee-based support programs for US and Canadian customers, as well as free online, automated self-help support options.

- **For information on FrameMaker support programs and how to subscribe to them, call Frame Technology at (800) 537-2634.**
- **To obtain information on support programs outside the United States and Canada, contact your local sales support representative or your distributor.**
- **To purchase technical support, contact your local sales support representative or call (800) U4-FRAME ((800) 843-7263).**

To prepare for contacting Frame Technical Support

Before you contact Frame Technical Support, please take the time to consult your FrameMaker manuals and the online *Release Notes*. The manuals might answer your questions and so save you time and effort. If the manuals do not answer your questions, take the following steps before you contact Frame Technical Support.

- **Make sure your hardware meets the minimum system requirements listed in the installation instructions.**
- **Make sure your hardware and peripherals are set up correctly and that all cable connections are secure.**
- **Know the product name, operating system version, description of hardware, exact error message (if any), and the steps to re-create the problem.**
- **Know which release of FrameMaker you're using.**
  To find out the release number, click INFO in the main FrameMaker window. Click OK to close the dialog box.

To telephone Frame Technical Support

If you have purchased technical support, or if you are in your complimentary support period, you can telephone Frame Technical Support. For information on purchasing technical support, see "To subscribe to a support program" on page A-1.

- **In the United States or Canada, call (408) 975-6466.**
  Frame Technical Support is available Monday through Friday from 6:00 AM to 5:00 PM Pacific time.
- **Outside the United States and Canada, call your local technical support representative or your local Frame reseller.**

To send faxes and electronic mail

Frame Technical Support can be reached via fax and electronic mail.

- **In the United States and Canada, send faxes to (408) 975-6611.**

- Send Internet electronic mail to `comments@frame.com`.
- Using any World Wide Web browser, open this Uniform Resource Locator (URL) site: `http://www.frame.com/SERVICES/Services.doc.html`

  You can send questions, comments, bug reports, or feature requests with the online forms.

To receive information by fax

Using a TouchTone telephone and a fax machine, you can call FrameFacts and request technical support documents to be sent to you at a fax number you specify. These documents contain technical notes and tips that were created by the staff of Frame Technical Support.

1. Call (408) 975-6731.
2. Listen to the recorded message and follow the instructions on how to have a document faxed to you.

To transfer files to and from Frame Technical Support

The Frame File Transfer Protocol (FTP) Server transfers files between your remote system and Frame Technical Support. To use this service, you must be able to connect to the Internet.

1. On the Internet, connect to the remote system named `ftp.frame.com` or to the system named `192.111.118.8`.

TAKING A TRAINING CLASS

Frame Technology provides classes at its training centers in San Jose, Chicago, and Atlanta and at customer sites. To enroll in classes at Frame or to schedule Frame training at your location, call the Frame Training Coordinator at (408) 975-6242.

Training is also offered by Frame Authorized Training Centers (ATCs) throughout the United States and Canada. To inquire about Frame ATCs, phone (800) U4-FRAME [(800) 843-7263], extension 884.

To inquire about authorized training in Europe, contact:

Frame Technology International Limited
3 Furzeground Way
Stockley Park
Uxbridge, Middlesex UB11 1DE, United Kingdom
Telephone: 44 (0)81 606 4100
Fax: 44 (0)81 606 4101

To inquire about training outside North America and Europe, contact your local sales support representative.

2 **Once you are connected, log in as `anonymous`.**
You will see messages that give you directions on how to transfer files.

3 **When prompted for a password, enter your electronic mail address.**

To reach Frame Technical Support on CompuServe

Frame Technology maintains a section in the Desktop Publishing Vendors Forum on CompuServe. CompuServe members can use it to contact Frame Technical Support or other FrameMaker users, and to upload or download FrameMaker-related files, such as templates, clip art, and filters.

1 **To reach the Frame Technology section, type GO `DTPVEND`.**

2 **Browse the forum for section 12, "Frame Technology."**

To reach the Frame electronic bulletin board

Frame Technology provides an electronic bulletin board service (BBS) named Frame Online. You can use it to upload or download FrameMaker-related files, such as templates, clip art, and filters, and to read the latest press releases on upgrades and special programs. The BBS runs 24 hours a day.

1 **Set your telecommunications application to 8 bits, no parity, and 1 stop bit, and set terminal emulation to TTY, TEXT, or ANSI.**
ANSI terminal emulation, if available, gives the best screen display.

2 **Use a telecommunications application to dial (408) 975-6729 or (408) 975-6730.**
You can connect at up to 9600 baud.

To reach the Frame electronic bulletin board *(Macintosh only)*

There is a bulletin board service (BBS) specifically for Macintosh users. The BBS uses the TeleFinder application to present a Macintosh interface, and supports access up to 9600 baud.

1 **Set your telecommunications application to 8 bits, no parity, and 1 stop bit, and set terminal emulation to TTY, TEXT, ANSI, or ANSI BBS.**

2 **Dial (408) 975-6738 and select the Register with the BBS option.**
After registering, be sure to download the TeleFinder application when you are prompted to do so. After downloading TeleFinder, the BBS hangs up automatically.

3 **Start TeleFinder by double-clicking its icon in the Finder.**
The Auto Dialer dialog box appears.

4 **In the appropriate text boxes, type the telephone number (408) 975-6738, the name you used to register on the BBS, and the password you used to register on the BBS.**

5 **In the Modem Setting scroll box, select the modem that most closely matches your modem.**

6 **Click Dial to connect to the BBS.**
For more information, see the TeleFinder Balloon Help or online TeleFinder documentation.

To reach Frame on the World Wide Web

Frame Technology maintains a World Wide Web home page on the Internet from which you can read and download information on Frame, Frame products and services, and third-party products and services.

- **Using any World Wide Web browser, open this Uniform Resource Locator (URL) site:**
  `http://www.frame.com`

To write to Frame Technical Support

You can send letters to Frame Technical Support.

- **In the United States and Canada, write to the following address.**
  Frame Technology Corporation
  333 West San Carlos Street
  San Jose, California 95110-2711
  USA

  Attention: Technical Support

- **Outside the United States and Canada, write to your local sales support representative or your distributor.**

ORDERING FRAME PRODUCTS

Frame Technology offers publishing applications, utilities, and developer's materials that work with FrameMaker to provide complete publishing solutions. For information on developer's materials, see "Frame Developer's Kit" on page A-6. For information on companion products to FrameMaker, see "Companion products" on page A-7. You can order any of these Frame products by phone.

To order other Frame products

Frame applications and utilities are available from your favorite software store or distributor and directly from Frame.

- **In the United States and Canada, call (408) 975-6161.**
  Frame Customer Relations is available Monday through Friday from 6 AM to 5 PM Pacific time. A Customer Relations representative can direct you to your nearest Frame reseller or can accept your order directly.
- **Outside the United States and Canada, call your local Frame distributor or reseller. In Europe, you can contact Frame at the following address.**
  Frame Technology International Limited
  3 Furzeground Way
  Stockley Park
  Uxbridge, Middlesex UB11 1DE
  United Kingdom
  Telephone: 44 (0)81 606 4100
  Fax: 44 (0)81 606 4101

To find out about new Frame products

Frame Technology is committed to improving its products and offering new ones. At any time, you can call to find out about new Frame products.

- **In the United States and Canada, contact your local sales support representative or call (800) U4-FRAME ((800) 843-7263).**

FRAME DEVELOPER'S KIT

Frame Technology provides the Frame Developer's Kit (FDK) for people who want to control FrameMaker sessions and create applications.

The FDK consists of three parts: the Frame Application Program Interface (API), the Frame Development Environment™ (FDE), and the Frame Intermediate Printer Language (IPL).

API With the API, you can write C programming language applications that take control of a FrameMaker session and communicate interactively with the FrameMaker user. The API gives your application direct access to the text and graphic objects in a document. Using the API, your application can do anything a real user can do, and more. For example, you can create grammar checkers, voice-control utilities, version-control utilities, filters, and database publishing packages. The API consists of header files, function libraries, sample source code, and utilities.

FDE The FDE provides a way to create applications, across platforms and across Frame products, by simply recompiling. The FDE includes a set of header files, libraries, wrappers, and makefiles for each supported platform, as well as a variety of utilities.

IPL The IPL lets you customize the X Windows version of FrameMaker to use a page description language other than PostScript.

For information on ordering the FDK, see "To order other Frame products" on page A-5.

- **Outside the United States and Canada, call your local Frame distributor or reseller. In Europe, you can contact Frame at the following address.**
  Frame Technology International Limited
  3 Furzeground Way
  Stockley Park
  Uxbridge, Middlesex UB11 1DE
  United Kingdom
  Telephone: 44 (0)81 606 4100
  Fax: 44 (0)81 606 4101

COMPANION PRODUCTS

Frame offers a wide family of products that can help solve your document management needs.

Localized versions Localized versions of FrameMaker are available in a number of languages. For information on the availability of localized versions, contact your local sales representative.

Many Frame products include the FrameMaker International Dictionaries; but if you don't already have them, you can order them. For a list of languages and how to order them, see "Languages available" on page 9-8.

Thesauruses are available in several languages. For more information, see "How FrameMaker determines the language to use" on page 9-19.

FrameMaker for other platforms FrameMaker documents are cross-platform compatible. If you work on a network with other platforms, you may want to order FrameMaker for the other platforms.

FrameMaker+SGML This unique product has all the functionality of FrameMaker, plus the ability to easily create precisely structured documents based on rules that specify the order and content of information and provide context-sensitive formatting. The FrameMaker+SGML™ product includes many functions and utilities to facilitate creating and using Standard Generalized Markup Language (SGML) documents so that you can import and export documents across different publishing technologies.

