

User Guide

Adobe® FrameMaker® version 5.5

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Adobe FrameMaker 5.5 User Guide

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Introduction

Welcome to Adobe FrameMaker®—the complete publishing system that's a word processor, page designer, graphics editor, equation 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. And then you can reuse the same material for a hypertext Help system or for publishing on the Internet.

About this manual

This user guide provides detailed cross-platform information about the FrameMaker tools and commands. It's designed to be used as a reference in your everyday work.

This manual provides step-by-step instructions for the Windows, Macintosh, and UNIX platforms. Any platform differences in procedures and commands are noted in the text.

Before using this manual, you need to install the program by following the instructions given in the *Getting Started* guide or in the *Installing FrameMaker Products* manual (UNIX). The *Getting Started* guide also provides an overview of new features.

FrameMaker documentation assumes you have a working knowledge of your operating system and its conventions, including how to use a mouse and standard menus and commands, and how to open, save, and close files. For help with any of these techniques, see the documentation that came with your computer.

Learning FrameMaker

Your package includes many types of documentation to help you learn FrameMaker. In addition, Adobe provides several online services to help you learn FrameMaker and have your questions answered.

Getting Started Contains system requirements, a description of new features, startup instructions, and—for Windows and Macintosh users—installation instructions.

User Guide Contains a quick tour of FrameMaker and complete information on using all its commands and features.

The Help system Contains all the information in the *Adobe FrameMaker User Guide,* optimized for use online. In addition, the Help system includes a complete list of shortcuts.

Quick Reference Card Contains a handy list of writing and editing shortcuts.

Sample templates Contain examples of some of the standard templates supplied with FrameMaker.

FrameMaker tutorials Provide hands-on instructions to introduce you to the fundamentals of FrameMaker.

QuickTime movie (Windows and Macintosh) Provides an overview of essential FrameMaker features.

Installing FrameMaker Products (UNIX) Contains information for system administrators for setting up, licensing, and maintaining FrameMaker on a UNIX network.

Online manuals Contain the following advanced or platform-specific topics:

- *Working on Multiple Platforms*
- *FrameMaker Character Sets*
- *Using Filters*
- *Release Notes*
- *Customizing FrameMaker Products*
- *MIF Reference*
- *MML Reference*
- (Macintosh) *Using AppleScript*
- (UNIX) *Managing Fonts*

Adobe online services For more information or help, use the following services. (Availability of forums may vary by country, but European and international callers may use the US phone numbers for the technical support bulletin board and the FaxYI system.)

- Adobe forums on America Online and CompuServe
- The Adobe site on the World Wide Web (www.adobe.com)
- The Adobe technical support bulletin board system (call 1-206-623-6984, using 8-N-1, up to 28.8K baud)
- A Web-based search engine of technical notes (www.adobe.com/misc/search.html)
- The FaxYI system to have technical notes faxed to you (call 1-206-628-5737)
- The Techdocs Mail Server to receive technical information by e-mail (send an e-mail message to techdocs@adobe.com with SEND HELP as the body of the message)

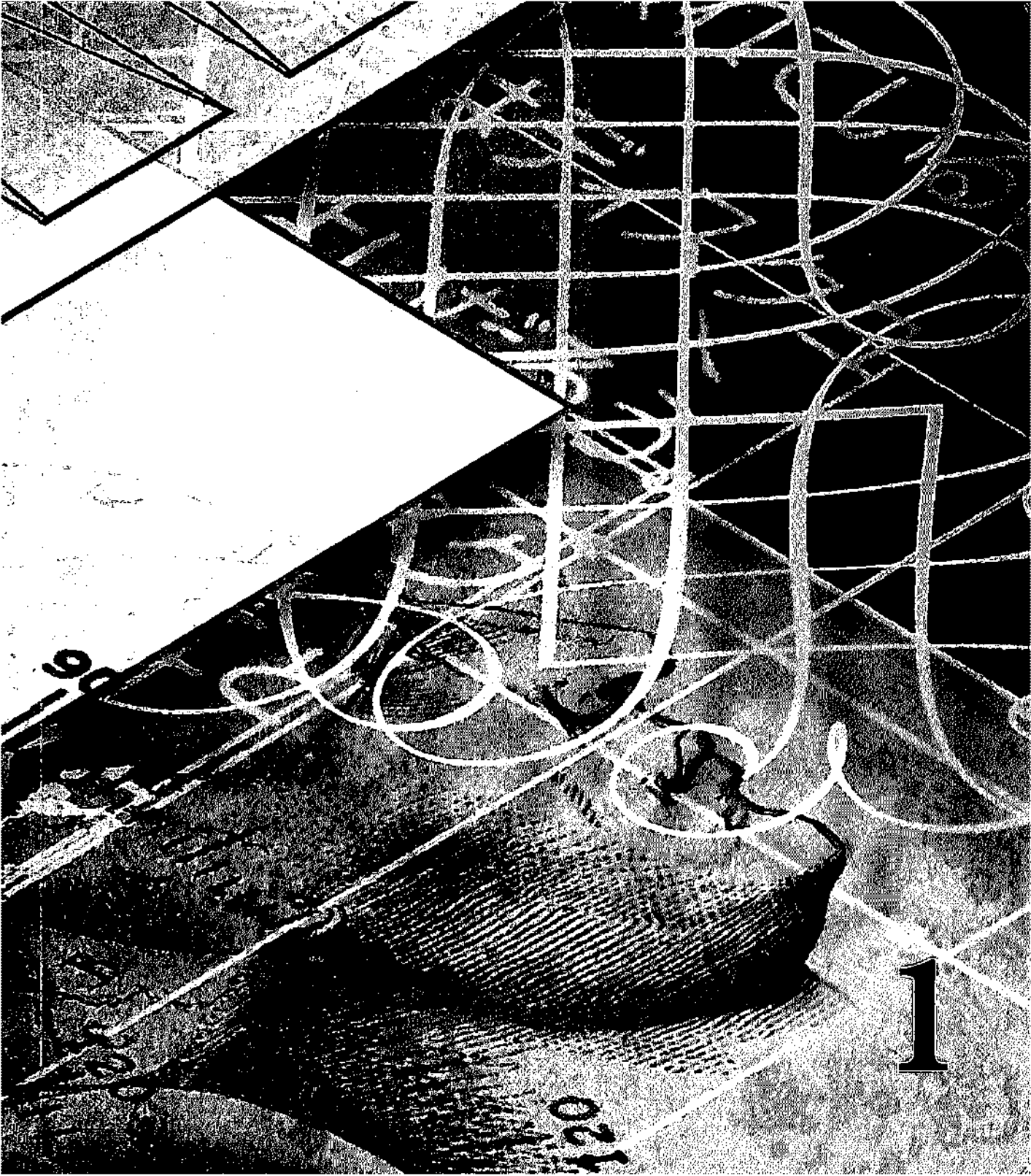
Conventions

Some screenshots in this manual come from the Windows version, some from the Macintosh version, and others from the UNIX version.

This manual refers to a special key, called Meta, on UNIX systems. Depending on the type of system you're working on, the Meta key may be mapped to Alt or to the key with a diamond on it.

This manual uses the following conventions for menus and shortcuts.

Example	Describes
File > Import > Formats	Choosing the Formats submenu in the Import submenu on the File menu
Control+n	Holding down Control and pressing the lowercase letter *n*
Control+Shift+n	Holding down Control and Shift, and pressing the letter *n*
Esc v Shift+b	Pressing and releasing Esc, then pressing the letter *v*, then holding down Shift while pressing the letter *b* (on UNIX systems, you can use Control+r instead of Esc)
Right-click	Clicking the right mouse button
Control-click	Holding down Control and clicking the left mouse button


1

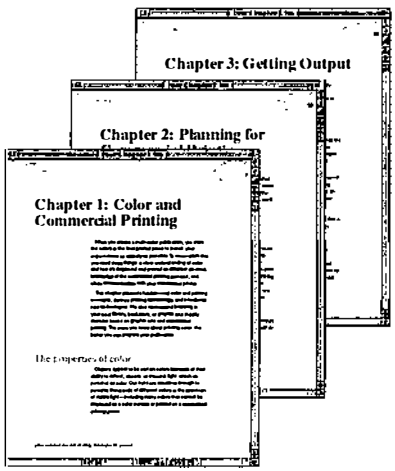


Chapter 1: A Quick Tour of FrameMaker

This hands-on introduction to FrameMaker provides an overview of some key features of the program in approximately one hour.

For more step-by-step instructions on how to use some of the features introduced in this tour, see the tutorials in the FrameMaker Tutorials folder. To find complete information about any feature, see the index in this user guide. To view a movie version of this tour in Windows and on the Macintosh, double-click FMTour.mov on the FrameMaker CD-ROM.

You'll usually create FrameMaker documents from *templates*—documents that contain the page layout, text formats, and other properties you want. For this tour, you'll use three documents—chapters of a book about print publishing—that were created from the same template.



During this tour, you'll save documents as you work on them, so before beginning, you should make a copy of the folder containing the tour documents. That way, the original files will be available if anyone else wants to take the tour, or if you want to take it again yourself.

1 Make a copy of the Tour folder in the FrameMaker folder. If you're using a UNIX system, enter **copymakertour** in a UNIX window and press Return. This copies the Tour folder to your home directory.

All the documents you'll use during the tour are in the Tour folder. If someone has already overwritten the original files, you'll need to reinstall them.

***Note:** If you're using the International English version of FrameMaker on a UNIX system, enter the following command in a UNIX window:*
copymakertour -l ukenglish
(The l *in* **-l** *above is a lowercase* L.*)*

2 Start FrameMaker. If you need help, see the FrameMaker *Getting Started* guide for startup instructions.

3 Do one of the following:

- (Windows and Macintosh) Choose File > Open.
- (UNIX) Click Open in the main FrameMaker window.

4 Open the Chapter2.fm file in your copy of the Tour folder.

Notice that, even though you opened the Chapter2.fm file, the title at the top of the page indicates that this is Chapter 1. We'll fix that later in this tour.

Document windows

You'll begin your tour by changing the display.

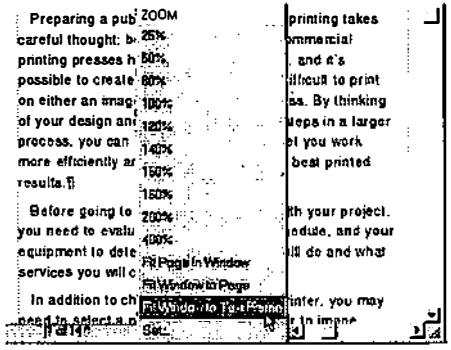
1 Choose View > Text Symbols. Nonprinting symbols such as the ends of paragraphs (¶), markers (⊤), and tab symbols (⟩) appear.

2 Choose View > Borders. Nonprinting borders appear around the area in which text appears.

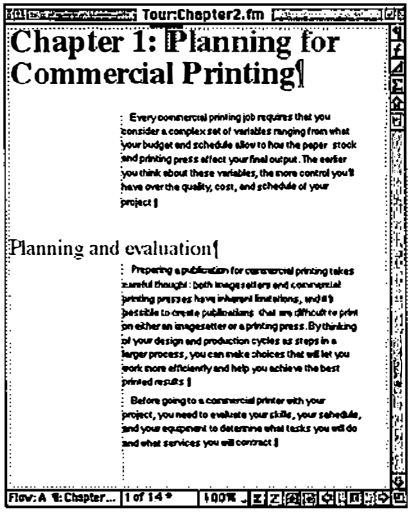
3 If the text appears too small to read, zoom in to 120% by clicking the Zoom In button (🔍) in the status bar.



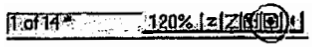
4 At the bottom of the document window, choose Fit Window to Text Frame from the Zoom pop-up menu.



The document window changes size to fit the area in which document text appears.



5 At the bottom of the document window, click the Next Page button (▣) in the status bar to display page 2.

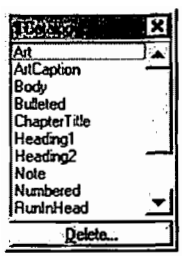


Predefined formats

The easiest way to format text is by using predefined formats stored in a document. These formats are stored in two catalogs: the Paragraph Catalog, which contains formats for entire paragraphs, and the Character Catalog, which contains formats you can apply to words or phrases within paragraphs.

First you'll change a bulleted list to a numbered list; then you'll add an item to the list.

1 On the right side of the document window, click the Paragraph Catalog button (¶) to display the Paragraph Catalog. (If the catalog covers part of the document window, drag it out of the way.) The predefined paragraph formats stored in the document appear in the catalog.

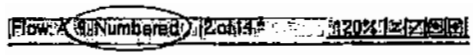


Paragraph Catalog

2 Select all three items in the bulleted list on page 2. You don't need to select all of the first and last items; drag from anywhere in the first item to anywhere in the last item.

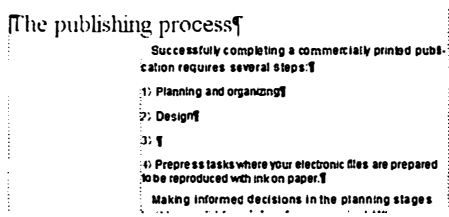
3 Click Numbered in the Paragraph Catalog. You may need to enlarge the catalog or scroll down in it to see the item you want.

The bullets change to numbers, and the name of the paragraph format (called its *tag*) appears in the status bar at the bottom of the document window.



Paragraph tag appears in status bar.

4 Click to the right of the second item in the list ("Design") to place the insertion point at the end of the paragraph and press Return. A new numbered item is inserted, and the subsequent item is renumbered from 3 to 4.

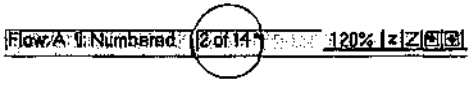


5 Type **Content development.**

6 Choose View > Text Symbols to turn off the display of text symbols. Neither the text symbols nor the dotted text frame border will appear when the document is printed.

Next, you'll change a body paragraph to use a special Note format.

7 At the bottom of the document window, click the Page Status area. Then type **10** in the Page Number text box and click Go.



Page Status area

8 Click anywhere in the paragraph that begins "Be prepared to" (above the heading "Scanning and Color Correction").

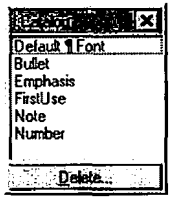
9 Click Note in the Paragraph Catalog. The Note format includes lines above and below the paragraph, and the word *Note* at the beginning of the paragraph.

10 Close the Paragraph Catalog.

Now you'll change the format of just part of a paragraph.

11 Click the Next Page button (⊡) in the status bar to display page 11.

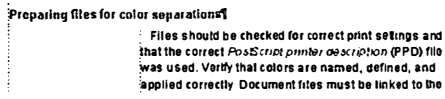
12 On the right side of the document window, click the Character Catalog button (*f*) to display the Character Catalog. The predefined character formats stored in the document appear in the catalog. The FirstUse character format is intended to emphasize technical terms when they're first used and defined.



13 Double-click "PostScript" in the first full body paragraph on page 11 to select it, and then Shift-click "description" (located two words to the right) to select the entire phrase.

14 Click FirstUse in the Character Catalog.

15 Click anywhere in the document window to deselect the text. The words appear in color and in italic.



16 Close the Character Catalog.

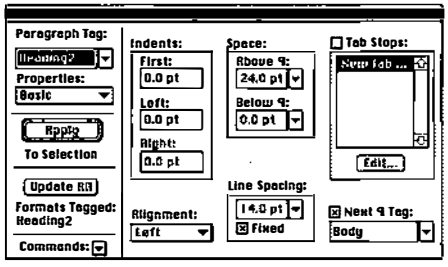
Paragraph formatting

Now you'll change the format of all the second-level headings in the chapter. To do so, you'll change the format stored in the Paragraph Catalog.

1 Click in the "Preparing files for color separations" heading on page 11.

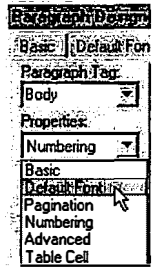
2 Choose Fit Window to Page from the Zoom pop-up menu (120%) in the status bar at the bottom of the document window to see the entire page.

3 Choose Format > Paragraphs > Designer. The Paragraph Designer appears, showing the format properties of the current paragraph. If the Paragraph Designer obscures the document window, drag it out of the way.



You'll change just two properties. First you'll increase the font size. Then you'll place the headings beside the body text. (An area for the side heads has already been set up in the file.)

4 Choose Default Font from the Properties pop-up menu in the Paragraph Designer. On Windows, you can just click the Default Font tab in the designer.



5 Choose "12 pt" from the Size pop-up menu and click Update All on the left side of the designer. All the Heading2 paragraphs in the document, and the Heading2 format in the Paragraph Catalog, are changed to 12-point text.

6 Choose Pagination from the Properties pop-up menu in the Paragraph Designer. In Windows, you can just click the Pagination tab in the designer.

7 In the Format area, click Side Head and then click Update All. (Don't choose a different option from the Alignment pop-up menu.) All the Heading2 paragraphs move into the side-head area at the left side of the page.

8 Close the Paragraph Designer.

9 Choose File > Save to save the document and leave the document open. Notice that the asterisk is removed from the status bar when you save the file.

Cross-references

You can insert cross-references to information elsewhere in the same document or in a different document. You don't need to type the text of the cross-reference, and you don't need to edit that text when headings and page numbers change. FrameMaker can automatically update the cross-references.

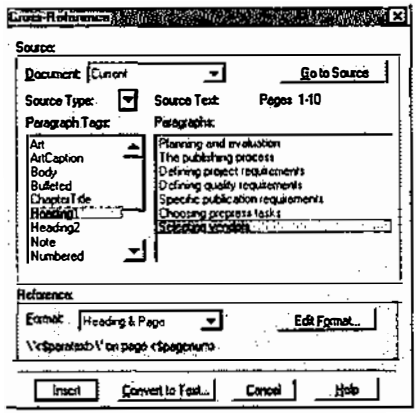
1 Display page 3 in the Chapter2.fm file.

2 Click at the end of the last body paragraph on the page (ending with "so that they can assist you in planning"). Then type **For details, see** and type a space.

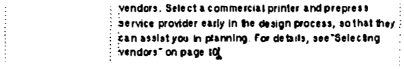
3 Choose Special > Cross-Reference.

4 Because you're going to insert a cross-reference to a Heading1 paragraph, select Heading1 in the Paragraph Tags scroll list. The Heading1 paragraphs appear in the Source Text scroll list.