FrameReader FrameReader lets you distribute hypertext-navigable, view-only versions of Frame documents. These documents can be searched and printed on demand. FrameReader is included in the CD-ROM edition of FrameMaker and may be freely distributed for noncommercial use.

FrameViewer FrameViewer provides all the online functionality of FrameReader, along with additional features. FrameViewer can read both FrameMaker format and Maker Interchange Format (MIF) and is customizable with the Frame Developer's Kit (FDK).

Document management Frame has a family of document management products that are particularly useful when you have a number of authors contributing to a document or need to route several documents for review or approval. These products provide indexed or hierarchical storage; many kinds of retrieval; security; support for any file and media type; special integration of FrameMaker documents; integration of scanned documents; and version control.

PRODUCT SUGGESTIONS

We are always interested in your comments and suggestions for improving FrameMaker.

Send us your comments by fax, electronic mail, World Wide Web, or regular mail. Please mark your comments *Attention: Product Development*. For addresses and phone numbers, see page A-2 and page A-4.

FINDING OUT ABOUT THIRD-PARTY PRODUCTS AND SERVICES

There are hundreds of third-party products that work with or complement FrameMaker. Frame can help you find a third-party product to suit your needs. The *FrameConnections Catalog* is a resource guide to applications, clip art, printers, utilities, training centers, and the like. The catalog also includes listings for consultants and service bureaus.

To find out about a third-party product or service

You can obtain the *FrameConnections Catalog*—an extensive catalog of Frame third-party products.

- **In the United States and Canada, contact your local sales support representative or call (800) U4-FRAME ((800) 843-7263) and ask for a copy of the *FrameConnections Catalog*.**
- **Download an online version of the catalog by accessing Frame's forum on CompuServe, Frame's bulletin boards, or Frame's ftp site.**
  There are three versions of the catalog: `fconnect.z` (UNIX version), `fconnect.zip` (Windows version), or `fconnect.hqx` (Macintosh version). For information on Frame's bulletin boards, see page A-3. For information on Frame's ftp site, see page A-4.
- **Using any World Wide Web browser, open this Uniform Resource Locator (URL) site:**
  `http://www.frame.com/PARTNERS/Partners.doc.html`
- **Outside the United States and Canada, ask your local Frame distributor or reseller for a copy of the *FrameConnections Catalog*.**

B

FRAMEMAKER UTILITIES

You use FrameMaker utility programs to perform batch operations on FrameMaker files and to convert files from one graphic or text format to another.

The utility programs are stored in the same directory as the main FrameMaker program files. If you can start FrameMaker from any directory, you can also start the utility programs from any directory. However, if you must change to a particular directory to start FrameMaker, you must also change to that directory to start one of the utilities.

This appendix describes the following utilities in alphabetical order.

Utility	Purpose	Page
`fmbatch`	Opens, prints, reformats, and saves FrameMaker files without actually displaying them	B-1
`fmcopy`	Copies FrameMaker installation files from one file system to another	B-12
`fminvert`	Inverts a monochrome bitmap	B-12
`fmprint`	Prints FrameMaker files without opening and displaying them	B-12
`xwd8to1`	Converts color images to monochrome	B-13

FMBATCH

You use `fmbatch` to open, print, reformat, and save FrameMaker files without actually displaying them. If the files are structured documents or books created with FrameMaker+SGML, you can also use `fmbatch` to validate them. (For information, see the documentation for FrameMaker+SGML.)

If you have a local or remote connection to an X server, you can use `fmbatch` directly at your graphics workstation or in a remote shell from a nongraphics terminal.

You perform `fmbatch` operations by issuing `fmbatch` commands. You can store commands in a text file—a *batch file*—and issue all the commands in the file at once, or you can issue commands one at a time *(interactively)*.

For example, the following `fmbatch` commands open, update, print, save, and close a file:

```
Open MyFile
Update MyFile
Print MyFile
Save MyFile
Quit MyFile
```

Notice that `fmbatch` commands are case-sensitive. For example, `Print` is a valid `fmbatch` command, but `print` is not.

You can use `fmbatch` in shell scripts to automate some simple FrameMaker operations. For example, a shell script may use `fmbatch` to generate a book file, save all documents in Maker Interchange Format (MIF), edit the MIF files to set the document's window position and size, and convert the MIF files back to documents.

For a list of `fmbatch` commands, see "fmbatch commands" on page B-3. For detailed instructions on using `fmbatch`, see the pages indicated below.

For information on	See page
Using `fmbatch` for batch operations	B-3
Using `fmbatch` interactively	B-5
Printing messages to standard error output	B-6
Opening a file	B-6
Verifying that FrameMaker is still running	B-7
Printing an open file	B-7
Closing a file or exiting `fmbatch`	B-8
Saving an open file	B-8
Executing a UNIX command	B-9
Updating cross-references and generating files	B-10
Importing the formats from one document to another	B-10

To use fmbatch for batch operations

You use batch files to perform the same set of operations frequently. For example, you can create a batch file to open, print, and close a book file. Each time you print a draft of the book, you can use the same batch file. Because you use batch files to issue several commands at once, you don't have to monitor the results of each command.

You can use a shell script to build an `fmbatch` batch file. Doing this lets you process many different directories of FrameMaker documents without worrying about their filenames.

When you store a batch file in the directory that contains the files you want to use, you won't have to use full pathnames in your `fmbatch` commands. Otherwise, you use either absolute or relative pathnames.

- **To create a batch file, use any standard text editor.**
  When you use FrameMaker to create the file, save the file in Text Only format.
- **To add an `fmbatch` command to a batch file, type the command on a separate line.**
  To add a comment, type a number sign `(#)` at the beginning of the line. `fmbatch` interprets the whole line as a comment.
- **To run `fmbatch` using a batch file, type `fmbatch` *`batch_file`* at any UNIX shell prompt.**
  `batch_file` is the name of a batch file that contains `fmbatch` commands.

FMBATCH COMMANDS

echo Prints messages to standard error output

help or **?** Displays a list of `fmbatch` commands

ImportFormats Updates the formats in an open document or in all the documents in a book file, using the formats from another open document

Open Opens a document or book file

OpenTextFile Opens a text file

ping Verifies that FrameMaker is still running

Print Prints an open file, using its own print settings or the print settings from another file

Quit Closes a file or exits `fmbatch`

Save Saves an open file

SaveAs Saves an open file, using a different name or format

system Executes a UNIX command

Update Updates cross-references and generates all the generated files in an open book

Validate Validates the contents of an open structured document or book (see the documentation for FrameMaker+SGML)

The `fmbatch` program starts FrameMaker, executes all the commands in the batch file, and then exits. Messages appear as `fmbatch` processes the commands.

ECHOING FMBATCH COMMANDS

To echo each command as it's executed, start `fmbatch` with the `-v` option, using the following statement: `fmbatch -v batch_file`

FMBATCH FILE EXAMPLE

Here is an example of a C-shell script that builds a batch file to save all documents in the current directory as MIF files. To use this script, type it in exactly as shown, then change to the directory that contains the documents you want to process, and type the full path to the script. The script creates a batch file in the current directory that you can use with `fmbatch`.

```
*** batch file ***

#! /bin/csh -f
# C shell script to build an fmbatch command file
# that saves all documents in the current directory
# as MIF files

set scriptname = createbatch
set batchfile = commands.batch
rm -f $batchfile >& /dev/null
touch $batchfile
foreach f ( * )
    # don't add directories or the batch file
    if ( ! -d "$f" && "$f" != "$batchfile" ) then
        echo "Open $f" >> $batchfile
        echo "echo Saving $f to $f.mif" >> $batchfile
        echo "SaveAs m $f $f.mif" >> $batchfile
        echo "Quit $f" >> $batchfile
    endif
end
echo ""
echo "$scriptname is done. See batch file in $batchfile."
```

USING QUOTATION MARKS IN FMBATCH COMMANDS

You can use quotation marks as part of a filename. If the filename includes single quotation marks, enclose the statement in double quotation marks. If the filename includes double quotation marks, enclose it in single quotation marks. For example: `Open "My 'Unquotable' Quotes File"`

To use fmbatch interactively

Use commands interactively (one at a time) for operations that you perform infrequently.

- **To start `fmbatch`, type `fmbatch` at any UNIX shell prompt and press Return.**

  If you have a single Frame product installed on your computer, whether FrameMaker, FrameMaker International Edition, or FrameMaker+SGML, `fmbatch` starts it and displays a prompt `(fmbatch->)`.

  When you run `fmbatch` from the directory that contains the files you want to use, you won't have to use full pathnames in your `fmbatch` commands. Otherwise, you use either absolute or relative pathnames.

STARTING FMBATCH WITH MORE THAN ONE FRAME PRODUCT

If you have more than one Frame product installed, you can use the following `fmbatch` options to start a specific product.

To start	Type
FrameMaker	`fmbatch -makername maker`
FrameMaker International Edition	`fmbatch -makername imaker`
FrameMaker+SGML	`fmbatch -makername makersgml`
FrameMaker+SGML International Edition	`fmbatch -makername imakersgml`

When you have both FrameMaker+SGML and FrameMaker installed on your computer, and you enter `fmbatch` at a UNIX shell prompt, `fmbatch` starts FrameMaker+SGML.

- **To execute an `fmbatch` command, type it at the prompt and press Return.**

  Messages appear as `fmbatch` processes the command. When it finishes processing the command, `fmbatch` displays its prompt so you can enter another command.

  If you receive a message telling you that a file doesn't exist, make sure you used the correct pathname.

For a list of `fmbatch` commands and their use, type `help` or `?` at the `fmbatch` prompt.

- **To exit `fmbatch`, type `Quit` and press Return.**
  You can also press Control-d.

To print messages to standard output

You can print status messages to indicate progress in processing a batch file.

- **To print status messages, use the `echo` *`message`* command.**
  `message` is the text you want to print.

EXAMPLE

The following commands open a file, save it in the normal format with a different filename, and then echo the message `File renamed`.

```
Open /usr/doc/MyOldFile
SaveAs d  /usr/doc/MyOldFile /usr/doc/MyNewFile
echo File renamed
```

To open a file

You can open any type of file with `fmbatch` that you can open with the FrameMaker Open command. You must open a file with `fmbatch` before you can perform any other `fmbatch` operations on it.

- **To open any type of file that FrameMaker can open, use the `Open` *`filename`* command.**
  `filename` is the name of the file you want to open.
- **To open a text file, use the `OpenTextFile` *`type`* *`filename`* command.**
  `filename` is the name of the file you want to open; *`type`* is one of the following file types.

To open this file type	Use this option
A line-oriented text file (in which each line is treated as a separate paragraph)	`a`
A paragraph-oriented text file (in which consecutive nonempty lines are considered part of a paragraph, and an empty line signifies a paragraph break)	`t`

EXAMPLE

The following command opens `MyTextFile`, a paragraph-oriented text file.

```
OpenTextFile t MyTextFile
```

To verify that FrameMaker is still running

You can verify that the copy of FrameMaker started by `fmbatch` is still running.

- **Use the `ping` command.**
  If FrameMaker is still running, this message appears:

  ```
  Calling Frame... done.
  ```

  If FrameMaker isn't running, these messages appear:

  ```
  Calling Frame... done.
  fmbatch: unable to raise Frame; exiting.
  ```

To print an open file

You can print a file that you opened with `fmbatch`. You can also use all the print settings from a different FrameMaker document. For example, you may want to print to a PostScript print file rather than print to a printer. Or you may want to send a group of documents to a particular printer, printing the documents' last sheet first.

If the open file you're printing is a book file, `fmbatch` prints the entire book. If you print a book file to a PostScript print file, `fmbatch` creates a single large PostScript file.

You must open the file and the print settings file (if you're using one) with `fmbatch` before you print. Otherwise, `fmbatch` displays an error message.

- **To print a file with its own print settings, use the `Print` *`filename`* command.**
  `filename` is the name of the file you want to print.
- **To print a file with the print settings from another FrameMaker document, use the `Print` *`filename settings_file`* command.**
  `filename` is the name of the file you want to print. *`settings_file`* is the name of the FrameMaker document that contains the print settings you want to use.

EXAMPLE

The following command prints `MyDocument` with the print settings from `PrinterLastSheet`, another document that has been set up to print its last sheet first.

```
Print MyDocument PrinterLastSheet
```

To set up print settings in the other document, open the document with FrameMaker and choose the Print command. Specify the settings you want in the Print dialog box and click Save Settings Only. Then save the document.

If the print settings document is set up to print to a file rather than to a printer, `fmbatch` prints to a file whose name is based on the name of the document or book you're printing. For example, if you're using a print settings document that prints to a PostScript file, `fmbatch` prints the file `MyDocument` to the file `MyDocument.ps` and places `MyDocument.ps` in the same directory as `MyDocument`.

To close a file or exit fmbatch

When you close a file or exit `fmbatch`, the program doesn't check whether you saved changes. So be sure to save any changes you made.

- **To close a file, use the `Quit` *`filename`* command.**
  `filename` is the name of the file you want to close.

  You must specify a filename when you use the Quit command. Otherwise, `fmbatch` exits.

- **To exit `fmbatch`, use the `Quit` command.**
  `fmbatch` closes all open files and then exits. `fmbatch` exits, automatically, when it reaches the end of a batch file.

To save an open file

You can save an open document or a book file with the current filename and format. You can also save a file with a different name or format.

When you save a document with `fmbatch`, it does not give you a warning about overwriting an existing file. If a document with the name exists, `fmbatch` first renames the original file, giving it a `.backup` suffix, and then saves your changes under the original name.

- **To save a file with its current name and format, use the `Save` *`filename`* command.**
  `filename` is the name of the file you want to save.

- **To save a file with a different name or format, use the `SaveAs` *`option source_file destination_file`* command.**
  `source_file` is the name of the file you want to save. *`destination_file`* is the name with which to save it. *`option`* is one of the following single-character codes for the file format in which to save.

To save in	Use this option
Normal format	`d`
View Only format	`l` (lowercase *L*)
Paragraph-oriented text format	`t`
Line-oriented text format	`a`
Interchange format (MIF)	`m`
The current format	`-` (hyphen)

  Specify only one format. If you don't specify a format, `fmbatch` saves the file in its current format (the format in which it was opened). You cannot use the `l`, `t`, or `a` option when saving a book file. If a document is in View Only format, you cannot save it in Normal format with the SaveAs command.

  EXAMPLE
  To save the document `MyReport` as a FrameMaker document in the Interchange format, use the following command.

```
SaveAs m MyReport MyReport.mif
```

To execute a UNIX command

You can execute UNIX commands from within `fmbatch`. For example, you may want to copy or move files after you process them.

- **Use the `system "`*`command`*`"` command.**
  `command` is any UNIX command you can type—within single or double quotation marks—in an xterm window at a shell prompt.

  `fmbatch` passes the command to `sh(1)` for execution.

  EXAMPLE
  To copy the file `MyFile` from your home directory to the `/tmp` directory, use the following command.

```
system "cp ~/MyFile /tmp/MyFile"
```

To update cross-references and generate files

You can update all cross-references in a document or book.When you update the cross-references in a book, `fmbatch` also regenerates all generated files in the book.

You must open the file with `fmbatch` before you generate or update files. Otherwise, `fmbatch` displays an error message.

When you use a batch file to update cross-references and to generate files, `fmbatch` quits when it runs into an error such as an unresolved cross-reference or a missing file.

- **Use the `Update` *`filename`* command.**
  `filename` is the name of the file you want to update.

To update an open document's format from another document

You can import and update the formats in a document or in all files in a book. For example, you may want to update paragraph and character formats to use different fonts throughout a book.

You must use `fmbatch` to open both the document or book into which you are importing formats and the document or book from which you are importing formats before you update the document or book. Otherwise, `fmbatch` displays an error message.

- **Use the `ImportFormats` *`options filename filename_with_formats`* command.**
  `filename` is the document or book into which you want to import formats. *`filename_with_formats`* is the document from which you want to import formats. *`options`* includes one or more of the following one-character codes for the formats that you can import.

To copy	Use this option
Paragraph formats	`p`
Character formats	`f`
Page layouts (master pages)	`l` (lowercase *L*)
Cross-references	`c`
Variable definitions	`v`
Reference pages	`r`
Table formats	`t`
Conditional text settings	`x`

To copy	Use this option
Color definitions	`k`
Math definitions	`m`

You can specify any combination of options you want. If you don't specify an option, `fmbatch` imports all formats.

FrameMaker normally does not remove manual page breaks and other format and layout overrides when you import and update formats. However, when you import and update formats with `fmbatch`, it removes these format overrides. The following two options allow you to preserve manual page breaks and other format and layout overrides when you import and update formats with `fmbatch`.

To preserve	Use this option
Manual page breaks	`B`
Other format and layout overrides	`O` (the uppercase letter *O*)

The options correspond to the settings available with the Import>Formats command on the File menu. For information on the settings, see "Importing formats into a document" on page 21-12.

EXAMPLE

The following command imports the conditional text settings and color definitions from `MyTemplate` to `MyNewFile` while preserving the manual page breaks in `MyNewFile`.

```
ImportFormats x k B MyNewFile MyTemplate
```

FMCOPY

The `fmcopy` script copies a directory from one place to another, preserving symbolic links and permissions. Use it to copy FrameMaker installation files from one file system to another. For example, to copy FrameMaker installation files from the directory `/var/frame` to the directory `/var/FrameMaker`, type:

```
fmcopy /var/frame /var/FrameMaker
```

For complete instructions on using `fmcopy`, type `fmcopy` at any UNIX shell prompt.

FMINVERT

You use the `fminvert` binary to invert a monochrome Sun rasterfile or X11 xwd 1-bit image so that portions previously black appear white and portions previously white appear black.

- **Type the following command at any UNIX shell prompt.**
  `fminvert` *`filename inverted_filename`*

  `filename` is the name of the file you want to invert; *`inverted_filename`* is the name of the inverted file. You can't invert a gray-scale or color image.

FMPRINT

You use the `fmprint` script to print one or more FrameMaker documents or books without opening and displaying them. You can use the print settings from a different FrameMaker file.

- **To print a file using its own print settings, use the `fmprint` *`filename`* command.**
  `filename` is the name of the file you want to print.
- **To print a file using the print settings from another FrameMaker document, use the `fmprint -p` *`settings_file filename`* command.**
  `settings_file` is the name of a FrameMaker document that contains the print settings you want to use. *`filename`* is the name of the document or book you want to print. `fmprint` works with the print settings from another document just as the `fmbatch Print` command does. For details, see "To print an open file" on page B-7.

XWD8TO1

You use the `xwd8to1` binary to convert color X11 xwd images to monochrome images. Although you can import color xwd images directly into a FrameMaker document, there are several situations in which you may want to convert an image to monochrome first:

- Color images appear in color on color displays and are printed in color on color printers. Color images are printed in gray scale on black-and-white printers. When you want to print an image just as it appears on a monochrome display, convert it to monochrome.
- Color images take up more space on disk than monochrome images. You may want to convert them in order to conserve file space.
- Converting captured line art to monochrome may help preserve the meaning and intent of the image. For example, a schematic diagram might use different colors to display symbols and connections. When you print, you may prefer that both be black instead of a gray-scale interpretation of the display color.

Each color is converted to either black or white. The conversion is controlled by a cutoff value—between 1 and 100—that determines the intensity at which colors should be converted to black. An intensity value of 1 causes only black to be converted to white. An intensity value of 99 causes all colors except white to be converted to black. If you don't specify a cutoff value, `xwd8to1` uses a value of 50.