5 Click "Selecting vendors" in the Source Text scroll list and make sure that Heading & Page is chosen in the Format pop-up menu. The format specifies the form of the cross-reference (in this case, that both the heading text and the page number will appear in the cross-reference).



6 Click Insert. The cross-reference appears at the insertion point.



7 Type a period.

8 Choose File > Close. When prompted, save your changes.

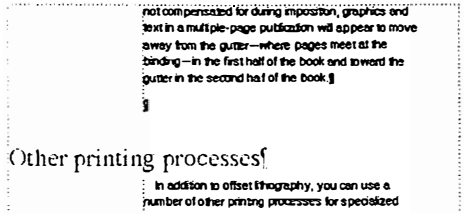
Graphics

You can create illustrations with the FrameMaker drawing tools, or you can use them simply to annotate illustrations that you import from other applications.

First, you'll import a graphic.

1 Open the Chapter1.fm file and display page 23.

2 Click at the end of the body paragraph at the top of the page (ending with "the second half of the book"), and press Return.



3 On the right side of the document window, click the Paragraph Catalog button (¶) to display the Paragraph Catalog.

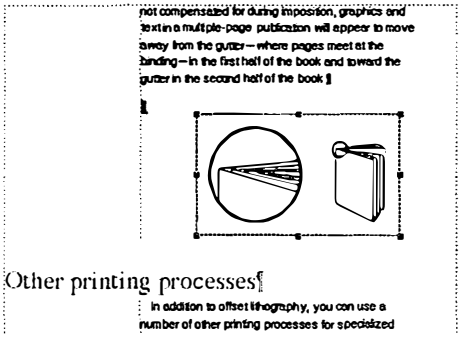
4 Click Art in the Paragraph Catalog. The paragraph format tagged Art is designed to add an appropriate amount of space above and below illustrations.

5 Close the Paragraph Catalog.

6 Choose File > Import > File, select the Graphic.tif file in the Art folder (within the Tour folder), and click Import.

7 To specify the size of the graphic, enter 144 in the Custom dpi text box and click Set. The imported graphic appears in an anchored frame—a frame that moves along with the surrounding text—below the empty paragraph. Handles appear

around the anchored frame to indicate that the frame is selected. Some of the text below the insertion point moves to the next page.



For the graphic to appear in the correct position, you'll need to change the properties of the anchored frame. You can position the anchored frame in several ways; this time, you'll use a shortcut that quickly places the anchored frame in the paragraph and resizes the anchored frame so the graphic just fits inside it. (This is called *shrink-wrapping*.)

8 With the anchored frame still selected, press Esc m p. The graphic now appears with the correct spacing above and below.

9 Choose Graphics > Snap to turn off Snap. (If Snap is already off, don't turn it on.) You can now move objects without having them snap to an invisible snap grid.

Now you'll add a line to the drawing.

10 Click the frame border to select the frame, and choose 200% from the Zoom pop-up menu (100%) in the status bar. (In Windows, you may need to scroll down to see the status bar.)

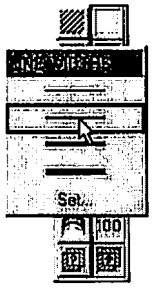
11 Click the Tools button (◢) at the right side of the document window to display the Tools palette. (If the Tools palette obscures the graphic, move the palette out of the way.) The Tools palette contains the drawing tools and drawing properties.



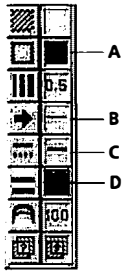
You'll add a line to make the connection between the two circled items in the graphic.

12 Click the Line tool (╲) on the Tools palette. The Line tool is highlighted.

13 Choose the second line thickness from the Line Widths pop-up menu on the Tools palette.

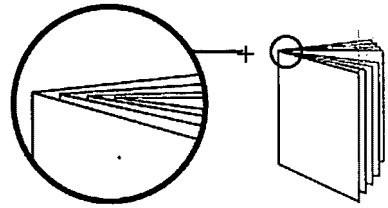


14 Choose the remaining drawing properties shown in the following illustration.



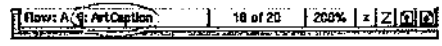
A. Pen pattern = Black B. Line end = No arrows
C. Solid line D. Color = Red

15 Place the pointer on the right side of the large red circle and Shift-drag to the right, to the edge of the small circle. Holding down Shift while you drag constrains the line to horizontal.



Finally, you'll type a caption for the graphic.

16 Click to the right of the anchored frame to place the insertion point in the Art paragraph and press Return. Because the format for the Art paragraph specifies the format to be used when you press Return, the new paragraph uses the ArtCaption paragraph format, as indicated in the status bar.



17 Type **Saddle-stitched binding.**

18 Choose 120% from the Zoom pop-up menu. Then close the Tools palette, and save and close Chapter1.fm.

Tables

You can place information in tables to organize the information and make it more readable. A table design, including its ruling and shading, is stored

in a table format in a document's Table Catalog, just as text formats are stored in a document's Paragraph Catalog and Character Catalog.

You'll add a simple table to Chapter 2 that summarizes some information about recommended line screens and pixel density for various types of publications.

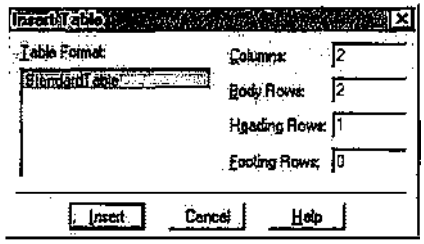
Table 1-1: Recommended print settings

	Line Screen	Dots per Inch
Newspapers	85	128-170
Four-color magazines	133	200-266
Art books	177	266-354

1 Open the Chapter2.fm file and display page 10. (You can open the file by choosing it from the bottom of the File menu.)

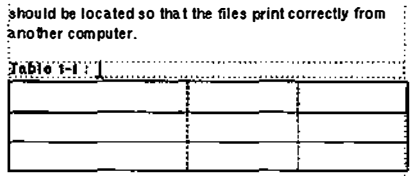
2 Place the insertion point at the end of the paragraph above the heading "Selecting vendors."

3 Choose Table > Insert Table. The Insert Table dialog box shows that only one table format (StandardTable) has been defined for this document.



You can easily change the number of rows and columns as you work on your table, but because we want the table to contain three columns, you'll make that change before creating the table.

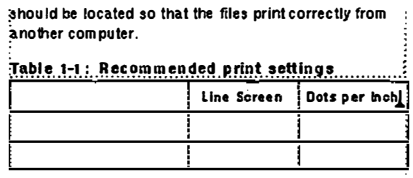
4 Change the value in the Columns text box to 3 and click Insert. A new empty table that uses the StandardTable table format appears at the insertion point, and the insertion point moves to the table title.



Next, you'll fill in the title and the heading row.

5 Type **Recommended print settings.**

6 Press Tab twice to move the selection to the second cell in the heading. Then type **Line Screen**, press Tab, and type **Dots per Inch.** The headings use the TableColumnHead paragraph format, which is stored in the document's Paragraph Catalog.



Now you'll fill in the body rows of the table.

7 Press Tab to move the selection to the first body cell. Then type **Newspapers**, press Tab, type **85**, press Tab, and type **128-170**. Notice that the first cell in the row uses a different paragraph format than the other cells. (Its contents are left aligned, while the contents of the other cells are centered.) The paragraph formats used in the table are stored as part of the table's format.

8 Press Tab to move the insertion point to the first cell in the next row. Then type **Four-color magazines**, Press Tab, type **133**, press Tab, and type **200-266**.

should be located so that the files print correctly from another computer.

Table 1-1: Recommended print settings

	Line Screen	Dots per Inch
Newspapers	85	128-170
Four-color magazines	133	200-266

The finished table will need one more row.

9 Press Control+Return to add a row below the current row.

should be located so that the files print correctly from another computer.

Table 1-1: Recommended print settings

	Line Screen	Dots per Inch
Newspapers	85	128-170
Four-color magazines	133	200-266

10 Type **Art books**, press Tab, type **177**, press Tab, and type **266-354**.

You can edit the table in a number of ways—you can edit the contents of cells, and you can add, move, and delete rows and columns. Since your table is complete, you'll stop working on it for now.

11 Save and close Chapter2.fm.

Books

You can group separate documents using a FrameMaker book file—a special file that ties several related files together so you can work with them as a unit. For example, you can change the page layout throughout the book, and you can generate a single table of contents and index for the book.

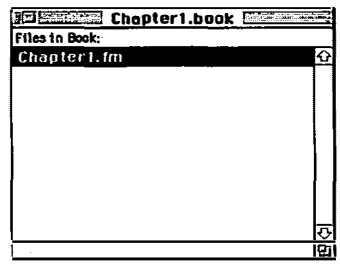
In this section, you'll set up a book for the three chapters in the Tour folder. In the following sections, you'll change the page layout and then generate a table of contents and index for the book.

1 Open the Chapter1.fm file.

2 Choose File > Generate/Book.

3 Click New Multifile Book and click Generate.

A book window appears. It contains one filename, Chapter1.fm (the file from which the book was created). The default name of the book file is Chapter1.book.



4 Close Chapter1.fm.

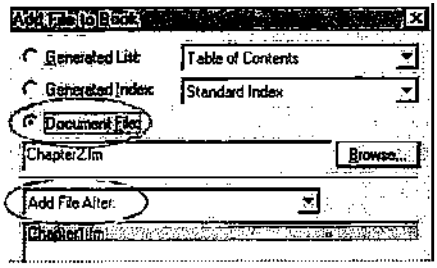
Next you'll save the book using a suitable name.

5 Choose File > Save As, and save the book file as SampleBook in the folder that contains the chapter files.

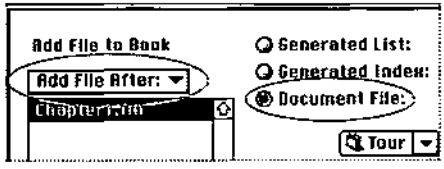
Now you'll add the second chapter to the book.

6 Choose File > Add File.

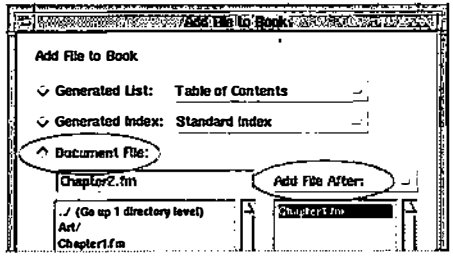
7 Click Document File and choose Add File After.



Windows



Macintosh



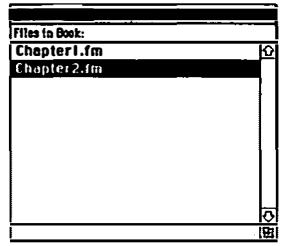
UNIX

8 Do one of the following:

• (Windows) Click Browse, navigate to the folder containing the chapter files if necessary, and select Chapter2.fm. Then click Add to redisplay the Add File to Book dialog box.

• (Macintosh and UNIX) Select Chapter2.fm in the Document File scroll list.

9 Click Add. Chapter2.fm appears in the book window.



Now you'll add the last chapter to the book.

10 Do one of the following:

• (Windows) Click Browse, navigate to the folder containing the chapter files if necessary, and select Chapter3.fm. Then click Add.

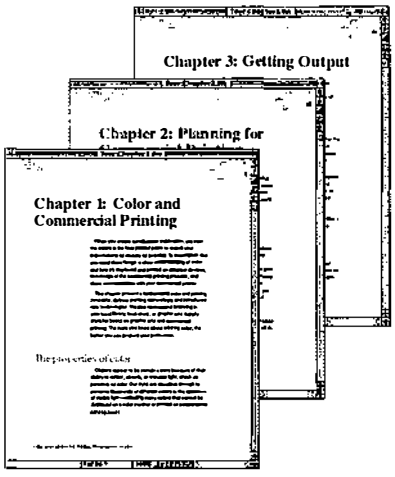
• (Macintosh and UNIX) Select Chapter3.fm in the Document File scroll list.

11 Click Add and then click Done.

Finally, you'll update the book's page numbering.

12 In the book window, choose File > Generate/Update. The empty scroll lists in the dialog box indicate that the book file doesn't contain any generated files. You'll add them later.

13 Click Update. FrameMaker updates the page numbers, chapter numbers, and cross-references throughout the book.



14 To see the changes, double-click Chapter2.fm in the book window to open the chapter. Notice that the chapter number is now 2 and that the first page in the chapter is now 27.

15 Display page 36. Notice that the table is now numbered 2-1.

16 Close the Chapter2.fm file, saving changes if prompted to do so. Save the book file, but leave the book window open.

Importing formats

With FrameMaker, layout possibilities are practically unlimited. For example, you can format document text in one column or several; you can display headings as side heads or run them into paragraph text; and in a multicolumn document, headings can span columns if you want.

You'll import the formats from a different template to change the chapters in the book to a two-column layout.

1 Open the TwoColumn.fm document. The document is an empty two-column template that contains all the formats you need. You'll import the new layout and formats from this template.

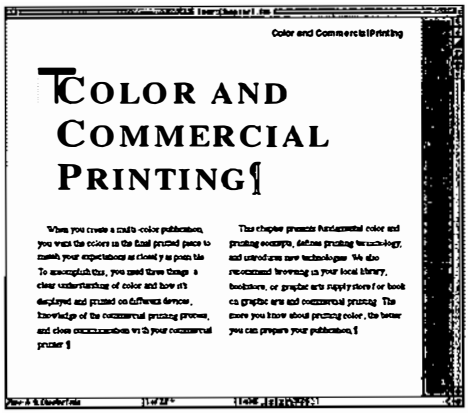
2 Do one of the following:

- (Windows and Macintosh) Click the book window to make it active, and then choose File > Import > Formats.
- (UNIX) Choose File > Import > Formats in the book window.

3 Make sure that TwoColumn.fm is chosen in the Import from Document pop-up menu.

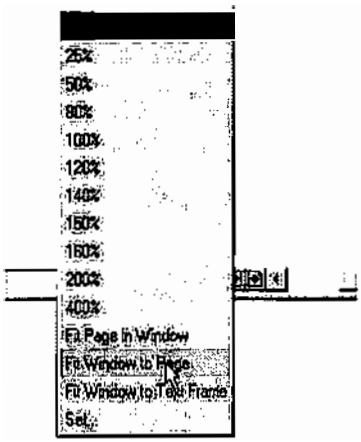
4 Make sure all the options in the Import and Update area are selected, and then click Import. All the formats in each chapter of the book are updated from the template. (This may take a few moments.)

5 Double-click Chapter1.fm in the book window to open the first chapter in the book. Notice that the chapter now uses the new layout and formats.



Because the new layout uses a different page size from the previous layout, you'll resize the window to fit the page.

6 Choose Fit Window to Page from the Zoom pop-up menu in the status bar.



7 Close the TwoColumn.fm file and save the Chapter1.fm file.

Page layout

The page design of your document is determined by *master pages*—special pages that contain the column layout and any background information (such as page headers and footers) that appears on your document's body pages. As you edit documents, FrameMaker adds pages automatically when you need them, alternating left and right pages in double-sided documents. Occasionally, though, a page may need some special treatment. For example, the first page of your chapter will use a different page design. In such a case, you use a *custom master page*—a master page designed for a specific purpose.

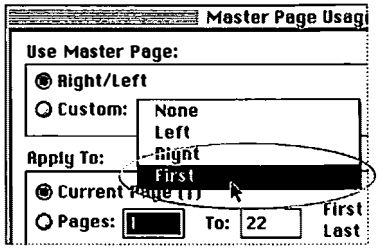
A custom master page for the first page of a chapter has already been created in your chapter file. You'll assign that custom master page to the first page of each chapter to change its page design.

1 Make sure the first page of Chapter1.fm is displayed.

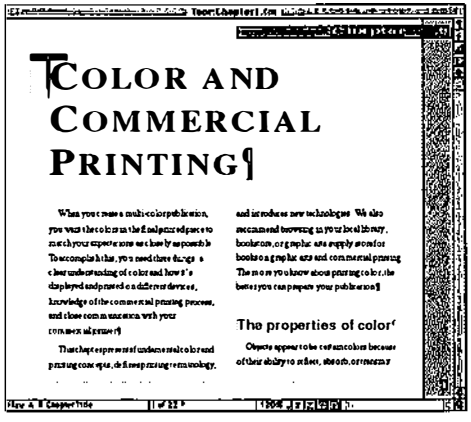
2 Do one of the following:

- (Windows and Macintosh) Click the Chapter1.fm window to make it active, and then choose Format > Page Layout > Master Page Usage.
- (UNIX) Choose Format > Page Layout > Master Page Usage in the Chapter1.fm window.

3 Choose First from the Custom pop-up menu.



4 Click Apply. The first page now uses a page design that differs from the design of the other pages. (The chapter number now appears at the top of the page, cut out of a green rectangle.)



5 Save and close the chapter.

6 If you like, repeat steps 2 through 5 for the Chapter2.fm and Chapter3.fm files.

Creating a TOC and index

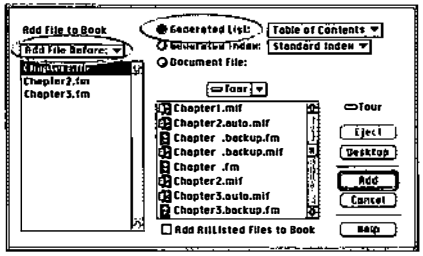
In FrameMaker, a table of contents (TOC) is generated from the text in a document or book; an index is generated from markers you insert in documents. You can easily update both tables of contents and indexes whenever you revise the documents they're based on.

Creating a table of contents or index is a two-step process. You set up the file in the book window by specifying the type of information the file will contain, and then you generate the file.

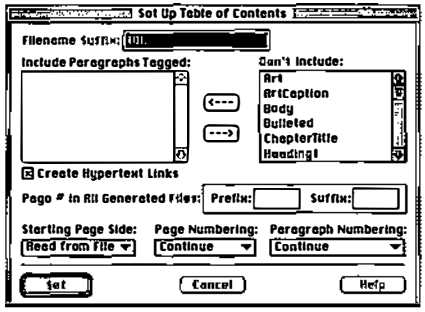
To begin, you'll set up the table of contents as the first file in the book.

1 Select Chapter1.fm in the book window and choose File > Add File.

2 Click Generated List. Then choose Add File Before and click Add.



The Set Up Table of Contents dialog box appears so you can specify the headings you want to include in the table of contents.