■ **Type the following command in an xterm window at a shell prompt.**

`xwd8to1 -i` *`cutoff_intensity filename filename.mono`*

`filename` is the name of the color image. *`cutoff_intensity`* is the cutoff value used to convert colors to black or white. `filename.mono` is the name of the converted file.

KEYBOARD MACROS

C

A *macro* is a shortcut for a sequence of keystrokes. You use macros to automate tasks you perform often—for example, to type a word or phrase you use often or to fill in a dialog box.

To create a macro, you record keystrokes as you perform a task. You also assign the macro a *trigger*—a key sequence you'll press to play back the macro. When you press the trigger, FrameMaker plays back the macro as if you were typing the keystrokes yourself.

You save macros in a macro file. If you use just a few macros from time to time, you can probably keep them all in one macro file that's read automatically whenever you start FrameMaker. If you use macros extensively for several kinds of activities, you can store your macros in several files.

This appendix describes how to record and play back macros, clear macros from your workstation's memory, and manage macro files. It also includes descriptions of several sample macros.

For information on	See page
Using macros	C-1
Managing macro files	C-5
Sample macros	C-7

USING MACROS

Before recording macros, become familiar with the FrameMaker keyboard shortcuts. You'll then know which keyboard shortcuts you like and for which you won't need to create macros. For a complete list of the keyboard shortcuts, see the *Quick Reference*.

To record a macro

While you're recording a macro, all keystrokes—but not mouse clicks or mouse movements—are recorded as part of the macro. For information on the functions that macros can't perform, see "Limitations" on page C-4.

1 **Choose Utilities>Keyboard Macros from the File menu.**

2 **In the Keyboard Macros dialog box, turn on Record a New Macro and click Begin.**

3 **When FrameMaker asks whether you want to begin recording keys, click OK.**
You can verify that FrameMaker is recording keystrokes by displaying the File>Utilities submenu with the mouse. While recording keystrokes, FrameMaker changes the Keyboard Macros command to Stop Recording Keys.

4 **Type the keystrokes you want FrameMaker to record.**
When you press a key, FrameMaker records it and carries out its normal function.

If you make a mistake while recording a macro, choose Utilities>Stop Recording Keys from the File menu. Then click Cancel in the dialog box that appears.

5 **When you finish recording keystrokes, choose Utilities>Stop Recording Keys from the File menu.**

6 **In the dialog box that appears, press the key or combination of keys you want to use as a trigger.**
The trigger can contain up to 15 keystrokes. As you type the trigger, characters appear in the text box. Most keys appear as you'd expect. However, some function and modifier keys appear differently. Some examples are shown in the following table.

This key	Appears as
F2, … F9	/F2, … /F9
Control	^
Meta	~
Shift	+
Esc	\!

For details on triggers you can use, see "Macro triggers" on page C-3. If you don't type a trigger, FrameMaker cancels the recording.

7 **When you finish typing the trigger, click Continue.**

8 **In the dialog box that appears, type a comment for the macro, if appropriate.**
Consider typing a comment for any macro you plan to keep. The comment, which is optional, reminds you what the macro does. Include the macro's trigger and purpose with the comment. For example, if you create a macro that types the word *FrameMaker,* you might add a comment like this:

```
Control-2: types FrameMaker
```

When you add the macro to a macro file, the comment is saved with the macro.

9 **When you finish typing the comment, click Continue.**

MACRO TRIGGERS

You can use any key on the keyboard for a macro trigger, but you should avoid using a key that already has a function assigned to it. For example, if you use the Tab key as the only key in a trigger, you won't be able to insert a tab in text. Also, avoid using keys that are already used for built-in keyboard shortcuts. For a list of keyboard shortcuts, see the *Quick Reference*.

A trigger can include any combination of the Control, Shift, and Meta keys. For example, Control-8 and Meta-Control-8 are both valid.

You might choose one key to be the first in all your macro triggers. For example, you might choose Control-5 as a macro key and create triggers such as Control-5 s m (to search for a marker symbol) and Control-5 s a (to search for an anchor symbol).

Never use Esc or Control-r and the first letter of a menu name as the only keys in a trigger, or you'll disable all the shortcuts for that menu. Also be careful not to disable existing shortcuts or macros with a new trigger. For example, if you choose Esc e as a trigger, you can't use the shortcuts for the commands on the Edit menu.

Certain keys and key combinations have special meanings when you're assigning a macro trigger.

This key sequence	Means
Backspace, Delete, and Control-h	Delete the last trigger keystroke
Control-u	Delete the whole trigger
Return, Control-]	Accept the trigger (clicks OK)
Tab	Move to the next setting
Shift-Tab	Move to the previous setting
Control-Tab	Move to the first setting
Control-c	Cancel the macro (clicks Cancel)

To use these keys or key combinations in a trigger, precede them with a backslash (\). The backslash disables the special meaning of the next key typed so you can use it as part of the trigger. For example, suppose you want to use the key combination Control-g Delete as a trigger. To prevent Delete from deleting the previous character in the trigger, type a backslash and then press Delete. The trigger appears as `^g\Delete`.

To include the backslash itself in a trigger, type it twice.

LIMITATIONS

FrameMaker can work with about 250 macros at a time. A macro can contain up to 600 *values*. The Esc key and all characters are specified internally with one value. Most other keys—for example, the space bar, Return key, and function keys—are specified with two values. A few keys require three values.

There are a few things macros can't do. In particular, a macro can't:

- Pause for keyboard input and then continue
- Record mouse clicks or mouse movements
- Record the F10 keyboard shortcut that moves the focus to the menu bar
- Record the F4 keyboard shortcut that displays the Maker menu

CHANGING BUILT-IN KEYBOARD SHORTCUTS

FrameMaker has an extensive set of built-in keyboard shortcuts for editing text and for choosing FrameMaker commands. If using macros doesn't give you the level of customization you need, you can add, change, or delete the built-in shortcuts. For more information, see the online manual *Changing Setup Files*.

To play back a macro

When you play back a macro, FrameMaker responds as if you were typing the keystrokes stored in the macro yourself.

- **Type the macro's trigger.**

  Depending on the purpose of the macro, you may need to select text or objects before typing the trigger. For example, if the macro changes the format of the current paragraph, put the insertion point in a paragraph before typing the trigger.

To cancel a macro

You can cancel a macro while it's playing.

- **Point in the document window and press Control-c.**

MANAGING MACRO FILES

When you record a macro, FrameMaker keeps it temporarily in memory and in `~/fmMacrosLog` as one of your current macros. It remains there until you exit FrameMaker or clear the current macros. When you exit FrameMaker, you're prompted to save any newly recorded macros. If you want to use the macros in future editing sessions, add them to a macro file.

When you start FrameMaker, it reads macros from the first `fmMacros` file it finds in the following directories. FrameMaker looks in the directories in this order:

- The `fminit` directory in the directory where you started FrameMaker (`./fminit`)
- The directory where you started FrameMaker (`.`)
- The `fminit` directory in your home directory (`~/fminit`)
- Your home directory (`~`)

You can also create special macro files for specific tasks, reading them into FrameMaker as needed. For example, you can record special macros for specific graphics tasks—such as aligning and distributing objects—and store them in a different macro file. When you need to perform these tasks, you can read the macros into FrameMaker and use them. When you're finished, you can clear the macros and then read your standard macros back in.

To save macros in a file

To save macros, you add them to a macro file. FrameMaker adds any macros you recorded since the last time you saved or cleared them.

1. **Choose Utilities>Keyboard Macros from the File menu.**
2. **In the Keyboard Macros dialog box, select a macro file by using the text box and scroll list.**

To	Do this
Add the macros to your standard set of macros	Make sure `fmMacros` is selected.
Add macros to a different macro file	Select the file in the scroll list or type the filename in the text box.
Create a new macro file	Type a new filename in the text box.

3. **Turn on Add New Macros to File and click Begin.**

To clear the current macros

When you record macros or read them from a file, the macros are stored in your workstation's memory and are the current macros. You can clear the current macros from memory at any time. Clear the current macros, for example, if you accidentally create a macro that disables an important key. You might also want to clear macros before reading a special macro file.

Before clearing macros, make sure you save them if you recorded macros that you want to use again; FrameMaker won't warn you if you're clearing macros you haven't added to a macro file.

When you clear macros, FrameMaker also clears shortcuts that were added in a menu customization file during the session. For information on menu customization files, see the online manual *Changing Setup Files*.

1. **Choose Utilities>Keyboard Macros from the File menu.**
2. **In the Keyboard Macros dialog box, turn on Clear Current Macros and click Begin.**

To read macros from a file

While working, you can read macros from any macro file. Doing so merges the macros in the file with the current macros. If a macro in the file uses the same trigger as a current macro, the macro in the file replaces the current macro. If you want to replace all the current macros with the macros in a file, clear the current macros before you read the macros from the file.

1. **Choose Utilities>Keyboard Macros from the File menu.**
2. **In the Keyboard Macros dialog box, select a macro file by using the text box and scroll list.**
3. **Turn on Read Macros from File and click Begin.**

To delete a macro

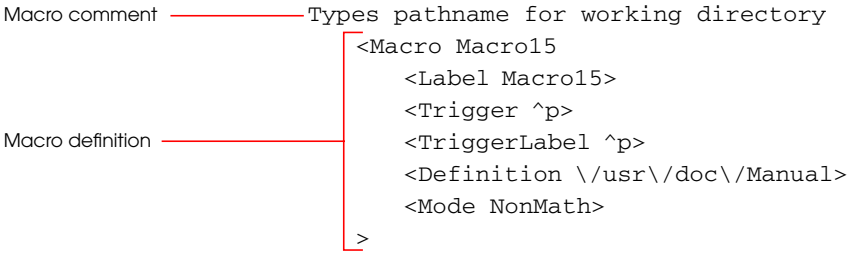
If you already use a trigger for a macro, and if you want to use the same trigger for a different macro, simply record the new macro. Even though FrameMaker saves both macro definitions, it uses only the most recent macro definition for the trigger.