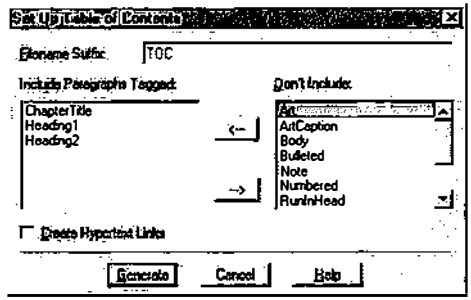


You'll include the chapter titles and two levels of headings.

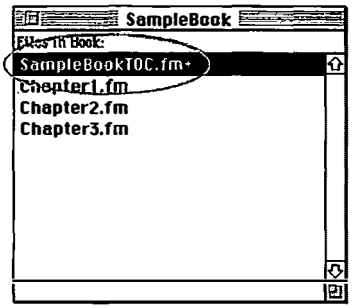
3 Select ChapterTitle in the Don't Include scroll list and click the left arrow (<---) to move ChapterTitle to the Include Paragraphs Tagged scroll list.

4 Double-click Heading1 in the Don't Include scroll list to move it to the Include Paragraphs Tagged scroll list. (Double-clicking an item in a list moves it to the other list.)

5 Double-click Heading2 to move it as well.



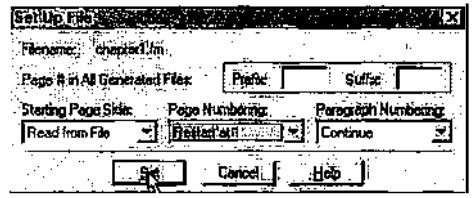
6 Click Set, and then click Done. The filename for the table of contents appears in the book window.



The table of contents is numbered with Roman numerals. Because the chapters will be numbered separately from the table of contents, you'll need to change the numbering for the first chapter.

7 Select Chapter1.fm in the book window and choose File > Set Up File.

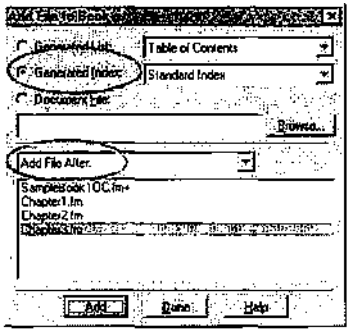
8 Choose Restart at 1 from the Page Numbering pop-up menu and click Set.



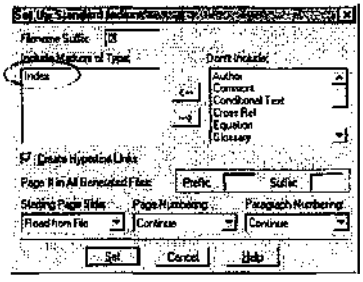
Now you'll set up the index as the last file in the book.

9 Select Chapter3.fm in the book window and choose File > Add File.

10 Click Generated Index. Then choose Add File After and click Add.



The Set Up Index dialog box indicates that markers of type Index will be included in the index.



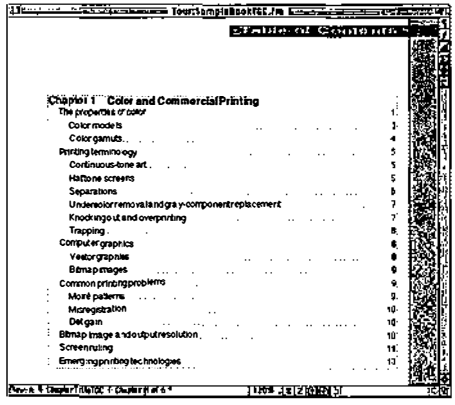
11 Click Set and then click Done.

Finally, you'll generate the table of contents and index. Because the index markers have already been inserted in the chapters, you can just generate the index from the markers. FrameMaker will put the table of contents and index entries into the empty files that are already in the Tour folder, and will use the formats that are stored there (such as a different page design, paragraph formats for the entries, and page numbering style).

12 Choose File > Generate/Update.

13 Click Update. FrameMaker generates the table of contents from the chapter titles and headings and the index from the index markers. (This may take a few moments.)

14 In the book window, double-click the filename of the table of contents. The formatted table of contents appears.



15 Double-click the filename of the index in the book window. The formatted index appears.

16 Close the table of contents and index, and then save and close the book file.

Going online

Hypertext Markup Language (HTML) and Portable Document Format (PDF) are popular formats used on the World Wide Web and in company-wide Web sites called *intranets*. You can easily create HTML and PDF documents from your FrameMaker documents and books.

First, you'll create an HTML file from a chapter. If an Internet browser such as Netscape Navigator or Microsoft Internet Explorer is installed on your system, you can use it to open the HTML file and browse through it.

1 Open Chapter3.fm.

2 Choose File > Save As.

3 Change the filename extension to .html and do one of the following:

• (Windows) Choose HTML from the Save as Type pop-up menu.

• (Macintosh and UNIX) Choose HTML from the Format pop-up menu.

4 Make sure that you're saving to the same folder that contains the chapters, and then click Save. FrameMaker takes a few moments to convert the chapter to an HTML file and to save it on the disk.

When FrameMaker converts the chapter to HTML, it converts cross-references to links and preserves illustrations and tables.

5 Save and close Chapter3.fm.

6 If an Internet browser is installed on your system, open the HTML file with it. (The HTML file is in the same folder as the files you've been working with, and it has an extension of .html.)

Now you'll create a PDF file from the book file. If Adobe Acrobat Reader or Adobe Acrobat Exchange is installed on your system, you can then open the PDF file and browse through it.

Note: *Adobe Acrobat Distiller must be installed on your system. On Macintosh systems, you must be using version 8.3 or later of the Adobe PSPrinter printer driver.*

7 Open the book file.

8 Choose File > Save As.

9 Do one of the following:

• (Windows) Choose PDF from the Save as Type pop-up menu.

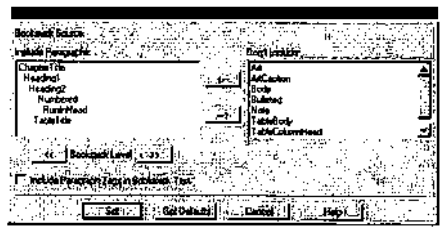
• (Macintosh and UNIX) Choose PDF from the Format pop-up menu.

10 Do one of the following:

• (Windows) Change the filename extension from .book to .pdf.

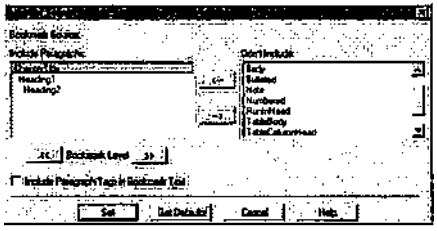
• (Macintosh and UNIX) Add a filename extension of .pdf.

11 Click Save. The Acrobat Setup dialog box appears so you can specify the bookmarks you want to include.



12 Double-click Numbered in the Include Paragraphs scroll list to move it to the Don't Include list.

13 Move other items to the Don't Include scroll list until only ChapterTitle, Heading1, and Heading2 appear in the Include scroll list.



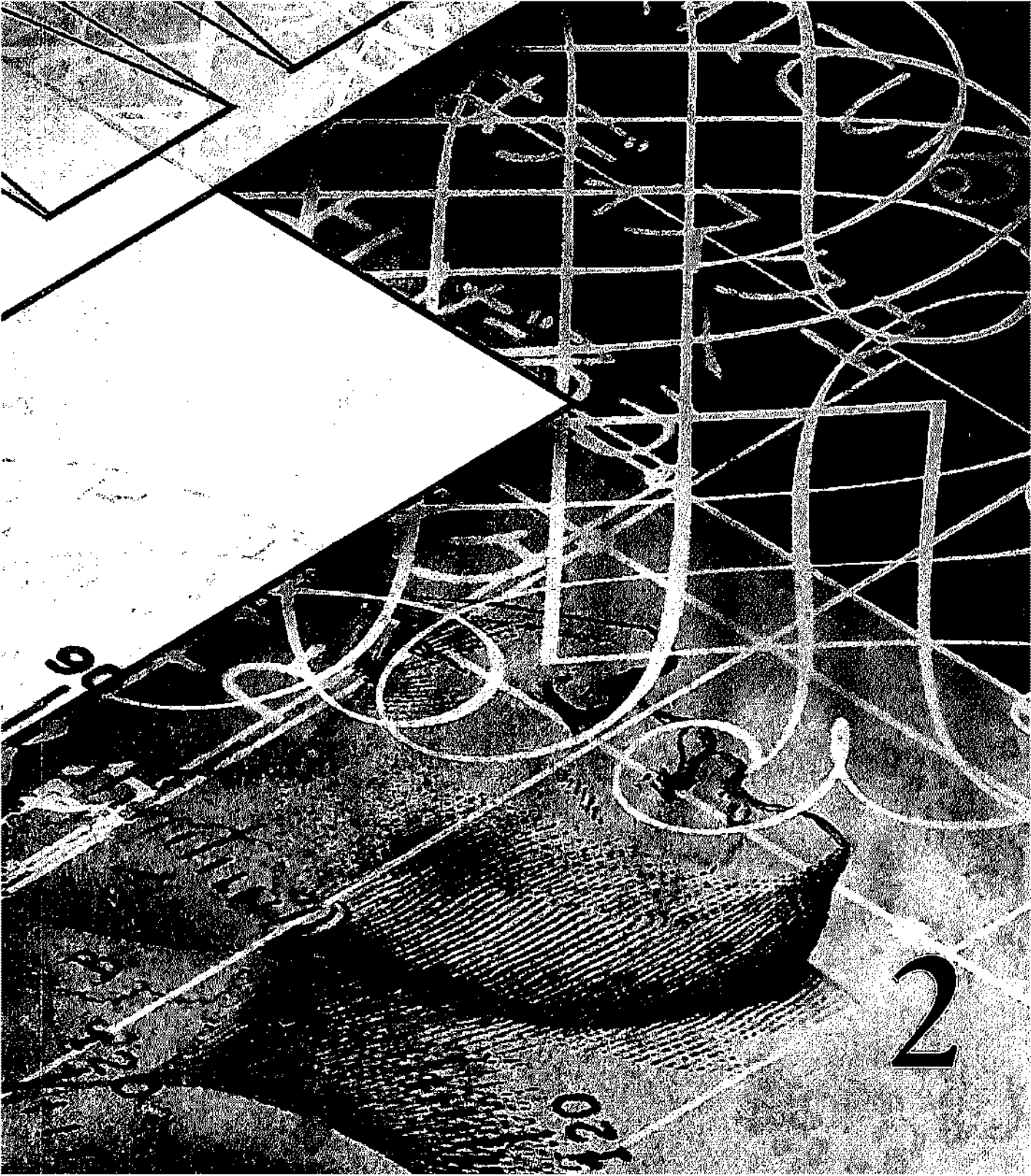
14 Click Set. FrameMaker creates a PostScript file and then starts Adobe Acrobat Distiller, which in turn creates the PDF file. This process takes a few moments.

15 Close the book file.

16 If Adobe Acrobat Reader or Adobe Acrobat Exchange is installed on your system, open the PDF file with it. (The PDF file is in the same folder as the files you've been working with, and it has an extension of .pdf.)

Moving on

Congratulations, you've finished the tour! Go ahead and work with your own documents as described in the following chapters, or try some of the lessons contained in the Tutorials folder.


2



Chapter 2: Working with FrameMaker Documents

You'll need to know the basic procedures that apply to working with any FrameMaker document, including how to create and open documents, choose cross-platform compatibility options, and print, save, and close documents.

This chapter covers these basics and provides information on using the document window. For example, it discusses how to use the document window guides, zoom in and out, and display pages. It also describes how to use shortcuts for frequently used FrameMaker commands.

Creating documents

You can create a document in the following ways:

- You can use a template that defines how a document looks.
- You can start with the equivalent of a blank piece of paper.

When you create a document, a document window appears (see page 32).

Creating documents from templates

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

FrameMaker comes with standard templates for letters, memos, reports, newsletters, outlines, books, and viewgraphs. However, you can use any document as a template. If the document contains text and graphics, you can delete them and then insert your own.

To create a document from a template:

1 Choose File > New. On UNIX systems, you can also click New in the main FrameMaker window.

2 Navigate to the document you want to use as a template (either the standard ones or your own). If you want to use a standard template—one in the FrameMaker Templates folder—but the contents of another folder appear in the New dialog box, navigate to the Templates folder in one of the following locations:

- (Windows and Macintosh) The FrameMaker folder

Note: *On the Macintosh, the Templates folder may not appear when you choose File > New if you have set the General Controls control panel to have applications automatically open the last folder used when opening or saving a document.*

- (UNIX) The fminit/*language*/Maker folder within the FrameMaker installation folder (In the path above, replace *language* with the name of the language you're using—for example, usenglish or ukenglish.)

3 Select a template and click New (Windows and Macintosh) or Create (UNIX). The new, untitled document contains the formats and content from the template.



To view information about the standard templates, choose File > New, click Explore Standard Templates, and select a template in the scroll list. After viewing the information, click Create to create an empty document from the selected template, or click Show Sample to view a document that contains sample text and graphics.

Creating documents from blank paper

If no standard template or other existing document looks the way you want, you can use a blank paper document. A document created from blank paper includes a few basic formats. You can use these formats as is, change them, or create new ones.

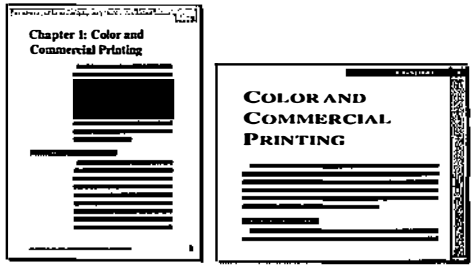
You can customize the document FrameMaker uses to create portrait, landscape, and custom documents. For details, see "Changing templates for blank paper and text files" on page 293.

To create a document from blank paper:

1 Choose File > New. On UNIX systems, you can also click New in the main FrameMaker window.

2 Do one of the following:

- To create a standard one-column document, click Portrait or Landscape.



Examples of a portrait and a landscape document

- To create a document with exactly the page size, margins, and number of columns you want, click Custom.

3 If you clicked Custom, do the following and then click Create:

- Choose a preset page size or enter the width and height for the pages.
- Enter the number of columns and a gap. The gap is the space between columns.
- Enter values for the margins, as measured from the edge of the page.
- Select a pagination option. If you select Double-Sided, choose Right 1st Page or Left 1st Page from the pop-up menu to determine the side on which the document starts.
- Choose the display units for the document. Display units are the units that FrameMaker uses when it measures distances in your document. These display units appear in dialog boxes and in the document window's status bar. For information, see "Changing the default units of measurement" on page 35.

Opening documents

In addition to FrameMaker documents, you can open text files, files in MIF (Maker Interchange Format), and files in MML (Maker Markup Language). You can also open files created in other applications, such as Microsoft Word, if the required filter is installed. Much of the file's formatting is retained when you open the file. For information on filters, see the online manual *Using Filters.*

When you open a document, a document window appears (see page 32).

To open a file:

1 Choose File > Open. On UNIX systems, you can also click Open in the main FrameMaker window.

2 Locate the document you want to open and click Open. If FrameMaker displays an alert message or a dialog box before opening the document, see the following sections.

Opening a document usually updates graphics imported by reference, text insets, cross-references, and system variables (if there are any). For information on preventing this automatic updating, see "Opening documents without updating references" on page 31 and "Suppressing automatic updating" on page 163.



In Windows and on UNIX systems, you can limit the files listed in the Open dialog box by entering wildcards (regular expressions in UNIX) in the Open File Named text box. For example, if you enter ***.new**, you see any folder or document that has the extension *.new*. If you enter **Chapter?**, you see any folder or document whose name consists of *Chapter* followed by a single character. To redisplay the entire contents of the folder, enter * in the text box.

Opening recently opened documents

The bottom of the File menu lists the five documents you last opened or saved with the Save As command. You can open a listed document by choosing its filename.

Messages and dialog boxes that may appear

If one of the following alert messages or dialog boxes appears, you must click OK or provide more information before continuing.

Fonts or font metric information If you click OK to continue, new fonts replace the missing ones. As a result, line breaks, page breaks, and the width of text lines may change.

The names of unavailable fonts are preserved by default. Even if you save a document with substitute fonts, the original fonts will reappear when you open the document on a computer that has the fonts installed.

Missing imported graphics Skip the missing graphic or specify a new location for it (see page 382).

Missing text insets Click OK to continue opening the file. You can locate the insets later (see page 380).

Unresolved cross-references Click OK to continue opening the file. You can resolve the cross-references later (see page 164).

Unknown file type (Windows and UNIX) Select a file type in the list and click Convert to continue opening the document.

Opening text files

Text-only files do not contain graphics or formatting information. In Windows and on UNIX systems, when you open a text-only file, you may be asked to confirm that it is a text file.

To open a text file:

1 Open the file (see page 29).

2 Do one of the following:

• To break the text into paragraphs only at blank lines, click Merge Lines into Paragraphs. Use this option for a paragraph-oriented text file such as a file containing document text.

• To break the text into paragraphs at the end of each line, click Treat Each Line As a Paragraph. Use this option for a line-oriented text file such as a file containing computer code.

3 If the file was saved on a system whose text encoding differs from yours, choose the appropriate encoding from the Text Encoding pop-up menu. If you choose an incorrect encoding, FrameMaker may replace some characters in the file.

4 Click Read. The text appears in a document that is created from a special template. You can customize the template so that documents created from text files are formatted differently (see page 293).

Opening documents that are in use

FrameMaker helps you avoid making changes to documents that are already opened by others.

On the Macintosh, only one person at a time can use a file that's stored on a Macintosh file system. If you try to open a file already in use, an alert message appears.

In all other cases, a file named *filename*.lck (where *filename* is the name of the open document) is created every time you open a document. This lock file is in the same folder as the original document and is removed when you close the document.

In Windows, you can turn off file locking. For details, see "Using files across platforms" on page 45.

If you try to open a document that's already open and if you have write permission to the document, a dialog box appears, showing the name of the document, who opened it last and when, and the computer on which it is open. You might also see this dialog box after a system crash, when you open a document you were last using.

To open a document that's already in use:

1 Open the file (see page 29).

2 Do one of the following:

• If you want to look at the file but not change it, click Open for Viewing Only, and then click Continue. The document appears in View Only format.

- If you want to edit a copy of the file, click Open Copy for Editing, and then click Continue.
- If you want to edit the file and you know that no one else is using it, click Reset File Lock and Open, and then click Continue. Use this option after a system crash, to open a document that was open at the time of the crash.

Opening view-only documents (Macintosh)

Double-clicking the Finder icon of a document saved in View Only format opens the document in FrameViewer (if available), not in FrameMaker. To open a view-only document using FrameMaker, use File > Open.

Opening MIF and MML files as text

MIF is an ASCII format that lets you exchange information between FrameMaker and other applications. MML is a markup language you can use to create simple FrameMaker documents with any text editor.

When you open a MIF file or an MML file, it is normally opened in Document or Book format. However, you can also open the file as text so that you can see and edit the MIF or MML commands.

To open a MIF or MML file as text:

1 Choose File > Open and select the file you want to open.

2 Do one of the following:

- (Windows) Control-click Open.
- (Macintosh) Option-click Open.
- (UNIX) Shift-click Open.

Opening documents without updating references

A document can open slowly if it contains many cross-references to other files, large imported graphics, or many text insets. You can open a document faster by bypassing the update of imported graphics, cross-references, and text insets. However, if you use this method to open documents, keep in mind that FrameMaker will not warn you about missing items or unresolved cross-references. For this reason, you should occasionally open a document in the normal way.

To open a document without updating references:

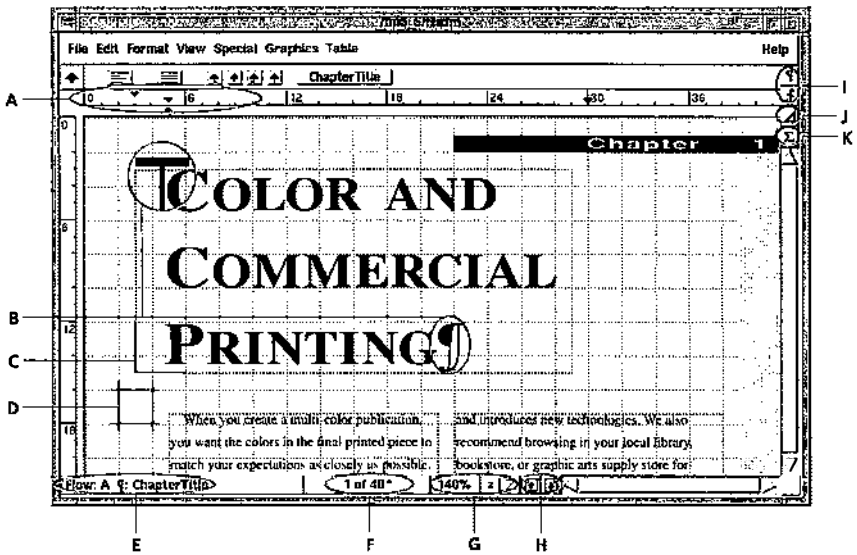
1 Choose File > Open and select the file you want to open.

2 Do one of the following:

- (Windows) Control-click Open.
- (Macintosh) Option-click Open.
- (UNIX) Shift-click Open.

After the file is open, FrameMaker will import and display graphics as needed on a page-by-page basis. You can manually update cross-references and text insets by using Edit > Update References. If the page display is too slow, reopen the document in the usual way and use the procedures on page 39 for displaying pages faster.

DOCUMENT WINDOW The document window contains guides and controls that help you work efficiently.



A The top *ruler* contains paragraph indent and tab stop symbols. When you draw, move, or resize an object, both the top and side rulers include guides that indicate the object's current position (see page 35).

B *Text symbols* indicate where paragraphs and text flows end, and show the location of tabs, markers, and other items (see page 35).

C *Borders* define the edges of text frames, graphic frames, table cells, and imported objects (see page 35).

D The *visible grid* provides a visual cue for drawing and arranging objects (see page 35).

E The *status bar* contains information about the document. The *Tag area* at the left side shows the current flow, paragraph, and character tags.

F The *Page Status area* shows the current page number and total page count (see page 38).

G *Zoom controls* include buttons for zooming in and out and a pop-up menu for choosing a zoom setting (see page 33).

H *Page buttons* display the next or previous page (see page 38).

I The *Paragraph Catalog* and *Character Catalog buttons* display palettes of predefined text formats (see "Applying predefined formats to text" on page 78).

J The *Tools button* displays the Tools palette, which contains drawing tools and drawing properties (see Chapter 8, "Graphics").

K The *Equations button* displays the Equations palette, which contains commands for inserting, filling in, and manipulating equations (see Chapter 20, "Equations").

Opening files after a system crash

If your system crashes, an automatically saved file will contain recent changes to the file. A file is saved automatically in the following situations:

- If you selected Automatic Save in the Preferences dialog box, autosave files (whose filename contains *.auto*) are created at regular intervals.
- If your system becomes unstable, FrameMaker tries to create a recover file (whose filename contains *.recover*) with your most recent changes.

To reopen a file after a system crash:

1 Open the file you were working on last (see page 29).

2 Do one of the following:

- If a recover file exists, open it when prompted and check whether your latest changes are there. If they are, save the recover file with the same name as the document you were originally working on and then delete the recover file.
- If no recover file exists, open the autosave file when prompted and save it with the same name as the file you were originally working on. The autosave file contains all the changes you made up until the time of the last automatic save. The amount of work lost depends on the time interval you set between saves and when your system crashed.

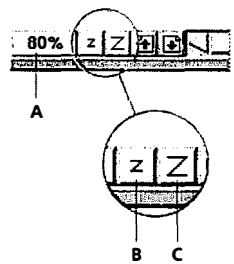
Customizing the document display

You can change the way each document window looks in several ways:

- By zooming in and out
- By displaying window guides: borders, text symbols, rulers, and grid lines
- By changing the commands that appear on the menus
- By changing the preset display units (for example, inches or points) that appear in dialog boxes

Zooming in and out

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



A. Zoom pop-up menu B. Zoom Out button C. Zoom In button

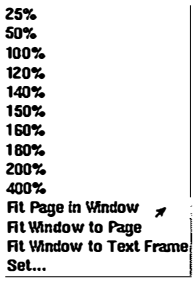
To change the zoom setting:

Do one of the following:

- To magnify text and objects, click the Zoom In button. FrameMaker zooms in on the area of the page containing the insertion point or selection. If

the document doesn't contain an insertion point or a selection, FrameMaker zooms in on the center of the page.

- To decrease the magnification, click the Zoom Out button.
- To display text and objects at a particular magnification, 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 to the size of the page:

Choose Fit Window to Page from the Zoom pop-up menu. If the view options are set to display facing pages, the window is resized to accommodate two pages side by side.

To resize the window to the size of the text frame:

Choose Fit Window to Text Frame from the Zoom pop-up menu.

To change the available zoom settings:

1 Choose Set from the Zoom pop-up menu.

2 Do one of the following:

- To change the available zoom settings, select the percentage you want to change and enter the new percentage. Enter any percentage from 25% to 1600%. The values will be sorted from lowest to highest, so you can enter values in any text box.
- To return to the default percentages, click Get Defaults.

Note: *In Windows and on UNIX systems, you can customize the default zoom settings. For information, see the online manual* Customizing FrameMaker Products.

3 Click Set.

To make 100% zoom match the page size in Windows:

1 Choose File > Preferences.

2 From the Monitor Size pop-up menu, choose the diagonal size of your computer monitor or enter a value, and then click OK.

If screen-to-paper fidelity is not critical, you may want to leave Monitor Size set to Default. This ensures cross-application compatibility, which is especially useful if you frequently edit embedded OLE objects within a document.

Showing and hiding document window guides

You can show the following types of visual guides in the document window:

- Borders around text frames, graphic frames, and imported objects
- Markers, paragraph returns, and other symbols in running text
- Rulers along the top and left side of the window

• A grid of horizontal and vertical lines that provide a visual aid for drawing, placing, and resizing objects

The visible grid lines are independent of the snap grid, an invisible grid you use to align graphic objects and to position paragraph indents and tab stops precisely. For information on using the two grids together, see "Using grids" on page 192.

To show or hide the document window guides:

Do the following:

• To show or hide borders, choose View > Borders.

• To show or hide text symbols, choose View > Text Symbols. The following symbols may appear in the document window.

Text symbol	Meaning
¶	End of paragraph
§	End of flow and end of table cell
⟩	Tab
⊥	Anchored frame and table anchor
⊤	Marker
⟨	Forced return
|	Manual equation alignment point
␣	Nonbreaking space
¬	Discretionary hyphen
–	Suppress hyphenation

• To show or hide rulers, choose View > Rulers.

• To show or hide grid lines, choose View > Grid Lines.

To change the spacing of grid or ruler intervals:

1 Choose View > Options.

2 Choose a new setting from the Rulers pop-up menu or from the Grid pop-up menu, and click Set.

Changing the menu display

You can display a subset of the commands on the menus—quick menus. You can also customize the menus.

To display quick menus:

Choose View > Menus > Quick.

To return to complete menus:

Choose View > Menus > Complete.

To customize menus:

Add, move, or remove menus and commands as described in the online manual *Customizing FrameMaker Products*.

Changing the default units of measurement

Some text boxes in dialog boxes require a unit of measurement (such as points or inches) for the value you enter. You can specify the default units for font size and line spacing (font size units) and for other measurements (display units). The default units of measurement appear after the values in the text boxes. If you enter a value without a unit of measurement, FrameMaker uses the default unit.

To change the preset units:

1 Choose View > Options.

2 Choose a unit from the Display Units and Font Size Units pop-up menus, and then click Set.

To enter different units in a text box:

Enter one of the following abbreviations for the units along with the numeric value:

- **cm** to specify centimeters
- **mm** to specify millimeters
- **"** or **in** to specify inches
- **pc**, **pi**, or **pica** to specify picas
- **pt** or **point** to specify points
- **Q** to specify Q units (for font size and line spacing only)
- **dd** to specify didots
- **cc** or **cicero** to specify ciceros

FrameMaker converts the entry to the preset display units when you click a command button in the dialog box.

For example, if your document's display units are picas and if you want to set a paragraph indent of 1 inch, enter **1"** in the First Indent text box. When you click Apply, the measurement changes to the number of picas that corresponds to 1 inch.

Using command shortcuts

FrameMaker provides the following types of command shortcuts:

- Keyboard shortcuts for all commands (For a list of shortcuts, see the online Help.)
- The context (shortcut) menu, whose commands depend on the location of the pointer
- The QuickAccess bar, which contains commonly used text, graphics, and table editing commands
- The formatting bar, which contains pop-up menus and tab wells that you can use to set text alignment, spacing, and tab stops (see page 79)

Using the context menu

The context (shortcut) menu contains commonly used commands for the item under the pointer—for example, text, a graphic, a table, or the document as a whole (when the pointer is in the margin).

To display a context menu:

Do one of the following:

- (Windows and UNIX) Right-click.
- (Macintosh) Hold down Control while pressing the mouse button.

Using the QuickAccess bar

You can keep the QuickAccess bar open in the work area and click commands as you need them.

To display the QuickAccess bar:

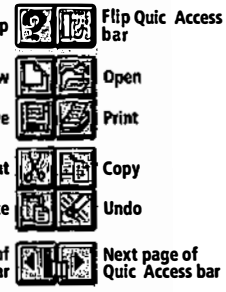
Choose View > QuickAccess Bar.

QUICKACCESS BAR The QuickAccess bar can be arranged horizontally or vertically. It always displays the common commands. In addition, it contains four pages of buttons for graphics, text editing, graphics editing, and table editing.

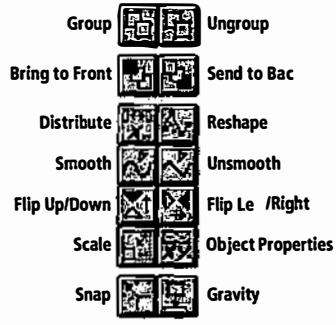


The first 12 buttons (highlighted here) on each page are used for the common commands shown at right.

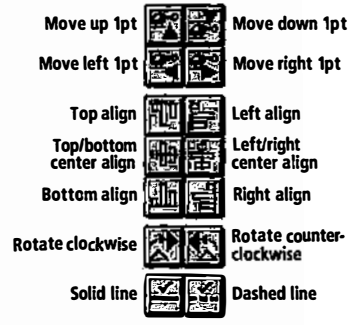
COMMON



GRAPHICS



GRAPHICS EDITING



TEXT EDITING

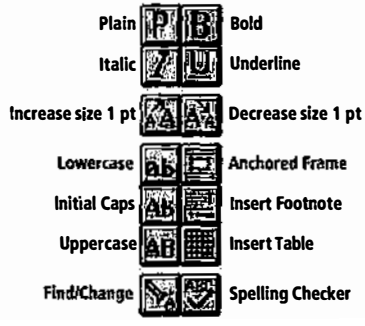
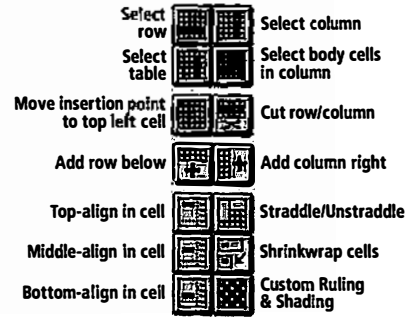


TABLE EDITING



• (UNIX) Choose Help > Context-Sensitive Help or press Help.

2 Move the question mark pointer over an item and click to get Help on that item. You can also type a keyboard shortcut to get Help on the command that corresponds to the shortcut.

To cancel context-sensitive Help when the pointer is a question mark:

Do one of the following:

• (Windows) Press Shift+F1.

• (Macintosh) Press Command+period or Esc.

• (UNIX) Press Control+c.

Saving documents

You can save a document using its current name and location, or save a copy of the document using a different name or location. You can save a document in several formats, including HTML and PDF.

When a document needs to be saved, an asterisk (*) appears in the Page Status area of the status bar.



An asterisk indicates unsaved changes.

To save a document:

1 Do one of the following:

• To overwrite the current version on the disk, choose File > Save.

• To save the file in a different folder or using a different name, choose File > Save As.

2 If you choose the Save As command, or if the file has never been saved, specify the new filename and location. If you want to save the file in a different format, choose the format from the pop-up menu (see the next section).

3 Click Save. If you chose Text Only format, you must specify how to treat the text and tables in the document (see page 41).

To save all open documents:

Hold down Shift and choose File > Save All Open Files.

To return to the saved version of your document:

Choose File > Revert to Saved and click OK.

File formats you can save in

You can use the Save As command to save a file in the following formats.

Document or Book Produces a normal FrameMaker document or book with the smallest file size possible.

MIF Creates a text file containing FrameMaker statements that describe all text and graphics. To avoid overwriting your original document, save the MIF file under a different name. (For example, add a *.mif* extension to the name.) For information on MIF, see the online manual *MIF Reference*.

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 make it editable by pressing Esc Shift+f l (lowercase *L*) k. Then you can save the document in Document format.

HTML Creates a Hypertext Markup Language (HTML) document that can be viewed on the World Wide Web. For information on adjusting the mapping of paragraph and character tags to predefined HTML elements, see page 433.

PDF (Portable Document Format) Creates documents that can be viewed with Adobe Acrobat Reader or Adobe Acrobat Exchange. For information, see page 448.

Text Only Creates a text file without graphics or formatting information. To avoid overwriting your original document, save the text file under a different name. (For example, add a *.text* extension to the name.) For information, see page 41.

Stationery (Macintosh) Creates a reusable template document. Stationery always opens as an untitled copy of the document, preserving the original so it can be used again.

Other file formats Create files that can be read by other applications. For example, you can save in Rich Text Format (RTF), which is supported by many word processors, or in any other format for which an export filter is installed. Most formatting is preserved, and formats are usually converted to word-processing styles. For details, see the online manual *Using Filters* and "Using Save As to export to other formats" on page 389.

Filename extensions for saved files (Windows)

When you save a file for the first time in Windows, FrameMaker automatically adds these extensions: *.fm* for documents, *.book* for book files, and *.mif* for MIF files. With these extensions, the files will continue to be recognized as FrameMaker files by the Windows operating system.

If you don't want these special extensions to be added to the filenames you assign, enclose the filenames in double quotation marks. Windows won't recognize a file without one of these extensions as a FrameMaker file, but you'll still be able to open the file in FrameMaker.

If you assign an extension that's registered by another application (for example, *.doc*), your extension won't be replaced by the FrameMaker extension.

Saving documents in Text Only format

Saving a document in Text Only format creates a text file with the text encoding of your choice: ANSI (Windows), Macintosh, ISO Latin-1 (UNIX), or ASCII. (On Japanese-language systems, you can also use JIS, Shift-JIS, or EUC. On other Asian-language systems, you can use encodings for the supported languages.) Only ordinary text—text in text frames and tables—is saved; graphics, text in graphic callouts, footnotes, and formatting information are not saved. Reformat line lengths and hyphenation as needed before saving the file (see "Changing indents and alignment" on page 87 and "Changing hyphenation and line breaks" on page 94).

If some characters are not available in the text encoding that you choose, those characters will be replaced in the text file. For example, when you save a document in Text Only format using ANSI (Windows), ISO Latin-1 (UNIX), or ASCII encoding, spaces (including thin, en, em, and numeric

spaces) are converted to regular spaces. If you use Macintosh encoding, thin, en, and em spaces are converted to regular spaces, but numeric spaces are converted to nonbreaking spaces.

To save a document as text only:

1 Choose File > Save As.

2 Specify the filename and location, and choose Text Only format.

3 Click Save.

4 Do one of the following:

• To break each line into a separate paragraph, click At the End of Each Line. This option maintains a file's original line breaks and blank lines. Use this option for a line-oriented file such as computer code.

• To merge adjacent lines into paragraphs and insert a carriage return only at blank lines, click Only between Paragraphs. Use this option for paragraph-oriented files such as files containing document text.

5 If you want to save table text, select Include Text from Table Cells. Then do the following:

• Specify the order in which you want the table cells saved (row by row or column by column).

• Choose whether to separate cells with tabs or with carriage returns by choosing items from the pop-up menus.

6 If the text file will be used on a platform that uses a different text encoding, choose an appropriate encoding from the Text Encoding pop-up menu.

7 Click Save.

Backing up and saving automatically

FrameMaker can back up and save your work automatically.

To specify an automatic save option:

1 Choose File > Preferences.

2 Do the following:

• To create a backup file every time you save, select Automatic Backup on Save. This creates a copy of the file before your latest changes are saved. If a backup file already exists, the new backup file overwrites it. (The filenames of backup files contain *.backup*.)

• To create an autosave file at regular intervals, select Automatic Save and enter an interval (in minutes) in the text box. This causes a copy of the file to be saved periodically without your having to choose File > Save. (The filenames of autosave files contain *.auto*.) When you save manually or revert to the last-saved version with the Revert to Saved command, the autosave file is deleted.