If you used a trigger that disables an important keyboard function by mistake—for example, the Tab key—you need to delete the macro. If you just recorded the macro, you can clear the current macros. But if you have other newly recorded macros you want to save, or if the macro has already been added to the file, you'll need to delete the macro from the macro file.

1. **Save any newly recorded macros in a macro file.**
2. **Using FrameMaker or any standard text editor, open the macro file and delete the macro definition.**
   The macro file is a text file. If you use FrameMaker, save the file as Text Only.
3. **In FrameMaker, clear the current macros.**
   The macro you deleted is no longer in your workstation's memory.
4. **Read the edited macro file back into FrameMaker.**

IDENTIFYING THE MACRO YOU WANT TO DELETE

If it's difficult to read the actual keystrokes stored in the macro file, you can usually identify the macro from the comment.



SAMPLE MACROS

You can use macros for simple tasks such as typing words or phrases you use often, inserting a variable, and applying a format from a catalog. The sample macros in this section are more complex. Most of them involve working with dialog boxes—for example, changing an anchored frame or searching.

To record a macro that uses a dialog box, you'll need to know the keyboard shortcuts for moving around and changing settings in a dialog box. To record a macro that uses another window, such as the Paragraph or Character Designer, you'll also need to know the keyboard shortcuts for redirecting input to the other window. For a list of these keyboard shortcuts, see the *Quick Reference*.

To create a macro that uses a dialog box

This procedure shows you how to create a macro that uses a dialog box. For specific examples, see the following two procedures.

1. **Start recording the macro.**
2. **Use a keyboard shortcut to display the dialog box.**
3. **Press Control-Tab to move to the first setting in the dialog box.**
   Pressing Control-Tab ensures that the macro always starts filling in the dialog box at the same setting.
4. **Specify each setting of importance to you even if it's already correct.**
   Specifying each setting ensures that the macro plays back in the same way no matter what state the dialog box is in when the macro starts. To move forward from setting to setting, press Tab. To move backward, press Shift-Tab.
5. **Press Return to accept the settings and to close the dialog box.**
   Pressing Return has the same effect as clicking the default command button as long as keyboard input is not directed to any other command button in the dialog box. If you want the macro to click a different command button, tab to the button and then press Return.
6. **Stop recording the macro.**

CREATING A MACRO THAT USES MORE THAN ONE WINDOW

When you create a macro that uses more than one window, use the keyboard shortcuts to display and navigate through the window. When you are finished with the window, press Esc F i d to redirect the pointer back to the document.

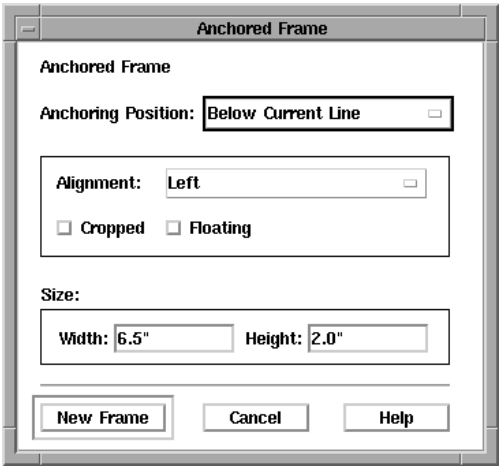
To change an anchored frame

You may want to make sure that all anchored frames in a document are the same. To do so, record a macro that fills in the Anchored Frame dialog box with the correct settings.

The macro in this example creates an anchored frame below the current line, centers it within the text frame, turns on Cropped, turns off Floating, and makes the frame 5 inches wide and 3 inches high. For general instructions on creating a macro that uses a dialog box, see the previous procedure.

1. **Select an anchored frame you want to change.**
2. **Start recording the macro.**

3 Press Esc s a to display the Anchored Frame dialog box.



4 Press Control-Tab to move to the Anchoring Position pop-up menu, the first setting in the dialog box.

5 Press the space bar to display the Anchoring Position pop-up menu.

6 Type `0` (zero) to make the Below Current Line menu item active and press Return.
Typing `0` (zero) moves to the first pop-up menu item. Type `0` (zero) even if keyboard input is already directed to the first menu item, because it might not be when you play back the macro.

7 Press Tab to move to the Alignment pop-up menu and press the space bar to display the pop-up menu.

8 Type `0` (zero) to move to the first pop-up menu item.

9 Press the down arrow key once to move to the Center menu item and then press Return.

10 Tab to the Cropped checkbox and type `1` to turn it on.

11 Tab to the Floating checkbox and type `0` (zero) to turn it off.

12 Tab to the Width text box and press Control-u to delete its contents.

13 Type `5 in`.

14 Tab to the Height text box and press Control-u to delete its contents.

15 Type `3 in`.

16 **Press Return.**

17 **Stop recording the macro.**

To create a macro that searches

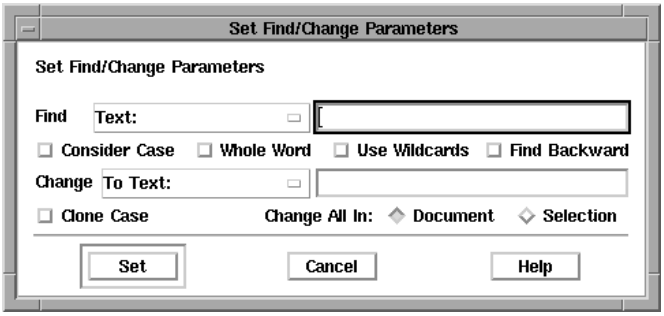
Use the Set Find/Change Parameters dialog box to create a macro that searches. The macro in this example searches for an anchored frame.

For general instructions on creating a macro that uses a dialog box, see "To create a macro that uses a dialog box" on page C-8.

1 **Put the insertion point in a document that contains an anchored frame.**

2 **Start recording the macro.**

3 **Press Esc f i s to display the Set Find/Change Parameters dialog box.**



4 **Press Control-Tab to move to the first text box in the dialog box.**
The Find text box becomes active.

5 **Press Shift-Tab to move back to the Find pop-up menu.**

6 **Press the space bar to display the Find pop-up menu.**

7 **Press 0 (zero) to move to the first pop-up menu item.**

8 **Press the down arrow key several times until the Anchored Frame menu item is active.**

9 **Press Return to accept the setting in the Find pop-up menu.**

10 **Press Return again to accept the settings and to close the dialog box.**
Pressing Return has the same effect as clicking the Set button.

11 **To start the search, press Esc f i n (for find next).**
FrameMaker selects the next anchor symbol in the document.

12 **Stop recording the macro.**

To create a macro that displays a dialog box and stops

You may have noticed that you can't choose the Utilities>Stop Recording Keys command when a dialog box is displayed. But you can create a macro that ends after displaying a dialog box. This allows you to create a macro that displays a dialog box, fills in part of it, and then stops so you can fill in the rest.

This example saves you several keystrokes each time you open a file by displaying the Open dialog box and by changing directories.

1. **Start recording the macro.**
2. **Press Esc f o.**
   The Open dialog box appears.
3. **Type the name of a directory in the text box and press Return.**
   The files in the directory appear in the scroll list.
4. **Press Control-] to stop recording the macro.**
   Even though the Enter Trigger dialog box doesn't appear until you close the dialog box, the macro contains only the keystrokes you recorded before pressing Control-].
5. **Click Cancel.**
   The mouse movement and click aren't recorded as part of the macro.

When you play back the macro, it displays the dialog box, changes directories, and stops.

CREATING A MACRO THAT BEGINS IN AN OPEN DIALOG BOX

You can create a macro that begins after displaying a dialog box. For example, you might want to create a macro that sets the format in the Save Document dialog box and clicks Save. To do so, display the dialog box as you usually do. Then press Control-] to start recording the macro. A message that tells you FrameMaker is recording a macro appears in the window where you started FrameMaker.

To create a macro that repeats

You use two macros to create a macro that repeats: The first macro performs the task you want to repeat; the second macro plays back the first one several times by pressing its trigger. To repeat the task several times, you press the second macro's trigger.

1. **Record the macro you want to repeat.**
   The macro can be very involved. For example, it might search for the paragraph tag of a first-level heading, move the insertion point to the next paragraph, and paste a format that's on the FrameMaker Clipboard.

2 **Start recording the second macro.**

3 **While recording, press the first macro's trigger as many times as you want the macro to repeat.**

4 **Stop recording the macro.**

CREATING A MACRO THAT REPEATS INDEFINITELY

You can create a macro that repeats until you cancel it. To do so, make the last keystrokes you record the same as the macro's trigger.

For example, suppose you want to browse through the pages of a file, pausing briefly at each page. Record a macro whose first two keystrokes are Control-v and Control-l (lowercase *L*)—to display the next page and then redisplay it. Then record the keystrokes Control-x Control-a. Finally, stop recording the macro, and specify Control-x Control-a as the trigger. When you play back the macro FrameMaker executes the keystrokes Control-v and Control-l, and then executes the keystrokes Control-x and Control-a, which starts the macro all over again.

To stop the macro, press Control-c.