3 Click Set.

Printing documents

When you print a document, you can specify options such as how many copies to print and whether to print crop marks and registration marks. The available options vary slightly with the platform and the printer you are using.

For information on printing a book made up of several documents, see page 347.

Important: *If you have turned off graphics in the View Options dialog box, graphics will not appear in the printed document.*

To print a document:

1 Choose File > Print.

2 Specify the page range you want to print. On the Macintosh, you can enter just the starting page number when you want to print from that page to the end of the document, or just the ending number when you want to print from the beginning of the document to that page.

3 Select other print options as described in the next section, and then click Print.


On UNIX systems, if you want to change the print 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.

Print options

The following print options are available for all printers. Unless stated otherwise, all options described in this section are in the Print dialog box. For information on additional options available for your printer, see your printer documentation.

Collating To print one complete copy before printing the next copy, select Collate when you're printing multiple copies. Printing might be slower when Collate is selected.

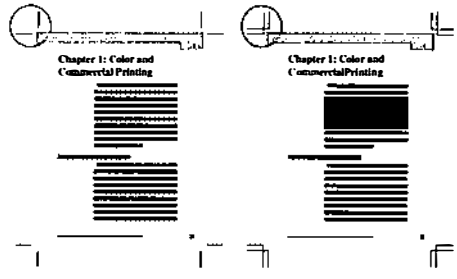
Printing double-sided To print a double-sided document when you're not using a duplex printer, print the odd-numbered pages, turn the paper over in the printer, and print the even-numbered pages. Depending on how your printer produces pages, you may need to select Last Sheet First before you click Print, because turning the paper over in the printer may reverse the page numbering.

Changing page order To print a document starting with the last page, select Last Sheet First.

Printing more quickly (Windows and UNIX) To print a document more quickly, select Low-Resolution Images. In Windows, imported images are printed as gray boxes. On UNIX systems, they are printed with lower resolution.

Printing crop marks and registration marks To print a document with crop marks and registration marks, select Registration Marks.

You can choose between Western and Tombo (Japanese) crop marks.



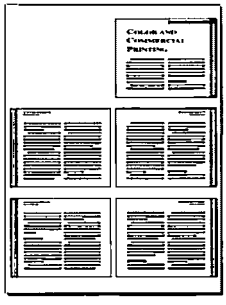
Western and Tombo crop marks

Reducing or enlarging the page image To print a reduced or enlarged page image centered on the page, do one of the following:

• (Windows and UNIX) Enter a percentage in the Scale text box.

• (Macintosh) Choose File > Page Setup and enter a percentage in the Reduce or Enlarge text box.

Printing thumbnails To print thumbnails (small images of several pages on one page), enter values in the Thumbnails text boxes. In the Rows text box, enter the number of thumbnails you want to print down the page. In the Cols text box, enter the number of thumbnails you want to print across the page.



Thumbnails

Skipping blank pages (Windows and Macintosh) To prevent printing blank pages, select Skip Blank Pages.

Printing colors in black and white To ensure that colored items are printed in black and white rather than in shades of gray, do one of the following:

• (Windows) Select Spot Color As Black/White.

• (Macintosh) With the Apple LaserWriter 8 printer driver or the Adobe PS Printer driver 8, click Options, choose Black and White from the Print pop-up menu, and then click OK. In version 7 of the LaserWriter printer driver, select Black and White in the Print dialog box.

• (UNIX) Edit the beginning of the ps_prolog file in $FMHOME/fminit. The ps_prolog file contains instructions for changing print settings. Changes to the file take effect immediately. To make changes without affecting other users, save a copy of the file with the changes to your personal fminit folder (~/fminit/ps_prolog).

Feeding paper manually To print the document on paper that is not in your printer's paper cassette, do one of the following:

• (Windows) Choose File > Print Setup. Choose Manual Feed from the Source pop-up menu and click OK.

• (Macintosh) Choose Manual Feed from the pop-up menu in the Paper Source area.

• (UNIX) Select Manual Feed.

Changing paper size (UNIX) To print the document on a different paper size, choose a paper size from the Paper Size pop-up menu, or type the dimensions in the Width and Height text boxes. Because these dimensions describe the physical size of the paper in the printer's paper cassette (not the orientation of the document), the Width setting should always match the width of the edge of the paper that feeds into the printer.

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

Downloading fonts (UNIX) To choose the fonts to download to the printer, choose from the Download Fonts pop-up menu. You don't need to download fonts that are already in the printer's memory or on a hard disk attached to the printer. For example, if your printer contains the Standard 35 fonts, choose All but Standard 35. You cannot use this option to download Japanese fonts.

The Standard 35 fonts (Avant Garde, Bookman, Courier, Helvetica, Helvetica Narrow, New Century Schoolbook, Palatino, Symbol, Times, Zapf Chancery, and Zapf Dingbats font families) are usually included with PostScript printers.

Using a different printer (UNIX) To use a different printer, choose the printer name from the Destination pop-up menu. All printers configured for your computer should appear in the pop-up menu. If a printer doesn't appear, or if you're using a special printing script (for example, to send a fax), choose Other Printer from the pop-up menu and type the appropriate parameters into the text box that appears.

Printing to a file

You can create a print file rather than print the document. For example, you may want to edit the file (by using an application that performs post-processing), send it to a service bureau for typesetting, or download it later to a PostScript printer.

You can also create a Portable Document Format (PDF) file, which can be viewed with Adobe Acrobat, by using the Save As command. For information, see page 448.

To create a print file:

Do the following in the Print dialog box:

- (Windows) Select Print Only to File and enter the path and filename in the text box.
- (Macintosh) Click File in the Destination area of the Print dialog box.
- (UNIX) Choose PostScript File from the Print Destination pop-up menu.

If you're using a PostScript printer driver, the print file consists of PostScript code. You might want to enter an extension for your file that describes the file, such as *.ps*.

Using files across platforms

You help keep FrameMaker files fully compatible across platforms with compatibility preferences. For more information on cross-platform and network compatibility, see "Opening documents that are in use" on page 30 and the online manual *Working on Multiple Platforms.*

To change compatibility preferences:

1 Choose File > Preferences.

2 Do the following:

- To preserve the names of unavailable fonts when FrameMaker substitutes existing fonts, select Remember Missing Font Names. The original fonts will reappear when you open the document on a system that has the missing fonts installed.
- (Windows and Macintosh) To display errors that FrameMaker finds as it opens files, select Show File Translation Errors.

- (Windows and Macintosh) To specify another platform with which to maintain filename compatibility, choose a setting from the Cross-Platform pop-up menu.
- (Windows) To warn a user on a network before opening and modifying the document if it is already open for another user, select Network File Locking.
- (Windows and Macintosh) To add a FrameImage facet to bitmap graphics imported by copying, select Save FrameImage with Imported Graphics. Each graphic will be saved in its native format and in FrameImage format (a format that is supported on all platforms). When you open the document on another computer or on a platform that doesn't support the native format, the FrameImage copy will be used.

3 Click Set. The settings take effect immediately.

Closing documents

You can close a document at any time. If you have unsaved changes, you'll be asked whether you want to save the changes. (A document with unsaved changes contains an asterisk in the Page Status area of its status bar.)

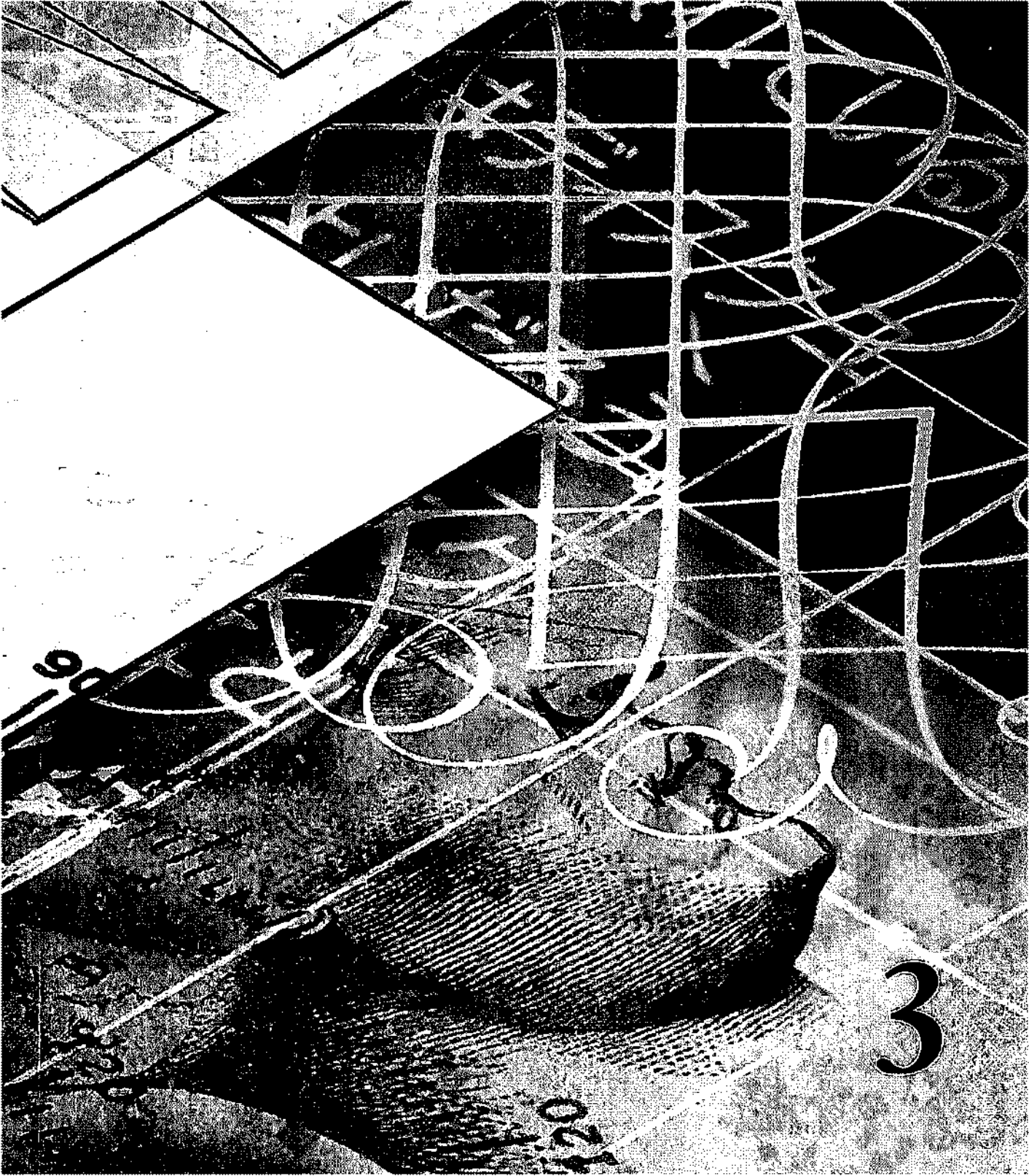
If imported graphics, text insets, cross-references, or system variables were updated when you opened your document, the document is marked as changed (with an asterisk in the status bar) when it opens. Similarly, because printing a document causes cross-references (if there are any) to be updated, printing a file may also cause a document to be marked as changed.

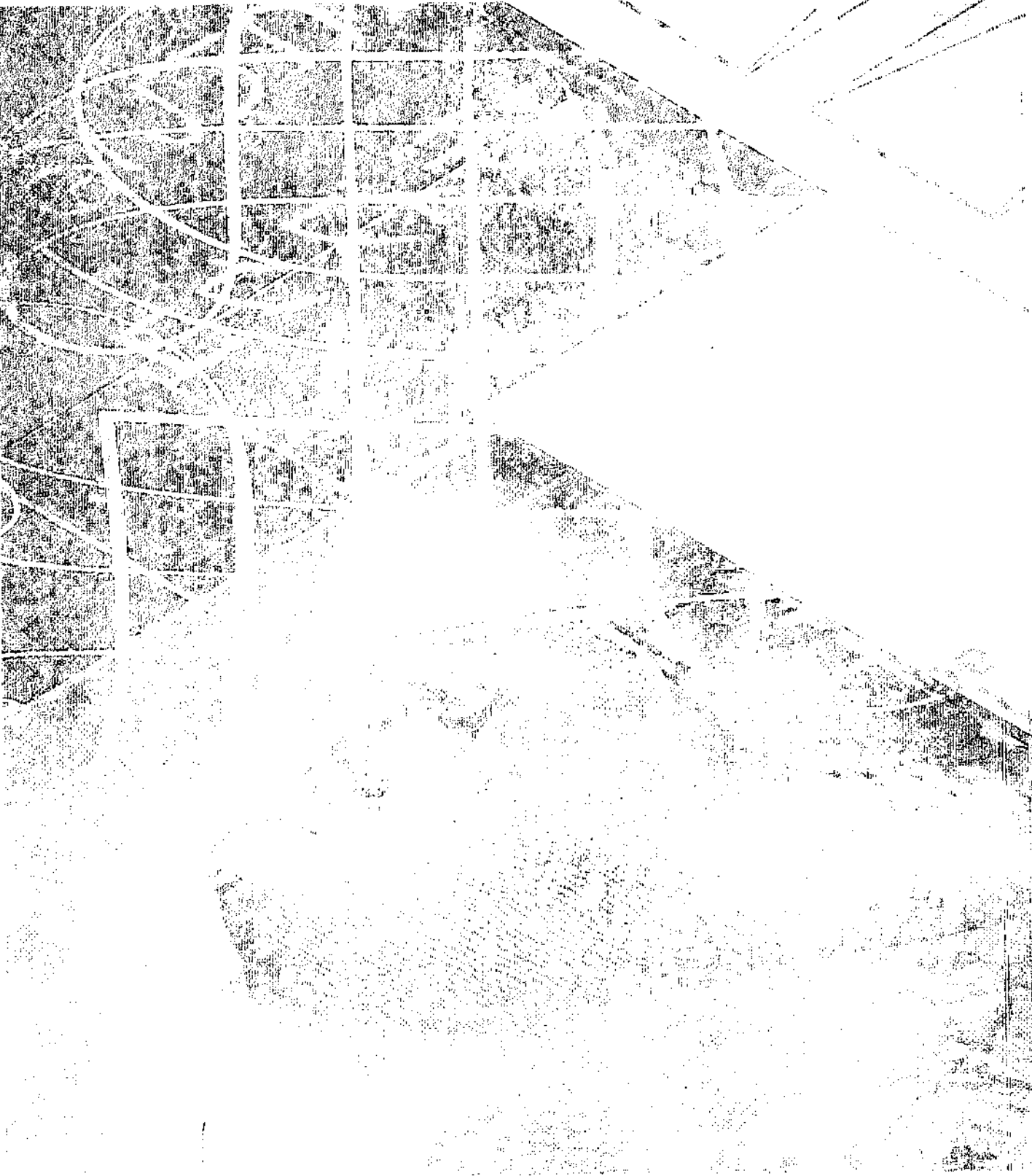
To close a document:

Choose File > Close.

To close all open documents:

Hold down Shift and choose File > Close All Open Files.


3



Chapter 3: Word Processing

For editing text, FrameMaker is flexible and straightforward. You can add or delete text, and you can copy or move it to another location.

FrameMaker includes the following powerful editing tools:

- The Find/Change command, which can find not only text but also items such as character formats, paragraph tags, anchored frames, and the contents of the Clipboard
- The Spelling Checker, which can find and correct misspellings and common typing errors such as extra spaces and repeated words
- The Thesaurus, which defines words and provides synonyms, antonyms, and related words

Placing the insertion point

Click to put the insertion point in any text in the document window. The insertion point marks where you enter or edit text. When you click on a special text item such as a cross-reference, variable, or text inset, you select the entire item.

The location of the insertion point determines the current paragraph—the paragraph to which paragraph formatting commands are applied.



Insertion point in text

If you can't place the insertion point in or next to text, the text might be background text that was typed on a master page. You can display the master page that contains the text and put the insertion point in the text on that page (see "Displaying master pages" on page 260). In other cases, you might not be able to place the insertion point in text because the text is automatically generated (for example, paragraph autonumbers) or because it's repeated from the previous page (for example, table titles or table headings).

Entering and editing text

You enter text by typing in the document window. As you type, the text flows to another line or column. Press Return only when you want to begin a new paragraph. When you reach the end of a page, FrameMaker automatically creates a new page. If you want to force a line or page break at a specific

location, use the information in "Changing hyphenation and line breaks" on page 94 or "Changing page and column breaks" on page 96.



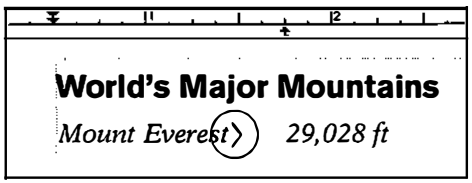
To adjust the space between paragraphs, change the spacing properties in the paragraph format rather than press Return repeatedly. For details, see "Changing spacing" on page 90.

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

Many features make typing easier. For example, 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.

Using tabs

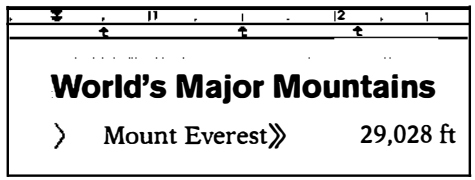
Each time you press Tab, a tab symbol (⟩) is embedded in the text. The symbol does not appear in the printed document, but it is visible on-screen when text symbols are visible.



Tab symbol

If the current paragraph has tag stops set, FrameMaker moves the insertion point and text one tab stop each time you press Tab. If tab stops are not set, pressing Tab doesn't move the insertion point and text. If you press Tab more times than you have tab stops, the Tab symbols overlap. If you later add tab stops to the paragraph, FrameMaker positions the text correctly at the tab stops.

FrameMaker uses tab stops that are absolute rather than relative. With relative tab stops, each time you press Tab, the insertion point moves to the next available tab stop. With absolute tab stops, the *n*th tab on a line moves the insertion point to the *n*th stop. If that tab stop is to the left of the insertion point, the insertion point does not move.



Press Tab three times to move to the third tab stop.

For information on the types of tab stops you can add to a paragraph, see "Changing tab stops" on page 88.

Typing special characters

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

This section describes how to type bullets and dashes. The next section describes how to type fixed-width spaces. For a list of characters in the Symbol and Zapf Dingbats fonts and a list of accented characters in the standard character set, see the online manual *FrameMaker Character Sets*.

Note: *In Windows and on UNIX systems, some special characters are entered or displayed differently in dialog boxes. In Windows, you enter a sequence of characters beginning with a backslash (\); these sequences are listed in Appendix A, "Typing in Dialog Boxes." On UNIX systems, the backslash sequences may appear in text boxes, even though you don't have to type the sequences to enter the characters.*

To type a bullet (•):

Press Control+q %. You can also press Option+8 (Macintosh) or Meta+period (UNIX).

To type an em dash (—):

Press Control+q Shift+q. You can also press Shift+Option+hyphen (Macintosh).

To type an en dash (–):

Press Control+q Shift+p. You can also press Option+hyphen (Macintosh).

Typing special spaces

When you press the spacebar, you insert a proportional space (whose width depends on the characters on either side of it). You can also insert special fixed-width spaces—for example, to increase the space between two words. When you type a special space between two words, the words always remain together on one line.

You can use the following types of special spaces:

- An em space is 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.
- An en space is half the width of an em space.
- A numeric space is 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.
- A thin space is 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, or between characters that appear too close together—for example, */)*.
- A nonbreaking space is the same width as the default space width for the font.

To type an em space:

Do one of the following:

- (Windows) Press Esc space m or Control+Shift+space.
- (Macintosh) Press Esc space m or Command+Option+9.
- (UNIX) Press Esc space m.

To type an en space:

Do one of the following:

- (Windows) Press Esc space n or Alt+Control+space.
- (Macintosh) Press Esc space n or Command+Option+8.
- (UNIX) Press Esc space n.

To type a numeric space:

Do one of the following:

- (Windows and UNIX) Press Esc space 1 (one).
- (Macintosh) Press Esc space 1 (one) or Command+Option+0 (zero).

To type a thin space:

Do one of the following:

- (Windows and UNIX) Press Esc space t.
- (Macintosh) Press Esc space t or Command+Option+7.

To type a nonbreaking space:

Do one of the following:

- (Windows and UNIX) Press Control+space.
- (Macintosh) Press Option+space.

A nonbreaking space symbol (␣) appears when text symbols are visible.

Using Smart Spaces or Smart Quotes

When Smart Spaces is on, you can't type more than one proportional space in a row. However, you can type multiple fixed-width spaces (see "Typing special spaces" on page 51).

When Smart Quotes is on, FrameMaker uses a curved left or right quotation mark whenever you press the ', `, or " key. If you prefer to use straight quotation marks, turn off Smart Quotes. You can use combinations of keys to type curved quotation marks when Smart Quotes is off, or to type straight quotation marks when Smart Quotes is on.

Smart Quotes doesn't apply to text in dialog boxes. For information on typing quotation marks and apostrophes in dialog boxes, see the online manual *FrameMaker Character Sets* and Appendix A, "Typing in Dialog Boxes."

Note: *For information on customizing quotation marks for languages other than US English in Windows or on UNIX systems, see the online manual* Customizing FrameMaker Products.

To turn Smart Spaces or Smart Quotes on or off:

1 Choose Format > Document > Text Options.

2 Change the Smart Spaces or Smart Quotes option and click Apply. When you select Smart Quotes, FrameMaker doesn't change any quotation marks that are already in the document. To find straight quotation marks and apostrophes, and change them to curved quotation marks and apostrophes, use the Spelling Checker (see page 64) or the Find/Change command (see page 56).

To enter straight and curved quotation marks in Windows:

Do one of the following.

To type	With Smart Quotes on, press	With Smart Quotes off, press
'	Control+'	Control+'
"	Esc "	"
`	Control+`	Control+`
´	Control+q plus (+)	Control+q plus (+)
‘ and ’	' and '	` and '
“ and ”	" and "	Alt+Control+` and Alt+Control+'

To enter straight and curved quotation marks on the Macintosh:

Do one of the following.

To type	With Smart Quotes on, press	With Smart Quotes off, press
'	Control+'	Control+'
"	Control+"	"
`	Control+`	Control+`
´	Shift+Option+e	Shift+Option+e
‘ and ’	' and '	Option+] and Option+}
“ and ”	" and "	Option+[and Option+{

To enter straight and curved quotation marks on UNIX systems:

Do one of the following.

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

Typing special text items

In addition to text, you can 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 can be used to generate lists and indexes and to insert hypertext commands.

To insert a special text item:

Choose the appropriate command from the Special menu. For information, see the following:

- On cross-references, see Chapter 6, “Cross-References and Footnotes.”
- On footnotes, see “Working with footnotes” on page 165.
- On variables, see Chapter 7, “Variables.”

• On markers for generated lists and indexes, see "Preparing documents for a list of markers" on page 303 and "About indexes" on page 307.

• On markers for hypertext commands, see "Inserting hypertext commands" on page 399.

Selecting text

You usually select text before you edit it. You also select text before you change its format, such as its font size or style. Selected text is highlighted.

For information on selecting text in tables, see page 120.

To select text:

Do one of the following:

• To select a range of text, drag through the text (or click one end of the text and Shift-click the other).

• To select a word, double-click it.

• To select a paragraph, triple-click it.

• To select all the text in a flow, click in the flow and choose Edit > Select All in Flow.

• To shorten or extend an existing selection, Shift-click at the new beginning or end of the selection.

Copying, moving, and deleting text

You use the Edit menu commands to cut, copy, and paste text to and from the Clipboard. When you use Edit > Cut or Edit > Copy, the cut or copied text remains on the Clipboard until you choose Cut or Copy again.

Pasted text always retains its character format properties. 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.

You copy text more quickly if you bypass the Clipboard. You can do this, however, only if the original text and the new location are visible. The new location can be in a different document.

To copy text quickly without using the Clipboard:

Put the insertion point where you want to insert the copied text, and then do one of the following:

• (Windows) Hold down Alt and select the text you want to copy.

• (Macintosh) Hold down Command and Control and select the text you want to copy.

• (UNIX) Hold down Control and use the middle mouse button to select the text you want to copy.

To delete or replace text:

Select the text and do one of the following:

• To delete the text, press Delete. You can also choose Edit > Clear.

• To replace the text, type the new text.

If the text you delete or replace contains the end of a paragraph and the paragraph symbol, the beginning of the paragraph is merged with the next paragraph. If you didn't intend to combine the two paragraphs, immediately choose Edit > Undo. Then select the text you want to delete or replace (but not the paragraph symbol), and try again.

To delete a page of text:

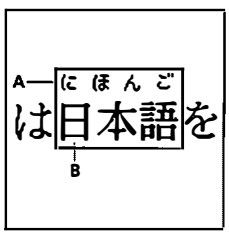
Do one of the following:

- To delete both the page and its text, choose Special > Delete Pages. If the page contains the beginning of a table that continues on another page, the entire table is deleted.
- To delete just the text on a page, select the text and press Delete.

For information on deleting empty pages at the end of a document, see "Adding and deleting empty pages" on page 263.

Entering rubi text for Japanese

Rubi text—small characters that appear above other characters—is used in Japanese-language documents to indicate pronunciation.



A. Rubi text B. Oyamoji text

If Japanese fonts are installed on your system, FrameMaker provides commands for entering rubi and for specifying how you want the rubi to appear. For information on adjusting the size, location, and spacing of rubi text, see page 93.

To type rubi:

1 Select the characters above which you want to type rubi. The selected text cannot contain a paragraph symbol (¶) or a forced return symbol (❮).

2 Choose Special > Rubi and type the text. (If the Rubi command doesn't appear on the Special menu, press Esc s r instead of choosing Special > Rubi.) The rubi appears above the selected characters. If the selected characters span two lines, the characters will all appear on the same line.

***Note:** If the rubi collides with the preceding line of text, either set the line spacing large enough to accommodate the rubi (at least 150% of the font size) or turn off fixed line spacing (see "Changing spacing" on page 90).*

3 To return to the regular text when you finish typing the rubi, click in it or choose Special > Rubi again.

About searching

In addition to text and footnotes, you can search for any of the following items.

Text formats and tags Character format properties, or specific paragraph or character tags.

Markers Any markers regardless of their marker types, markers of a specific type, or markers that contain specified text.

Cross-references Any cross-references regardless of their formats, cross-references that use a specific format, or unresolved cross-references—cross-references that FrameMaker is unable to update.

When an unresolved cross-reference is found, the marker text of the cross-reference appears in the Find text box.

Text insets Any text imported by reference, including Macintosh text subscribers. You can also search for unresolved text insets—insets that cannot be updated from their sources. However, you can't search for graphics subscribers or OLE linked objects. (To list OLE links in Windows, choose Edit > Links.)

Publishers Macintosh text publishers.

Variables Any variables regardless of their variable names, or specific variables.

Rubi Any rubi text, when Japanese fonts are installed on your system.

Anchored frames You can find graphics by searching for the anchored frames that contain them.

Tables Any tables regardless of their table format tags, or tables with a specific tag.

Conditional text Any conditional text regardless of its condition tags, text with specific condition tags, or unconditional text. FrameMaker cannot find conditional table rows or hidden conditional text.

Automatic hyphen Words that are hyphenated automatically.

Text and character format on the Clipboard Text that matches the Clipboard's text, capitalization, and character formatting.

Searching for any item

When you search for an item listed in the preceding section, you can customize the search by considering case, matching whole words only, or using wildcards. Wildcards let you search for character patterns and for text that appears at the beginning or end of a line.

When FrameMaker finds an item, you can replace the item or continue searching for other occurrences of the item.

To search for any item:

1 Click where you want to begin the search and choose Edit > Find/Change.

2 Choose the item you want to find from the Find pop-up menu.

3 Do one of the following:

- If you chose 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, enter the particular item you want to find in the Find text box.
- If you chose Character Format or Conditional Text from the Find pop-up menu, enter additional information in the dialog box that appears. For information, see "Searching for character format properties" on page 59 and "Searching for conditional text" on page 60.
- If you chose any other item from the Find pop-up menu, skip step 4 and proceed to step 5.

4 If you entered text in the Find text box, customize the search by doing the following:

- To find or ignore an item with specific capitalization, select or turn off Consider Case. For example, if you enter **MAIN** in the Find text box and Consider Case is selected, you won't find *Main*. If Consider Case is turned off, you'll find *MAIN*, *Main*, and *main*.
- To match only a complete word, enter the word in the Find text box and select Whole Word. For example, if you enter **phone** in the Find text box and select Whole Word, you 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. For example, if you enter **old** in the Find text box and turn off Whole Word, you'll find words such as *bold* and *oldest* as well as *old*.
- To find an item by using wildcards, enter the text and wildcards in the Find text box and select Use Wildcards. For example, if you enter **Number[1-9]** in the Find text box and select Use Wildcards, you'll find all occurrences of the word *Number* followed by any number between 1 and 9. For information, see the following information in "Using wildcards in a search."

USING WILDCARDS IN A SEARCH When Use Wildcards is selected in the Find/Change dialog box, you can use the following wildcards to find character patterns.

To find	Do this	Example
Zero or more characters, excluding spaces and punctuation	Enter an asterisk (*).	*f***t* finds words such as *fit* and *feet*.
Any single character, excluding spaces and punctuation	Enter a question mark (?).	*f??t* finds four-letter words that begin with *f* and end with *t*—for example, *foot* and *feet*.
One or more spaces and punctuation characters	Enter a vertical bar (|).	**any|* finds words such as *any.* and *many?*. If Whole Word is turned off, it also finds *Tiffany,* but not *anything.*
Any one of several characters	Type the characters within brackets ([and]).	*[rml]ate* finds *rate, mate,* and *late.* If Whole Word is turned off, it also finds *berate, isolate,* and *material.*
Any one character not in a specified group of characters	Precede the characters in brackets with a caret (^).	*[^rml]ate* finds *fate, gate,* and *date,* but not *rate, mate,* or *late.*
The beginning of a line	Enter a caret (^).	^*f* finds any word that starts with *f* at the beginning of a line. You cannot combine this wildcard with the Whole Word option.
The end of a line	Enter a dollar sign ($).	*f$* finds any word that ends with *f* at the end of a line. You cannot combine this wildcard with the Whole Word option.

5 Click Find. If FrameMaker finds an exact match, it displays the page that contains the item and selects the item.

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 text flow, it searches other text in the document. Because FrameMaker searches flow by flow rather than page by page, it may appear to jump around within the document while searching.

To find the next occurrence of an item:

Click Find Again in the Find/Change dialog box or choose Edit > Find Next.

To reverse the search direction:

Select Find Backward in the Find/Change dialog box and click Find.

To cancel a search:

Do one of the following:

- (Windows) Press Esc.
- (Macintosh) Press Command+period.
- (UNIX) Press Control+c.

Entering text in the Find text box

You can enter any characters in the Find text box. However, the following characters require special treatment:

- To find a single backslash (\), enter two backslashes (\\) in the Find text box. A single backslash usually indicates a special character.
- To search for a wildcard character as an ordinary character when the Use Wildcards option is selected, precede the wildcard character with a backslash. For example, to find an asterisk, enter * in the Find text box.

Searching for special characters and nonprinting symbols

You can search for any text, including single characters, phrases, and special characters that aren't on your keyboard. When you enter special characters in a dialog box on UNIX systems, the characters may be represented as a sequence of characters beginning with a backslash (\). In Windows, you'll need to type the backslash sequence (see Appendix A, "Typing in Dialog Boxes").

To find nonprinting symbols (such as tab, paragraph, and end-of-flow symbols) and positions (such as the start of a paragraph or word), use the following character sequences.

To find	Enter this sequence
Tab	\t
Forced return	\r
End of paragraph	\p (lowercase)
Start of paragraph	\P (uppercase)
End of flow or end of table cell	\f
Start of word	\<
End of word	\>

For example, you could find empty paragraphs by searching for \P\p (beginning of paragraph followed by end of paragraph).

You can use most of these sequences for both searching and replacing—for example, replacing a forced return symbol with an end-of-paragraph symbol. However, you cannot replace with the end-of-flow, start-of-word, or end-of-word sequence.

Searching for character format properties

You can search for any character format property—for example, you can search for any text in italics. Or you can search for text with several properties—for example, 12-point Helvetica bold.

You can also search for text with specific properties 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.

To search for text with a specific paragraph or character tag, use the Paragraph Tag or Character Tag find options.

To search for character format properties:

1 Click in text with properties similar to (or the same as) the properties you want to find.

2 In the Find/Change dialog box, choose Character Format from the Find pop-up menu.

3 Do one of the following:

- To search for the properties of the current text, leave the properties as they are.
- To search for text with different properties, change the properties to match that format.
- To search for text with some properties specified and some overlooked, set the properties you want to overlook to As Is. You set a property to As Is by clicking a check box until it is gray (in Windows and on the Macintosh) or dim (on UNIX systems), by choosing As Is from a pop-up menu, by selecting As Is in a scroll list, or by 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 find text with only a few properties, set all properties to As Is by pressing Shift+F8 (in Windows and on UNIX) or Command+Shift+x (on the Macintosh). Then specify only the properties you want to find.

4 Click Set, and then click Find.



After making some changes in the Find Character Format dialog box, you can reset the dialog box to match the format of the current text. To do this, press Shift+F9 (Windows and UNIX) or Command+Shift+v (Macintosh).

To search for specific text and character format properties:

1 Copy the text with the character format you want to find. You can copy as much text as you like, but FrameMaker uses only the first 126 characters on the Clipboard.

2 In the Find/Change dialog box, choose Text & Character Formats on Clipboard from the Find pop-up menu. Don't type the text you want to find in the Find text box.

3 Click Find.

Searching for markers

FrameMaker uses markers for cross-references, indexes, conditional text, and other purposes. It can find any type of marker or just the marker type you specify. When text symbols are visible, a symbol (T) indicates a marker.

FrameMaker can also find markers with specific marker text.

To search for a marker:

1 In the Find/Change dialog box, do one of the following:

- To find any marker in the document, choose Any Marker from the Find pop-up menu, and leave the Find text box blank.
- To find a specific type of marker, choose Marker of Type from the Find pop-up menu, and enter the marker type in the Find text box.
- To find a marker with specific text, choose Marker Text from the Find pop-up menu, and enter the marker text in the Find text box.

2 Click Find. If the Marker dialog box is open (Special > Marker), the marker text for the found marker appears there.

Important: *If you want to replace the text in a found marker, use the Marker dialog box to edit the marker text. If you use the Find/Change dialog box, you'll replace the marker rather than the marker text.*

Searching for conditional text

You can search for visible text that has specific condition tags. When FrameMaker finds visible conditional text, it selects all adjacent text that uses these condition tags.

FrameMaker cannot find conditional table rows.

To search for conditional text:

1 Make sure that the text with the condition tags you want to find is visible (see "Changing the view of conditional documents" on page 359).

2 In the Find/Change dialog box, choose Conditional Text from the Find pop-up menu.

3 Do the following:

- To find text with a particular condition tag, move the condition tag to the In list.
- To find text that doesn't have a particular condition tag, move the tag to the Not In scroll list.
- If you don't care whether found text has a particular tag, move the tag to the As Is scroll list.
- To find all conditional text, move all tags to the As Is scroll list.
- To find unconditional text, click Unconditional.

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.

4 Click Set, and then click Find.

Using 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 Parameters dialog box (which contains the same options as the Find/Change dialog box), to move the insertion point between the options, and to start a search. These keyboard shortcuts are useful in macros that automate finding and changing. In Windows and on the Macintosh, you can use a third-party macro application to create macros that work with FrameMaker. On UNIX systems, you can use File > Utilities > Keyboard Macros (see page 495).

To use the Find/Change command from the keyboard:

1 In a document window, press Esc f i s.

2 Fill in the Set Find/Change Parameters dialog box as you would the Find/Change dialog box, and then press Return.

Use keyboard shortcuts to move from setting to setting and to choose items from pop-up menus. For a list of keyboard shortcuts, see online Help.

3 To start the search, do one of the following:

- (Windows) Press Control+Shift+f.
- (Macintosh) Press Command+g.
- (UNIX) Press Esc f i n.

4 To search again, repeat step 3.

Troubleshooting a search

If you don't find the item even though you're sure it's there, check the Find/Change dialog box for the following possible problems:

- Did you spell the text in the Find text box correctly?
- Did you include too many or too few spaces? Are they the right type of spaces? When you enter 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.
- Are you using the appropriate options? For example, is Whole Word selected when it should be turned off?
- If your document uses conditional text, is the text for which you're searching hidden?
- If you're searching for an item on a master page, is the insertion point on a master page?

Changing items you find

After you find an item, you can change it in several ways. Generally, you find text and replace it with other text, but you can also change the character format of the found item or 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. Or you can replace a word with a graphic in an anchored frame.

You can change each occurrence of the item as it is found, or have FrameMaker automatically make the change throughout the document.