GLOSSARY

This glossary contains industry-wide printing terms as well as terms used in the FrameMaker manuals. For references to more information about a term, see the index.

absolute pathname A pathname that starts with a slash and the root directory name and fully specifies the file's location in the file system hierarchy (for example, `/usr/sales/Memo`). *See also* pathname. *Compare* relative pathname.

active area In a view-only document, text that surrounds a hypertext marker. An active area extends to the first change in character format on either side of the marker.

alignment Text alignment defines the placement of text—left (ragged right), right (ragged left), centered, or justified. Graphic alignment defines how objects align—along their sides, centers, tops, or bottoms. *See also* justified text*;* tab alignment.

alignment point The point in an equation or a text line at which the contents are aligned. For example, when you type in a text line that has an alignment point at the center, the text line expands to the left and right while its center point does not move.

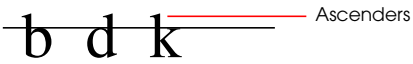
anchored frame A graphic frame that is tied to a specific location in the text. An object in an anchored frame moves with the text as the anchor symbol (⊥) moves. *See also* graphic frame. *Compare* unanchored graphic frame.

arrow keys The four directional keys on the numeric keypad.

As Is setting A setting indicating that a selection has mixed properties—for example, two paragraphs with different indents. Also indicates that the property should not be changed when you apply the settings in the dialog box or window. To indicate an As Is setting, checkboxes are dim, *As Is* appears in pop-up menus, and text boxes are empty.

ascender

A vertical stroke that extends above the body of some lowercase letters. *Compare* descender.



asymmetrical page layout

A double-sided page layout in which the left and right page layouts are not mirror images. They may have different inside, outside, top, or bottom margins. They may also have a different number of columns, a different gap between columns, or different side-head settings. *Compare* symmetrical page layout.

Autoconnect

A flow property that controls whether FrameMaker generates a new page when you fill the last text frame of a text flow. If Autoconnect is on, FrameMaker creates a new page and connects a text frame on the new page with the text frame on the previous page.

automatic hyphen

A hyphen FrameMaker inserts when it needs to break a word at the end of a line. *See also* discretionary hyphen; hyphenation points; suppress hyphenation.

autonumber

An automatically generated number at the start or end of a paragraph.

background text and graphics

Text and graphics that appear on body pages exactly as they do on the corresponding master page. Background text frames, such as headers and footers, are text frames with no flow tag. All graphics on master pages are background graphics. *See also* flow tag; page design; template text frame.

baseline

The imaginary line on which letters and numbers rest.

bitmap

A graphic composed of dots or pixels. Bitmaps are usually created with a paint program, a screen capture utility, or a scanner. Because you import color and gray-scale images just as you do bitmaps, this manual uses *bitmap* to refer to all of them. *See also* color image; gray-scale image; pixel. *Compare* vector.

blank paper document

An empty FrameMaker document you create with the New command in the main FrameMaker window or on the File menu. Blank paper documents contain basic formatting information you can use to create your document.

body page

A printable page in a document; where you enter and edit the main text (not the headers and footers) of a document.

body text

The main text in a document, not including headings.

boilerplate Text or graphics that are used repeatedly.

book file A file that contains the filenames of documents in a book, as well as a specification for how the files should be paginated and numbered. You use a book file to perform tasks across all the files in the book—for example, to generate tables of contents and indexes, manage pagination, print, update cross-references, and import and update formats. *See also* generated file.

book window A window that appears when you open a book file.

border Nonprinting dashed or dotted lines that mark the edges of text frames and text columns, imported graphics, tables, and graphic frames. Also refers to the boundary around objects you draw with the FrameMaker drawing tools—for example, rectangles, circles, and polygons. *Compare* selection border.

bounding box The imaginary rectangle that is just large enough to surround an object.

building blocks Text used in cross-reference formats, variable definitions, index marker text, and in the special text flows that determine the format and structure of generated files.

built-in math element A mathematical element that appears on the Equations palette. *See also* custom math element; math element.

bullet A character—typically a filled-in or open circle (•) or square (■)—used to draw attention to an item in a list. Character fonts contain an open-circle bullet symbol; the Zapf Dingbats font contains a number of special symbols commonly used as bullets.

callout A short phrase that defines and highlights important parts of an illustration. A thin line—a callout rule—usually connects a callout to the corresponding part of the illustration. *Compare* caption.

caption Text that accompanies and identifies an illustration. *Compare* callout.

capture To store (in a file on the disk) a rectangular portion of the image on a workstation's screen so you can import it into a document. *See also* bitmap; import.

catalog *See* Character Catalog; Paragraph Catalog; Table Catalog.

change bar A vertical line in the page margin that indicates an addition, a change, or a deletion of text.

Character Catalog Part of a document; contains formats that have been created and stored to ensure consistent formatting of characters, words, and phrases. *Compare* Paragraph Catalog.

Character Designer A window you can use to create and change character formats and store them in the Character Catalog. *Compare* Paragraph Designer.

character format The formatting information for characters, words, and phrases. This information is used to override a paragraph's default font and can be stored in the Character Catalog.

character tag The tag assigned to characters; the name of a format stored in the Character Catalog.

cicero A unit of measure used in Europe. One cicero is approximately 4.55 millimeters.

click To press and release a mouse button. Refers to the left mouse button, unless otherwise noted.

Clipboard *See* FrameMaker Clipboard; X Window System Clipboard.

CMYK A model used by commercial printers to simulate the appearance of any color using just four colors of ink—cyan, magenta, yellow, and key (black). Each color component is printed in a different concentration, depending on how much is needed to create the desired color. The CMYK model is used to create color separations for four-color process printing. *See also* color separation.

color image A bitmapped graphic that contains 4 to 32 bits of information per pixel to convey color. *See also* bitmap; gray-scale image.

color separation The process of separating color on a page into components. For spot color separations, FrameMaker prints a separate sheet of paper or film for each color on each page. For process color separations, FrameMaker prints four separate sheets (one each for cyan, magenta, yellow, and black) for each page. The commercial printer uses the separations to create printing plates. On the press, each plate is printed with the appropriate ink color, eventually resulting in the complete page. *See also* process color; registration marks; spot color.

condition indicator A change in the way text appears on the screen when it's tagged as conditional text—for example, displaying the text in a different color or with an underline.

condition tag The name of a version of a conditional document. Each condition tag is associated with condition indicators—format changes that help identify the versions of a conditional document.

conditional document A document that contains the text for several versions. You use a conditional document to produce several similar documents—for example, for similar products—or to include comments, which you can hide before you print the final copy.

conditional text Text specific to a version of a document. Conditional text is identified by one or more condition tags identifying the versions the text is in.

crop To trim a graphic to fit inside an area; to eliminate part of a graphic from viewing and printing.

crop marks Lines at the corners of a page that show where the paper is to be cut after printing. *See also* registration marks.

cross-reference A reference to related information in another part of the same document or a different document.

current page The page with a darkened border, indicating where FrameMaker will paste text and objects.

current paragraph; current table The paragraph or table that contains the insertion point or selection.

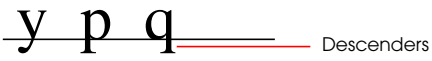
custom math element A user-defined math element. Custom math elements don't appear on the Equations palette. *See also* built-in math element; math element.

cutout A method of printing an object when it is overlapped by another object of a different color. The overlapped area is not printed, leaving it white. The overlapping color is then printed over the cutout. *Compare* overprinting; trapping.

default A preset value in a dialog box or window.

default font *See* paragraph default font.

descender A vertical stroke that extends below the baseline of some lowercase letters. *Compare* ascender.



deselect To remove highlighting from text or handles from objects.

designer *See* Character Designer; Paragraph Designer; Table Designer.

dictionary A collection of words and hyphenation information that FrameMaker uses to check spelling and hyphenate words. FrameMaker uses four dictionaries—the system dictionary, site dictionary, personal dictionary, and document dictionary.

dictionary header or footer A running header or footer that shows the range of information on a page or on two facing pages. For example, telephone books commonly use dictionary headers to show the first and last names on the page. *See also* footer; header. *Compare* running header or footer.

didot A unit of measure used in Europe. One didot is approximately 0.375 millimeters.

dingbat An ornamental character such as a bullet, an asterisk, or scissors. You create dingbats using the Zapf Dingbats or similar special font.

discretionary hyphen A nonprinting symbol (¬) that marks where a word can be hyphenated. *See also* automatic hyphen; hyphenation points; suppress hyphenation.

display equation An equation that appears in a paragraph of its own. *Compare* in-line equation.

display units The units—such as inches or points—that FrameMaker uses to display measurements in dialog boxes and in the status bar at the bottom of the document window.

distribute To position objects an equal distance apart, horizontally or vertically.

double-click To press and release the mouse button twice rapidly without moving the mouse. Refers to the left mouse button, unless otherwise noted.

dpi The setting (dots per inch) that determines the size (scaling) of a bitmap. *See also* bitmap.

drag To hold down a mouse button while moving the pointer.

draw order The order in which objects are drawn on a page. When FrameMaker displays a page, the objects on the page are displayed in draw order.

em dash A dash (—) that is the same width as the point size of the font in use.

em space A space that is the same width as the point size of the font in use.

emulsion The photosensitive coating on photographic film.

en dash A dash (–) that is half as wide as an em dash in the point size of the font in use.

en space A space that is half as wide as an em space in the point size of the font in use.

Encapsulated PostScript (EPS) format A graphic file format supported by many graphics applications. An EPS file contains PostScript code for printing and may also contain a preview image for viewing on the screen. EPSI is a version of Encapsulated PostScript that contains a generic preview image. EPSI files can be imported and displayed on the screen on all platform versions of FrameMaker. *See also* PostScript.

endnote A note placed at the end of a document. Endnotes provide additional information on a particular part of the document. *Compare* footnote.

end-of-flow symbol The symbol (§) that appears at the end of the text in a text flow when text symbols are visible. You can't put the insertion point after an end-of-flow symbol.