To change any item:

1 Specify the item you want to find in the way described in "Searching for any item" on page 56.

2 In the Find/Change dialog box, do one of the following:

- To replace the found item with text, choose To Text and type the text in the Change text box. For information, see page 62.
- To change character format properties of the found text, choose Character Format and then specify the properties in the dialog box that appears. For information, see page 63.
- To apply the contents of the Clipboard to the found item, choose By Pasting. Then select the item you want to paste and copy it to the Clipboard.

3 Click Find to find the first match.

4 Do one of the following:

- To change the found occurrence but not continue searching for the item, click Change.
- To continue searching but not change the found occurrence, click Find Again.
- To change the found occurrence and continue searching for the item, click Change & Find.
- To change all occurrences of the item, specify the scope of the change (all occurrences in the document or only the occurrences in the current selection) and click Change All In.

Important: *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 (if you don't select Whole Word). Also, you can't undo the changes. For these reasons, consider saving your document and then clicking Find and then Change to replace several found occurrences. When you're confident that FrameMaker will replace only the items you want, click Change All In.*

If you click Change or Change & Find when no text is selected in the document, FrameMaker inserts or applies the replacement item at the insertion point.

To delete a found item:

In the Find/Change dialog box, choose To Text from the Change pop-up menu, leave the Change text box empty, and click Change. You can also simply press Delete.

Replacing found items with text

You can replace anything that FrameMaker finds with text. For example, you can replace a word with another word or replace a marker with a phrase.

If capitalization is important, you can have FrameMaker use the same capitalization that is used in the original text by selecting the Clone Case option in the Find/Change dialog box. For example, if you select 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.*

You can type any text, including special characters not found on the keyboard—for example, em spaces and paragraph symbols. For information on these characters, see "Typing special characters" on page 50 and "Typing special spaces" on page 51. To include a backslash (\) in replacement text, type two backslashes (\\) in the Change text box.

You can't change marker text (such as an index entry) by using the Find/Change dialog box. If FrameMaker finds the marker text you specify, 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 Special > Marker command (see "Editing and deleting entries" on page 306).

Changing character format properties

You can change the character format properties of any text 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 particular properties and then change the properties.


To search for text with a specific paragraph or character tag and then apply a different format, copy the format to the Clipboard and then use the By Pasting change option.

To specify the character format properties you want to change:

1 Do one of the following:

- If you're changing several character format 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 format properties, click in any text.

2 In the Find/Change dialog box, choose To Character Format from the Change pop-up menu, specify the character format you want to use, and then click Set.

To prevent FrameMaker from applying a property to found text, set the property to As Is. You set a property to As Is by clicking a check box until it is gray (Windows), dashed (Macintosh), or dim (UNIX); by choosing As Is from a pop-up menu; by selecting As Is in a scroll list; or by 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. If you want to change all properties to As Is, press Shift+F8 (in Windows and on UNIX systems) or Command+Shift+x (on the Macintosh).


After making some changes in the Change to Character Format dialog box, you can reset the dialog box to match the format of the current text. To do this, press Shift+F9 (in Windows and on UNIX systems) or Command+Shift+v (on the Macintosh).

Checking spelling

The FrameMaker Spelling Checker uses several dictionaries to check text for spelling errors. 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 unchanged.

The Spelling Checker helps correct your typing as well as your spelling. For example, you can check for repeated words, unusual hyphenation or capitalization, straight quotation marks (when curved should be used), and extra spaces.

About FrameMaker dictionaries

When you spell-check a document, FrameMaker compares each word in it with the words in the following dictionaries:

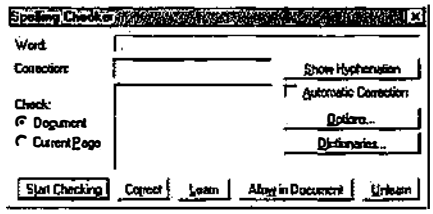
- The *main dictionary* contains words found in a standard dictionary. You can't add words to or delete words from this dictionary.
- The default *site dictionary* contains some technical terms. You can add words common to your site or work group—for example, the company name and product names. In Windows, the site dictionary is normally in the site.dict file in the FrameMaker dict folder. On the Macintosh, it's in the Site Dictionary file in the FrameMaker Dictionaries folder. On UNIX systems, it's in $FMHOME/fminit/site.dict.
- Your *personal dictionary* contains words you use often. Because FrameMaker uses this dictionary whenever you spell-check any document, use this dictionary for words that are neither document-specific nor site-specific (for example, your name). You can add or delete words. You can also create several personal dictionaries and switch between them.
- The *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. Unlike the other dictionaries, the document dictionary is part of the document rather than a separate file.

Checking for spelling and typing errors

When you spell-check a document, FrameMaker questions any words 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 or to the document dictionary. If a questioned word is misspelled, you can correct it. FrameMaker usually provides suggestions for the correct spelling.

To check and correct spelling:

1 Choose Edit > Spelling Checker.



2 Do one of the following:

- To check all text in a document, click in the document and then click Document in the Spelling Checker dialog box.
- To check all text on a page, click on the page and then click Current Page in the Spelling Checker dialog box.
- To check specific text, select the text.
- To check a word, place an insertion point in the word.

In most cases, you'll want to spell-check the text on the body pages. If a body page isn't displayed, choose View > Body Pages.

3 Click Start Checking. If you're checking a selection of text or a single word, do one of the following:

- (Windows and UNIX) Shift-click Start Checking.
- (Macintosh) Option-click Start Checking.

FrameMaker begins spell-checking at the insertion point. When it finds a questionable word, the word appears at the top of the Spelling Checker dialog box. The message to the left of the text box—for example, *Misspelling*—explains why the word has been questioned.

Note: *FrameMaker does not spell-check superscript and subscript text or manually micropositioned text (for example, text with a manual baseline shift).*

4 Correct or confirm the spelling in one of the following ways:

- To correct a misspelling, make sure the correctly spelled word is in the Correction text box and click Correct. If the suggested word is not the word you want, you can select a different word in the Correction scroll list or enter the word in the Correction text box. You can also move the insertion point to the document window and type the word correctly there.
- To correct a typing error (for example, repeated words such as *and and*), make sure the correctly typed text is in the Correction text box and click Correct. FrameMaker lists only one suggestion for mistyped text. If the suggestion is not correct, you can enter the correct text in the Correction text box, or 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, see "Changing Spelling Checker options" on page 66.

- To add a word to a personal dictionary, make sure the intended word appears next to "Misspelling" at the top of the Spelling Checker dialog box and click Learn.
- To add a word to a document dictionary, make sure the intended word appears next to "Misspelling" at the top of the Spelling Checker dialog box and click Allow in Document.

Note: *If FrameMaker adds a word that contains uppercase letters to a personal or document dictionary, when Unusual Capitalization is selected in the Spelling Checker Options dialog box, it 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 it learns* trinidad, *in all lowercase letters, it does not question any type of capitalization of the word.*

5 If necessary, click Start Checking to find the next questionable word. When the document contains no more questionable words, *Spelling OK* appears in the Spelling Checker dialog box.

To check spelling in text insets:

Open the inset's source file and check the spelling there.

To cancel the Spelling Checker:

Do one of the following:

- (Windows) Press Esc.
- (Macintosh) Press Command+period.
- (UNIX) Press Control+c.

Correcting spelling errors automatically

You can have FrameMaker automatically correct future occurrences of a misspelled word or typing error. The error won't be questioned in any document you open, and you won't have to provide the correction. FrameMaker keeps track of the errors to correct automatically until you exit or until you instruct FrameMaker to stop making the corrections.

Before you decide to change a particular misspelling or typing error automatically, make sure you know what other changes will be made. For example, if you use the Automatic Correction option when correcting a repeated word, FrameMaker will correct every repeated word even though some may be correct (such as *had had*). Similarly, if *thst* is a misspelling of both *test* and *that*, you won't want to change it automatically to either word.

To correct spelling errors automatically:

1 Choose Edit > Spelling Checker and click Start Checking.

2 When FrameMaker questions a word or typing error, select Automatic Correction and click Correct.

To stop making automatic corrections before exiting:

1 Choose Edit > Spelling Checker and click Dictionaries.

2 In the Dictionary Functions dialog box, click Clear Automatic Corrections, and then click OK.

Changing Spelling Checker options

When you spell-check a document, FrameMaker also checks for errors that don't involve spelling—for example, repeated words, extra or misplaced spaces, or unusual capitalization. You can specify the kinds of typing errors for which you want to look.

You can also limit the spell-check so that FrameMaker overlooks certain types of words. For example, you may want to overlook words that contain numbers.

To change Spelling Checker options:

1 Choose Edit > Spelling Checker and click Options.

2 Do the following:

• In the Find area, specify the kinds of typing errors you want to find. For example, select Unusual Capitalization if you want to find words with uppercase letters in inappropriate locations (for example, *GReen*).

• In the Ignore area, specify the kinds of words you want to overlook. For example, select Words with Digits if you want to ignore words that contain numbers.

Keep in mind that the more words FrameMaker overlooks, the greater the possibility that your document will contain misspelled words. For example, if you choose to ignore words containing a period, you'll also skip over a sentence that begins without a space after the preceding period.

• If you change the Spelling Checker options and then want to reset the default options, click Get Defaults. If you change the Spelling Checker options in Windows or on the Macintosh, and then exit FrameMaker without resetting the default options, your current settings become the default options.

3 Click Set.

Rechecking after changing options

FrameMaker ordinarily rechecks only paragraphs that have been edited since the prior check. If you change options after spell-checking a document, you may want to run the Spelling Checker again after instructing FrameMaker to mark all paragraphs for rechecking.

To mark all paragraphs for rechecking:

1 Choose Edit > Spelling Checker and click Dictionaries.

2 Select Mark All Paragraphs for Rechecking and click OK.

Skipping text when spell-checking

If you don't want FrameMaker to spell-check certain text, assign no language to it; that is, change its Language property to None (see the following section). For example, you may not want to spell-check paragraphs of computer code.

When you set the language of text to None, FrameMaker no longer provides hyphenation for it. For information on changing the spell-checking language, see the next section.

Checking spelling in different languages

All text is assigned a language. When you spell-check, FrameMaker uses the main dictionary of the language assigned to the text. You can change the language used to spell-check text by changing the language assigned to the text.

The CD-ROM version of FrameMaker contains dictionaries for all supported languages. However, the default Windows and Macintosh installation contains only one dictionary in a single language. For information on installing additional dictionaries, see the *Getting Started* guide.

The 3.5-inch disk version of FrameMaker for Windows and the Macintosh does not include all the dictionaries. For information on how to order the

FrameMaker International Dictionaries™ in the United States and Canada, see the *Getting Started* guide.

To change the language of text in a document:

Do one of the following:

- To change the language of a single paragraph or of all the paragraphs in a document, use the Language property in the Default Font properties of the Paragraph Designer (see "Using a designer to change font properties" on page 83).
- To change the language of a range of text within a paragraph, or the language of a text line, use the Language property in the Character Designer (see "Using a designer to change font properties" on page 83).

Controlling hyphenation

When you add a word to a personal dictionary, FrameMaker calculates the points at which it can hyphenate the word. If the suggested hyphenation points aren't appropriate, you can change them before adding the word. You can also specify that a word is always or never hyphenated. For example, you can hyphenate *heavy-duty* wherever it appears but never hyphenate your company's name.

After you make hyphenation changes, you should rehyphenate the document. For information on hyphenation, see "Changing hyphenation and line breaks" on page 94.



When you want strict control over hyphenation (for example, before printing the final draft of a book), you may want to search your document for all hyphens that FrameMaker has inserted automatically. To do this, choose Automatic Hyphen from the Find pop-up menu in the Find/Change dialog box.

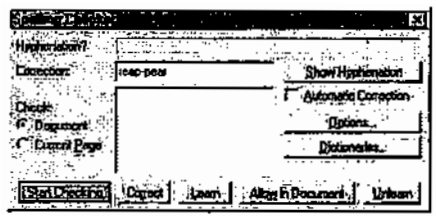
To show a word's hyphenation points:

Choose Edit > Spelling Checker, type the word in the Word text box, and click Show Hyphenation. If the word is in the main dictionary or your personal dictionary, FrameMaker uses the dictionary to determine the hyphenation points. If the word isn't in one of these dictionaries, FrameMaker calculates the hyphenation points.

To change the hyphenation of a word:

1 Show the word's hyphenation points in the way described in the previous procedure.

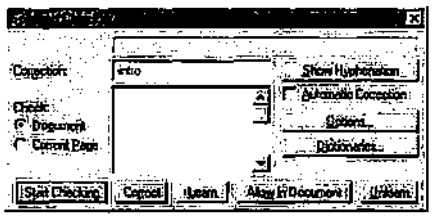
2 Adjust the hyphenation and click Learn. You can add and delete hyphens as necessary.



Reappear *cannot be hyphenated as* re-appear.

To prevent FrameMaker from ever hyphenating a word:

Enter the word in the Correction text box, enter a hyphen before the word, and click Learn. Make sure the word doesn't contain any hyphens other than the one before it.



Word cannot be hyphenated.

To rehyphenate an entire document:

1 Choose Edit > Spelling Checker and click Dictionaries.

2 Click Rehyphenate Document and click OK.

Managing dictionaries

You have editorial control over your document, personal, and site dictionaries. For example, you can add and delete words and change the hyphenation of words. You can also choose different dictionaries, merge one dictionary into another, and delete dictionaries.

Managing personal and document dictionaries

FrameMaker automatically creates a personal dictionary for you and a document dictionary for each of your documents. You can use the Spelling Checker to add or delete words in these dictionaries, 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 instructions, see "Rechecking after changing options" on page 67.

To delete a word from the personal or document dictionary:

Choose Edit > Spelling Checker, enter the word in the Correction text box, and click Unlearn.

To delete the contents of the document dictionary:

1 Choose Edit > Spelling Checker and click Dictionaries.

2 Choose Clear from the Document Dictionary pop-up menu and click OK.

To delete a personal dictionary:

Delete the file that contains the dictionary. (To find the name of the personal dictionary, choose Edit > Spelling Checker and then click Dictionaries. The name of your personal dictionary appears in the Dictionary Functions dialog box.)

To create another personal dictionary:

1 Place words (with a hyphen at each hyphenation point) in a document. Type as the first line in the document:
<MakerDictionary 2.0>

2 When you save the file, choose Text Only format and click Save. Then click Only between Paragraphs and click Save.

To use a different personal dictionary:

1 Choose Edit > Spelling Checker and click Dictionaries. The name of your personal dictionary appears in the Dictionary Functions dialog box.

2 Choose Change Dictionary from the Personal Dictionary pop-up menu and click OK.

3 Specify the name of the file that contains the personal dictionary you want to use.

To check the spelling of a document without using the personal dictionary:

1 Choose Edit > Spelling Checker and click Dictionaries.

2 Choose Set to None from the Personal Dictionary pop-up menu and click OK.

To copy the contents of a dictionary to a file:

1 Choose Edit > Spelling Checker and click Dictionaries.

2 Choose Write to File from the Personal Dictionary or Document Dictionary pop-up menu and click OK.

3 Specify the file to which you want to copy the dictionary's contents. You can edit this file and then use it as a new dictionary.

To merge the contents of a dictionary with the current personal or document dictionary:

1 Choose Edit > Spelling Checker and click Dictionaries.

2 Choose Merge from File from the Personal Dictionary or Document Dictionary pop-up menu and click OK.

3 Specify the file you want to merge with the current dictionary.

Managing site dictionaries

You can specify a different site dictionary for each of several projects, among other purposes. You can also edit your site dictionary directly.

If FrameMaker is used across a network at your site, a system administrator probably manages the site dictionary.

To specify a different site dictionary:

Do one of the following:

- (Windows) Specify the dictionary in the maker.ini file. For details, see the online manual *Customizing FrameMaker Products.*
- (Macintosh) Choose Edit > Spelling Checker and click Dictionaries. Next choose Change Dictionary from the Site Dictionary pop-up menu and click OK. Then select the file that contains the site dictionary you want to use and click Use.
- (UNIX) Edit the Maker.siteDict resource. For details, see the online manual *Customizing FrameMaker Products.*

Editing dictionary files

You can change the contents of your personal or document dictionary by clicking Learn, Allow in Document, or Unlearn in the Spelling Checker dialog box as you spell-check. You can also edit your personal, document, and site dictionaries directly.

To edit a dictionary file directly:

1 If you're editing a personal or document dictionary, use FrameMaker to write the dictionary's contents to a file. For instructions, see "Managing personal and document dictionaries" on page 69.

2 Edit the file. If you use FrameMaker to edit a dictionary, be sure to do the following:

- When you open the file, select Treat Each Line as a Paragraph in the Reading Text File dialog box and click Read.
- When you save the file, choose Text Only format. Make sure the file is named correctly and click Save. Then click Only between Paragraphs and click Save.

3 Merge the dictionary file with another dictionary. For instructions, see page 69. If you removed words from the dictionary, delete the original dictionary before merging the file. Otherwise, the deleted words remain in the dictionary.

Adding 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 add all unknown words to a dictionary:

1 Choose Edit > Spelling Checker and click Dictionaries.

2 Click Write All Unknown Words to File and click OK.

3 Specify a filename for the dictionary file, and click OK or Save. 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.

4 Edit the dictionary file with a text editor or with FrameMaker (see the previous section, "Editing dictionary files"). Delete any words you don't want to add to your dictionary, such as misspelled words.

5 In the Spelling Checker dialog box, click Dictionaries.

6 Choose Merge from File from the Personal Dictionary or 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 Name and save the dictionary file.

Adding hyphenated compound words 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 checking the hyphenated compound word as a whole. For example, when spell-checking the word *heavy-*

duty, FrameMaker checks *heavy* and then checks *duty*. By changing the default settings, you can spell-check hyphenated compound words as single words, and you can add hyphenated compound words to your personal dictionary.

To add a hyphenated compound word to your personal dictionary:

1 Choose Edit > Spelling Checker and click Options.

2 Select Unusual Hyphenation and click Set. FrameMaker will spell-check hyphenated compound words as single words, rather than checking the individual words.

3 In the Word text box in the Spelling Checker dialog box, enter the hyphenated compound word to be added to your personal dictionary. Include 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 *heavy-duty*, type **-heavy\-duty**. For information on specifying hyphenation points, see "Controlling hyphenation" on page 68.

4 Click Learn.

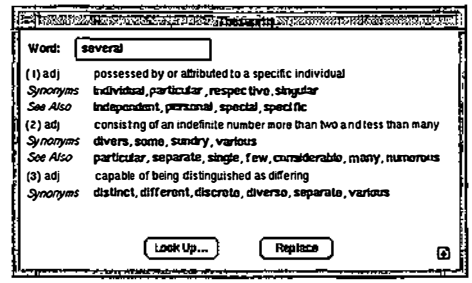
Using the Thesaurus

You use the Thesaurus to look up synonyms, related words, and antonyms for words you specify. For example, 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. For example, you can replace *figment* with any of its synonyms, related words, or antonyms.