EPSI *See* Encapsulated PostScript (EPS) format.

expression Part of an equation. For example, $(x-2)^2$ is an expression in $3(x-2)^2+7$.

extension *See* filename extension.

feather To add space between paragraphs and lines so that text completely fills a text frame vertically and so that the baseline of the last line of text aligns with the bottom of the text frame.

filename The name of a file as it is stored on a disk. *See also* pathname.

filename extension The characters that appear at the end of a filename, after a period. For example, FrameMaker names some documents with an extension of `.doc`.

filename suffix The characters that FrameMaker adds to a generated file to identify the type of information the file contains. For example, a generated table of contents has a suffix of `TOC`.

fill pattern The pattern inside an object's border. *Compare* pen pattern.

fixed line spacing When a paragraph's line spacing is fixed, FrameMaker doesn't open up space to accommodate larger font sizes, characters that are positioned above or below the baseline, or anchored frames positioned at the insertion point.

fixed-width font Refers to fonts in which all characters of the same font size are the same width. For example, in the Courier font, the letter *I* takes up the same horizontal space as the letter *W*. *Compare* proportionally spaced font.

flip To change an object by rotating it around its horizontal axis (up/down) or its vertical axis (left/right).

flow *See* text flow.

flow tag The name of a text flow. On a master page, text frames with a flow tag are used as template text frames; text frames with no flow tag are used for background text. Flow tags also determine how column layout changes are applied to existing pages. When the insertion point is in a text frame, the flow tag appears in the status bar at the bottom of the document window. *See also* background text and graphics; template text frame; text flow.

font A complete set of characters (letters, numbers, punctuation, and symbols) in one family at a single size and weight—for example, 10-point Avant Garde Bold.

font family A series of characters with the same design characteristics—for example, Times.

footer Text that appears at the bottom of each page—for example, the page number, date, or chapter title. *See also* dictionary header or footer; running header or footer.

footnote A note placed at the bottom of a page or at the end of a table. Footnotes provide additional information on a particular part of the document. *Compare* endnote.

footnote reference The number or symbol in the main text of a document that indicates a footnote.

format overrides Differences between the format of text or tables in a document and the corresponding format in the Paragraph, Character, or Table Catalog.

frame *See* anchored frame; reference frame; text frame; unanchored graphic frame.

FrameImage A bitmap graphic file format that FrameMaker can import, display, and print on each platform it supports.

FrameMaker Clipboard A temporary storage area in FrameMaker for elements, text, objects, graphic frames, and paragraph and character formats that you cut or copy within and between FrameMaker documents. The information remains on the Clipboard until you cut or copy something else. *Compare* X Window System Clipboard.

FrameReader A program that permits only viewing, searching, and printing of hypertext-navigable FrameMaker documents. FrameReader is included in the CD-ROM edition of FrameMaker and may be freely distributed for noncommercial use. You can use FrameViewer to provide readers with online information. *See also* FrameViewer.

FrameVector A vector graphic file format that FrameMaker can import, display, and print on each platform it supports.

FrameViewer A program that, like FrameReader, permits only viewing, searching, and printing of hypertext-navigable FrameMaker documents. In addition, FrameViewer can read documents in Interchange format (MIF) and is customizable with the Frame Developer's Kit (FDK). *See also* FrameReader.

generated file A file—such as a table of contents, a list of figures, or an index—created by extracting paragraphs or marker text from one document or from several documents in a book. *See also* book file.

graphic frame An object that contains text or graphics. *See also* anchored frame; unanchored graphic frame.

graphic inset An image created with a graphic inset editor and imported into a document.

graphic inset editor A separate application that can create and edit images in a format FrameMaker can import. You can start a graphic inset editor from within FrameMaker.

Gravity A drawing feature used to make the points of one object touch another object. When Gravity is on, an object attracts the pointer when you draw, resize, or reshape an object.

gray-scale image A bitmapped graphic that contains more than 1 bit of information per pixel to convey shades of gray. For example, an image with 256 shades of gray requires 8 bits per pixel. *See also* bitmap; color image.

greeking The representation of text in a small font size as a gray bar on the screen. Greeked text appears correctly when the document is printed.

group To combine several objects into one so you can manipulate them as a single object. After grouping objects, you can move, resize, flip, and rotate the group. *Compare* join.

handles Eight small boxes that appear around a selected object. Use the handles to stretch or shrink an object. *Compare* reshape handles.

header Text that appears at the top of each page—for example, the chapter or section title. *See also* dictionary header or footer; running header or footer.

HLS A model for representing color. HLS is based on three values—hue, lightness (or luminance), and saturation. Hue specifies the actual color. Lightness refers to the lightness or darkness of the color. Saturation is the amount of gray in the color.

hypertext Refers to the linking and display of related information on different pages or in different documents. You can use FrameMaker hypertext commands to create online documents. You can also generate files that include hypertext links to the source documents.

hyphenation points The locations in a word where FrameMaker places a hyphen if necessary. *See also* automatic hyphen; discretionary hyphen; suppress hyphenation.

import To bring text or graphics from other files into a document. Also, to bring formats from another FrameMaker document into a document.

in-line equation An equation that appears in line with paragraph text. *Compare* display equation.

insertion point The point (⊥) at which text and graphics are inserted or pasted.

inset *See* graphic inset, text inset.

join To combine lines, polylines, arcs, and smoothed polylines into a single complex outline. *Compare* group.

justified text Text that is adjusted to be even on the left and right. *See also* alignment.

kern *See* pair kern.

keyboard shortcut A keystroke or series of keystrokes you use to perform a task rather than use the mouse. *See also* macro.

landscape The orientation of a page that is wider than it is tall. *Compare* portrait.

layout *See* page design.

layout overrides Differences between the layout of a body page and the layout of its corresponding master pages—for example, a different number of columns or gap between columns, or different margins or side-head settings.

leader dots Characters (usually periods) used to lead the reader's eye across the page to text aligned at a tab stop. Leader dots are frequently used in tables of contents—for example, *Introduction*..... *iii*.

leading The white space between lines in a paragraph, usually measured in points. A type specification such as *12 on 14* means a 12-point font with 2 points of leading (pronounced *ledding*). *See also* line spacing.

ligature A combined letter pair such as fi or fl.

line cap The style of a line end. A line cap can be butt, projecting, or round.

line spacing The space between lines in a paragraph, measured from the baseline of one line to the baseline of the next. *See also* leading.

lock file A temporary file (with the extension `.lck`) that FrameMaker creates when you open a document. FrameMaker uses a lock file to determine whether a document is already in use.

locked document *See* view-only document.

macro A user-defined keyboard shortcut that types text or plays back a sequence of commands.

main FrameMaker window The small window that appears when you start FrameMaker. The main FrameMaker window contains five buttons—New, Open, Help, Info, and Exit.

Maker menu A menu that contains frequently used FrameMaker commands. To display the Maker menu, point in a document window (except on the menu bar or title bar), and hold down the right mouse button.

margin *See* page margin.

marker A nonprinting character (T) you insert to indicate the text of a running header or footer, an index entry, or a hypertext command. Markers are also used to indicate conditional text and the source of a cross-reference.

master page A nonprinting page that contains the page design for body pages. A master page can include background text and graphics and template text frames.

math element Item in an equation. For example, variables, operators, and delimiters are all math elements. *See also* built-in math element; custom math element.

MIF An acronym for Maker Interchange Format, a group of statements describing a FrameMaker document in a text file. MIF is used to exchange information between FrameMaker and other applications.

MML An abbreviation for Maker Markup Language. An MML file is a text file that contains statements that define a document's contents and format. You can create an MML file using a word processor. When you open the MML file, FrameMaker interprets the markup statements and applies the correct formats.

Normal format The format in which you usually save FrameMaker documents. *Compare* Text Only format; view-only document.

numeric space A space that is as wide as the font's zero (0) character.

object Anything that appears with handles when selected—for example, rectangles, circles, text frames, and text lines.

Object Selection tool A tool on the Tools palette that allows you to select only objects. *Compare* Smart Selection tool.

offset The distance of an object from some point. For example, the offsets for a circle in a graphic frame are the distance from the left edge of the frame to the left edge of the circle and from the top of the frame to the top of the circle.

orphan A line of text at the top or bottom of a column of text that is isolated from the rest of its paragraph.

overline A font style in which a horizontal line appears above characters.

Overline

overrides *See* format overrides; layout overrides.

overprinting Printing one color on top of another when two objects in different colors overlap. Used commonly when a color is overlapped by black. *Compare* cutout; trapping.

page design The column layout (the number, size, and placement of text columns), headers and footers, and graphic elements on a page. *See also* background text and graphics; template text frame.

page margin The distance between the edge of the page and the edge of the nearest column.

pair kern To move pairs of characters closer together to improve their appearance.

PANTONE MATCHING SYSTEM® A system for specifying ink colors.

paragraph A block of text ended by a paragraph return.

Paragraph Catalog Part of a document; contains formats that have been created and stored to ensure consistent formatting of paragraphs. *Compare* Character Catalog.

paragraph default font The font in which text appears unless you override it with a different character format. The default font is part of a paragraph's format.

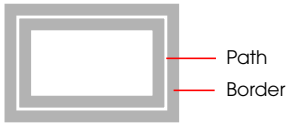
Paragraph Designer A window you can use to create and change paragraph formats and store them in the Paragraph Catalog. *Compare* Character Designer.

paragraph format The formatting information for a paragraph, including its typography (such as fonts, spacing, and hyphenation), overall shape (including indents and alignment), tab settings, and automatic numbering. This information can be stored in the Paragraph Catalog.

paragraph symbol The symbol (¶) that appears at the end of a paragraph when text symbols are visible. If you delete a paragraph symbol between two paragraphs, FrameMaker merges the two paragraphs into one.

paragraph tag The tag assigned to paragraphs; the name of a format stored in the Paragraph Catalog.

path The line segments at the center of an object's border to which objects align and snap.



pathname The location of a file or directory on a disk. *See also* absolute pathname; filename; relative pathname.

pen pattern The pattern of an object's border. *Compare* fill pattern.

pica A unit of measure used in printing. There are 6 picas to the inch. Each pica contains 12 points. *See also* point.

pixel The smallest unit of a digitized picture. (The word *pixel* is derived from *picture element*). *See also* bitmap.

point A unit of measure used in printing. There are 12 points to the pica and 72 points to the inch. *See also* pica.

portrait The orientation of a page that is taller than it is wide. *Compare* landscape.

PostScript A page description language published by Adobe Systems Incorporated. PostScript describes the appearance of text and graphics on printed pages. *See also* Encapsulated PostScript (EPS) format.

process color A color that is printed by combining cyan, magenta, yellow, and black. *See also* CMYK; color separation. *Compare* spot color.

proportionally spaced font Refers to fonts in which characters of the same font size vary in width. For example, in the Times font, the letter *I* takes up less horizontal space than the letter *W*. *Compare* fixed-width font.

rasterfile A file that contains a bitmap image (black and white, gray scale, or color).

read-only document *See* view-only document.

reference frame An unanchored graphic frame that appears on a reference page. Reference frames can be used above or below a paragraph (as specified in the paragraph's format). They can also separate footnotes from other text on a page. And they can contain the definition for a custom math element.

reference page A nonprinting page that contains reference frames that can be used above and below paragraphs or above footnote text. A reference page can also contain special flows that determine the structure and format of generated files such as indexes and tables of contents.

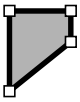
registration The alignment of color separations so that each color is printed in exactly the right position in relation to the other colors.

registration marks Marks ( ) printed outside the page image area. A commercial printer uses registration marks to align color separations. *See also* color separation; crop marks.

relative pathname A pathname that includes only the path from a document to another file—for example, `rfiles/Screen1`). *See also* pathname. *Compare* absolute pathname.

reshape To change the shape of a line, polygon, polyline, or freehand curve by moving, adding, or deleting reshape handles.

reshape handles Small boxes used to change the shape of an object. *Compare* handles.



revert To go back to the last-saved version of a document.

RGB A model for representing colors on a color monitor by mixing red, green, and blue light.

rule A line drawn on a page.

runaround text Text flowing around a graphic. *Compare* wordwrap.

running header or footer A header or footer the text of which depends on the body page's contents. For example, a header might contain the text of the current section heading. *See also* footer; header. *Compare* dictionary header or footer.

scale To adjust the size of an object proportionally.

select To highlight text and display handles on graphics.

selection border A border you draw to select several objects at once. *Compare* border.

separation *See* color separation.

shrinkwrap To fit a graphic frame tightly around an equation of any size and place the frame in line with paragraph text.

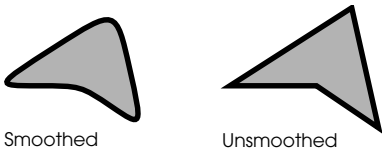
Small Caps A character format property that displays lowercase letters in uppercase, using a smaller font size.

Smart Quotes A document feature you can turn on to automatically insert the appropriate left or right single quotation marks (‘’) or double quotation marks (“”) as you type.

Smart Selection tool A tool on the Tools palette that allows you to select both text and objects. When this tool is active, the pointer changes shape as you move it, indicating whether you select text or an object when you click. *Compare* Object Selection tool.

Smart Spaces A document feature you can turn on to prevent extra spaces when typing, deleting, or replacing text.

smooth To round the corners of a polygon, polyline, or freehand line. *Compare* unsmooth.



Snap A drawing feature used to draw, move, resize, and rotate objects so they line up with the snap grid.

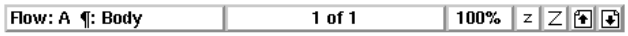
snap grid An invisible grid to which an object snaps when you draw, move, resize, or rotate it. *Compare* visible grid.

special text flow A text flow on a reference page that determines the structure and format of generated files.

spot color A color that is printed with a single color ink rather than as a process color. Spot color is usually used to highlight or emphasize information. For example, headings in a book can be in a different color from the body text. *See also* color separation. *Compare* process color.

spread The amount of space added to or subtracted from the normal space between characters. Spread is expressed as a percentage of an em space.

status bar The bar at the bottom of a document window, containing information such as the tag, object size, page number, and zoom setting.



straddle In a table, to combine a range of cells so text and graphics can flow across cell borders as if the combined cells were a single cell. In a text frame, refers to a paragraph, table, anchored frame, or footnote that spans columns of text.

strikethrough A font style in which a horizontal line appears through characters.

~~Strikethrough~~

subscript character A character, usually in a smaller font size than the surrounding text, set below the baseline. Subscripts are used often in science and mathematics—for example, H_2O.

suffix *See* filename suffix.

superscript character A character, usually in a smaller font size than the surrounding text, set above the baseline. Superscripts are used often for footnote references and in science and mathematics—for example, b^2.

suppress hyphenation To prevent a word from being hyphenated by inserting a suppress hyphenation symbol (_) in the word. *See also* automatic hyphen; discretionary hyphen; hyphenation points.

symmetrical page layout A double-sided page layout in which the left and right page layouts are mirror images. They have the same inside, outside, top, and bottom margins. They also have the same number of columns, the same gap between columns, and the same side-head settings. *Compare* asymmetrical page layout.

synchronize To align the baselines of body paragraphs along a page grid.

system administrator The person who installs and maintains your FrameMaker installation.

system variable A built-in variable, used mainly in headers and footers—for example, the current date, document name, and current page number. *See also* variable. *Compare* user variable.

tab alignment A tab property that determines the alignment of text at the tab stop. Tab alignment can be left, right, center, or decimal. *See also* alignment.

tab stop The location to which the insertion point moves when you press the Tab key.

Table Catalog Part of a document; contains formats that have been created and stored to ensure consistent formatting of tables.

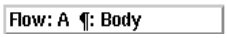
Table Designer A window you can use to create and change table formats and store them in the Table Catalog.

table format The formatting information for a table, including its indents, alignment, and placement on the page; the placement of a table title; and the ruling and shading used for its rows and columns. This information can be stored in the Table Catalog.

table tag The tag assigned to tables; the name of a format stored in the Table Catalog.

tag *See* character tag, condition tag, flow tag, paragraph tag, table tag.

Tag area The area on the left side of the status bar at the bottom of the document window. The Tag area contains the current flow, paragraph, and character tags. It also contains the current condition tag settings.



template A document used to create new documents. A template can include all the formats and other information you need to create a document. It can include formats in the Paragraph Catalog, Character Catalog, and Table Catalog as well as page design information such as margins, page numbering, and headers and footers. It can also include cross-reference formats, variable definitions, conditional text settings, math and color definitions, and information on reference pages.

template text frame A text frame on a master page that has a flow tag. Template text frames are used to determine the column layout on corresponding body pages. *See also* background text and graphics; flow tag; text frame.

text flow The text in a series of connected text frames. A text flow can also be contained in a single text frame, not connected to any other. *See also* flow tag.

text frame A rectangular object that contains paragraphs of text. *Compare* text line.

text inset Text that is imported by reference from another document, from a file created by another application, or from a text file. A text inset is linked to the text in the source document. When the source text changes, FrameMaker can automatically update the inset.

text item A range of text, usually a few characters, a word, or a phrase within a paragraph.

text line An object, created with the Text Line tool on the Tools palette, that contains a single line of text. *Compare* text frame.

Text Only format A format in which you can save FrameMaker documents. Only the document text is saved, unformatted. You can edit the resulting file with any standard text editor. *Compare* Normal format.

text symbols Special nonprinting characters that are displayed when Text Symbols is turned on in the View menu.

Thesaurus A list of words, with synonyms, antonyms, and related words. Use the FrameMaker Thesaurus to look up words and to replace words in a document.

thumbnail A small image of a page. Print thumbnails to see the general layout of several pages at a glance.

trapping A technique used to prevent gaps from appearing between objects of different colors when printing. *Compare* cutout; overprinting.

trigger The key sequence that activates a macro.

triple-click To press and release the left mouse button three times rapidly without moving the mouse.

unanchored graphic frame A graphic frame used to crop graphics. Also used on reference pages for reference art, which appears above or below a paragraph as part of the paragraph's format, separates footnotes from the body text above them, and defines math elements. An unanchored graphic frame isn't anchored to text. *See also* graphic frame. *Compare* anchored frame.

ungroup To separate grouped objects into their constituent objects or groups.

unresolved cross-reference A cross-reference that has a source FrameMaker cannot find.

unsmooth To remove smoothing from an object that has corners that were rounded with the Smooth command. *Compare* smooth.

user variable A variable you can define to use in the place of text that appears repeatedly—for example, a product name. *See also* variable. *Compare* system variable.

variable Text that is defined once but that can be used several times. Variables are updated automatically when the values of the variables change. *See also* system variable; user variable.

vector A graphic composed of mathematically defined lines and curves. *Compare* bitmap.

view-only document A document saved in View Only format; a read-only document.

visible grid A grid of horizontal and vertical lines used as an aid when drawing, placing, and resizing objects. *Compare* snap grid.

widow A line of text at the top or bottom of a column of text that is isolated from the rest of its paragraph.

wildcard A special character used to broaden or narrow a search.

wordwrap The automatic continuation of text from the end of one line to the beginning of the next. *Compare* runaround text.

X Window System Clipboard A temporary storage area in the X Window System for text (not graphics) that you copy from one application to another. The information remains on the Clipboard until you copy something else. FrameMaker supports the X11R3, -R4, and -R5 Clipboard (primary selection). FrameMaker does not support the X11R2 Clipboard. *Compare* FrameMaker Clipboard.

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