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 and display *its* synonyms, related words, and antonyms. You can quickly go back to any of the last 10 words you looked up.

Looking up words

When you look up a word, information about the word appears in the Thesaurus dialog box.



If more information is available than fits, you can use the arrow buttons at the bottom of the dialog box to view the additional information. FrameMaker displays the synonyms, antonyms, and related words with capitalization that matches the capitalization of the word you looked up.

To look up a word visible in the document window:

Select the word and choose Edit > Thesaurus.

To look up a word not visible in the document window:

1 Make sure that no text is selected, and then do one of the following:

- If the Thesaurus dialog box is not open, choose Edit > Thesaurus.
- If the Thesaurus dialog box is open, click Look Up.

2 Enter the word and click Look Up.

To look up a phrase:

1 Make sure that no text is selected and choose Edit > Thesaurus.

2 Enter the phrase, including any hyphens, in the Thesaurus Look Up dialog box, and click Look Up.

Note: If you try to specify a phrase by selecting it in the document window, FrameMaker looks up only the first selected word.

To look up a synonym, a related word, or an antonym displayed in the Thesaurus dialog box:

Click the word. Synonyms, related words, and antonyms are shown in bold.

To look up a word again:

Choose the word from the Word pop-up menu in the Thesaurus dialog box. This menu lists the last 10 words you looked up.

Choosing a language to use

FrameMaker uses the language of the current text. If a word isn't selected or the insertion point isn't in a paragraph, FrameMaker uses the language of the interface you chose when you installed FrameMaker. You can override the default language in new documents by creating your own template for custom new documents. For information, see "Changing templates for blank paper and text files" on page 293.

The Thesaurus for a language is installed along with the dictionary for that language. For information, see "Checking spelling in different languages" on page 67.

To specify a different language when looking up a word:

1 Click Look Up in the Thesaurus dialog box.

2 Enter the word you want to look up, choose a language, and click Look Up.

Using words from the Thesaurus

You can add or replace a word in your document from the Thesaurus dialog box. The addition or replacement can be either the word looked up or one of the words in bold.

When replacing a selected word in your document with a word from the Thesaurus dialog box, you replace only the selected word—not all occurrences of the word. To replace all occurrences, use Edit > Find/Change (see "Changing items you find" on page 61).

To insert a word looked up in the Thesaurus dialog box:

1 Do one of the following:

- To add the word, place an insertion point in the document.

• To replace a word in the document, select the word.

2 Click Replace.

To insert a word that appears in bold in the Thesaurus dialog box:

1 Do one of the following:

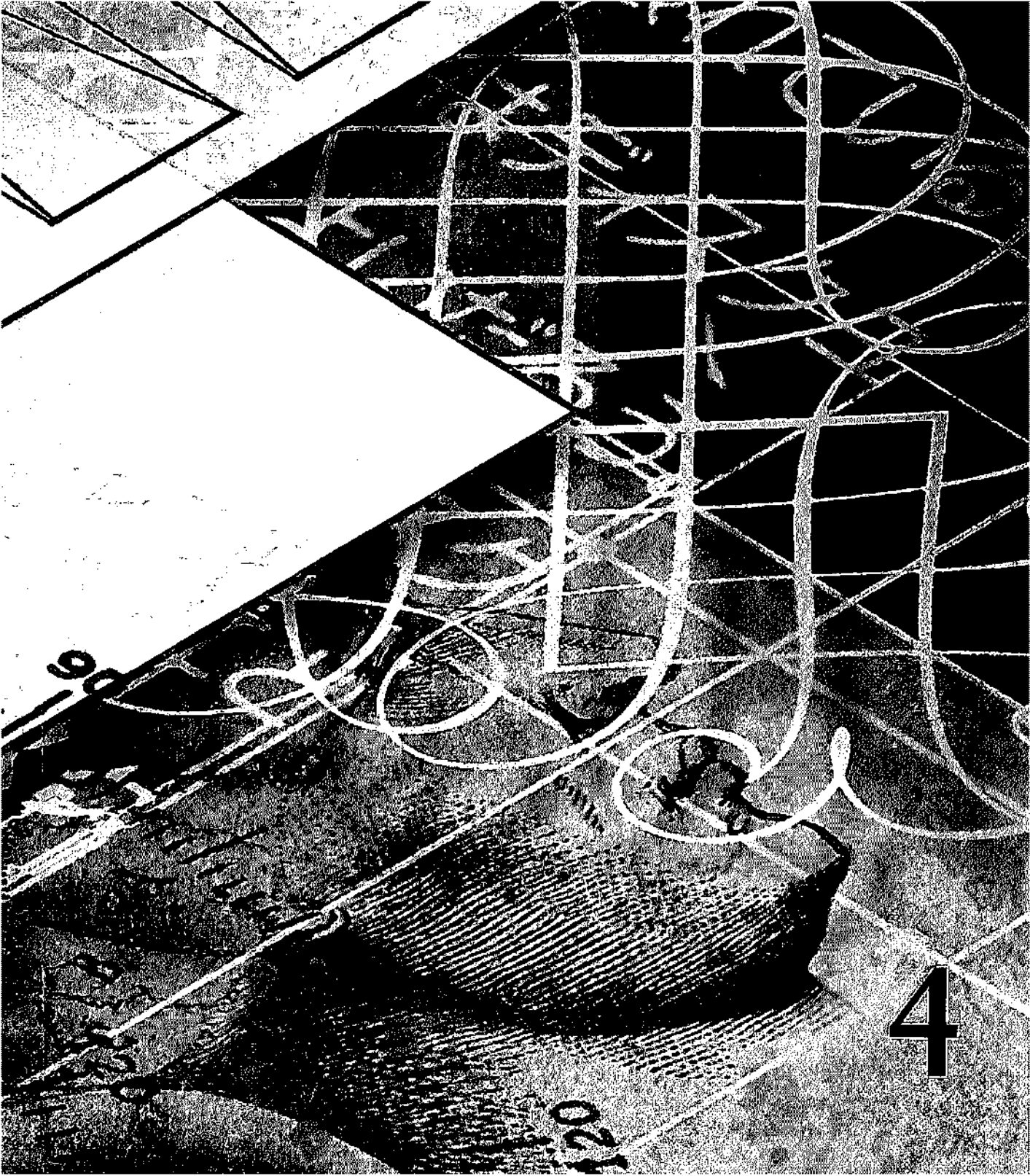
• To add the word, place an insertion point in the document.

• To replace a word in the document, select the word.

2 Do one of the following:

• (Windows and UNIX) Control-click the word in the Thesaurus dialog box and click Replace.

• (Macintosh) Command-click the word in the Thesaurus dialog box and click Replace.

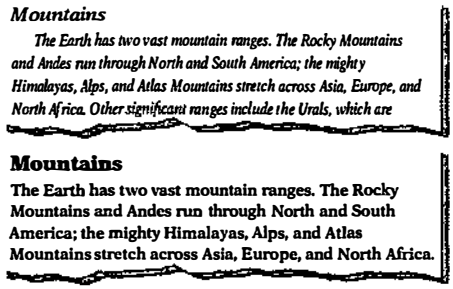

4



Chapter 4: Text Formatting

You can change the look of text either by applying predefined formats—which usually make several changes at once—or by changing one property at a time.

Each format is made up of many properties. When you use a paragraph format, you apply settings for indentation, alignment, font properties, automatic numbering, tab stops, hyphenation, word spacing, and so on. When you use a character format to change selected text within a paragraph, you can change a number of font properties of the text without changing the rest of the paragraph.



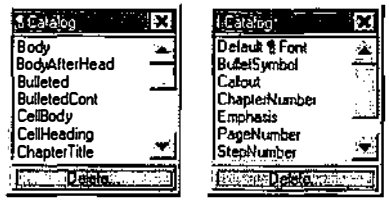
Each paragraph has properties that determine its appearance and position on the page.

Text format properties also include those used to create page breaks, numbered and bulleted lists, and straddle, side, and run-in heads.

This chapter describes how to apply predefined formats for whole paragraphs and for selected text. It also describes how to change specific text format properties and apply the changes.

About paragraph and character formats

Each document contains two text-related *catalogs:* a Paragraph Catalog and a Character Catalog. These catalogs, which appear in floating palettes, contain predefined *formats.*



Paragraph Catalog and Character Catalog

Applying formats from catalogs is the easiest way to change the look of text and to ensure that your documents are formatted consistently. This consistency simplifies making changes later as well as converting documents to other formats such as HTML.

The name of a format is its *tag.* You or a template designer defines the properties of a format, including its tag, in special dialog boxes called designers.

The formats in the Paragraph Catalog affect whole paragraphs; the formats in the Character Catalog affect any amount of selected text—usually just portions of paragraphs.

Applying predefined formats to text

Applying a predefined format from the Paragraph Catalog or the Character Catalog changes text to match the format's properties.

On looking towards the upper portion of the glacier, at the spot where it precipitates itself into the passage which conducts it to the valley like a furiously boiling cascade with wild

Body paragraph format applied

On looking towards the upper portion of the glacier, at the spot where it precipitates itself into the passage which conducts it to the

Same text, different format

An easy way to access predefined formats is to open a floating palette of formats, called a catalog, and leave it open to the side of your documents. Then, you need only click a format's name (its *tag*) to apply it.

A special entry in the Character Catalog lets you restore the default font to text. The *default font* is the font (and point size, style, and so on) used for a paragraph unless you explicitly change it.

You can also redefine the catalog format and then apply it to all the text in the document that's tagged with that format; see "Redefining (updating) formats" on page 109.

To display a catalog:

Do one of the following:

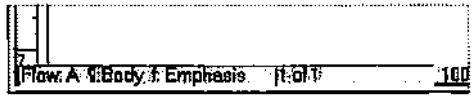
- To display the Paragraph Catalog, click ¶ in the upper right corner of the document window.
- To display the Character Catalog, click *f* in the upper right corner of the document window.

To apply a paragraph or character format:

1 Select the text you want to change by doing one of the following:

- To apply changes at the paragraph level, click in a paragraph or select several paragraphs.
- To apply changes at the character level (typically, to portions of a paragraph), select any amount of text. (Avoid selecting an entire paragraph. If you do, the character format you apply is considered a change to the paragraph's default font.)
- To apply changes only to the characters you are about to type, click in the paragraph without selecting any text.

2 Click a format in a catalog to apply that format to the selection. The Tag area on the left side of the status bar changes to show the new tag. For example, the selection might have a Body paragraph format and an Emphasis character format.




To apply a format from the keyboard, press Control+9 (for paragraph formats) or Control+8 (for character formats). At the status bar prompt, start typing the format's tag until the name appears. (Lowercase letters search forward; uppercase letters search backward.) You can also use the up arrow and down arrow keys to scroll through formats. Press Return to apply the format. To cancel, click in the document without pressing Return.

To restore the paragraph's default font:

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.

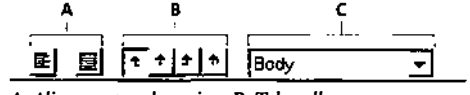
Changing text without using the catalogs

You usually format text by applying predefined formats to it from the Paragraph or Character Catalog. However, you can also change individual properties of a paragraph or a portion of a paragraph. If the resulting format doesn't match the corresponding predefined format in the catalog for that text, the format change is considered an *override* of that catalog format. For information, see "About format overrides" on page 82.

You can change individual properties in the following ways:

- You can use the Paragraph Designer to change or override any format properties for paragraphs (see "About format overrides" on page 82).
- You can use the Character Designer or commands on the Format menu—Font, Size, and Style—to change or override the character format of selected text or at the insertion point (see "Changing font properties" on page 83). You can also use the QuickAccess Bar to change many font properties (see page 36).
- You can copy a format, including any overrides, by choosing Edit > Copy Special > Paragraph Format or Character Format, and paste it elsewhere.
- You can use the formatting bar to change or override several paragraph properties.

The formatting bar contains pop-up menus and tab wells that you can use to set alignment, spacing, and tab stops. Any changes you make take effect immediately, changing the appearance of the text to reflect the new settings. Changes made using the formatting bar are often overrides to the format properties.



A. Alignment and spacing B. Tab wells
C. Paragraph format pop-up menu

To display or hide the formatting bar:

Do one of the following:

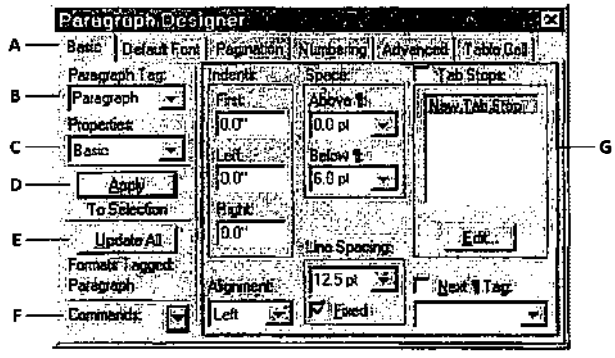
- (Windows) Choose View > Formatting Bar.

• (Macintosh and UNIX) If the rulers aren't already visible, display them by choosing View > Rulers and then clicking the formatting bar toggle (◓). Click the toggle again to hide the formatting bar.

Using the designers

There are two special dialog boxes for formatting text: the Paragraph Designer and the Character Designer. You can use these designers to change and create formats.

THE PARAGRAPH AND CHARACTER DESIGNERS The designers include several areas and commands for creating, changing, and overriding formats. The Paragraph Designer contains several groups of properties, displayed one at a time (it's shown here displaying the Basic group of properties). The Character Designer contains only one group.



A (Windows) Click a tab to display a group of properties.

B Choose from the Paragraph Tag pop-up menu to display the stored properties for that format.

C Choose from the Properties pop-up menu to display a group of properties.

D Apply all properties in all property groups (including the tag) to the current paragraph's format.

E Update all paragraph formats that have the same tag, including the format stored in the Paragraph Catalog.

F Choose commands for updating specific properties of selected paragraph formats.

G View or change the group's properties.

To display a designer:

Do the following:

- To display the Paragraph Designer, choose Format > Paragraphs > Designer.
- To display the Character Designer, choose Format > Characters > Designer.

To use a designer:

1 Display a group of formatting properties in the Paragraph Designer by choosing the group from the Properties pop-up menu, or, in Windows, by clicking a tab.

2 Make the changes to properties that you want. For an overview of the changes you can make, see "About format overrides" on page 82.

3 Click Apply To Selection.

Note: Click Apply To Selection when you want to override the format for the current paragraph. Click Update All only when you want to globally change (update) the format, as described in "Redefining (updating) formats" on page 109.

To reset properties after making some changes in a designer:

Do one of the following:

- To reset the properties to match the current selection, including any format overrides, click in text or choose Reset Window from Selection from the Commands pop-up menu.
- To reset the properties to match the stored format, choose the format from the Tag pop-up menu. Do this even if its tag is already displayed in the Tag text box.

Using As Is

The As Is setting can appear in the Paragraph, Character, or Table Designer, as well as in dialog boxes throughout FrameMaker. When properties are set to As Is in a designer, text boxes are blank, As Is appears in pop-up menus, and check boxes appear as in the following illustration.

	Selected	As Is	Deselected
Windows			
Macintosh			
UNIX			

Check boxes can be selected (on), As Is, or off. You may have to click a check box twice to set it to the state you want.

As Is has the following uses:

- As Is can indicate that selected items have different properties. For example, if you select a right-aligned paragraph and a left-aligned paragraph, the Alignment pop-up menu displays As Is.
- As Is lets you change some, but not all, of the properties when working in a designer. For example, if you want to change all headings from centered to left-aligned but want to leave the rest of their properties intact, you can set the rest to As Is, and then update all heading formats. For information, see "Redefining (updating) formats" on page 109.
- As Is lets you create character formats that specify the properties that won't be changed when you apply the format to text. In this case, the As Is

property is stored as part of the character format. For information, see "Creating new formats" on page 112.

Globally applying formats to text

You may occasionally need to apply a format globally to multiple paragraphs of your choosing. For example, you could retag all paragraphs currently tagged Head2 as Head1.

To globally apply a format to text:

1 To apply a format to text that has several different tags, select consecutive paragraphs or text items that have those tags. Otherwise, skip this step (that is, it makes no difference what is selected).

2 Display the Paragraph or Character designer, and then choose the format you want to apply from the Paragraph Tag or the Character Tag pop-up menu.

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

4 Do one of the following:

- To update all text and formats in the document, click All Paragraphs and Catalog Entries, or All Characters and Catalog Entries.
- To update all text in the selection and all paragraphs or text items that have the same tags as the selected paragraphs, click All Matching Tags in Selection.
- To update formats with a specific tag, choose a tag from the All Tagged pop-up menu.

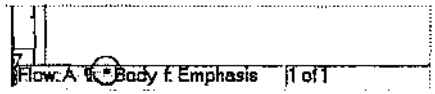
5 If you're retagging paragraphs, click All Properties in the Use Properties area.

6 Click Update.

About format overrides

When you make a text formatting change that doesn't match the text's predefined format, it is usually a format *override.*

FrameMaker indicates text format overrides by displaying an asterisk (*) next to the tag in the Tag area and in the Paragraph Format pop-up menu on the formatting bar.



An asterisk indicates a format override.

If you use the catalog formats to maintain consistency in a document, you'll probably want to avoid overrides. You can do this by applying formats from the catalogs or by redefining (updating) the catalog format to match the current text. For details, see "Applying predefined formats to text" on page 78 and "Redefining (updating) formats" on page 109.

If you're formatting quick, one-time-only documents, these format overrides pose no problem. For example, you may want a particular Body paragraph to function as a title of a memo without having to define and apply a new Title format. In such a case, you simply change the paragraph's format without updating the catalog format.

If you later update the catalog format, you can choose whether you want to retain format overrides. If you decide you want to create separate formats instead of using overrides, you can use File > Utilities > Create & Apply Formats (see "Changing format overrides to new formats" on page 430).

Many of the following sections discuss format properties you can override—for example, font properties (see the next section), indent and alignment properties (see page 87), tab stops (see page 88), spacing properties (see page 90), line breaks and hyphenation (see page 94), page breaks (see page 96), graphics as part of a paragraph format (see page 96), headings (see page 97), and autonumbering (see page 101).

Note: *When you apply font formatting to parts of a paragraph, that formatting is not considered an override to the paragraph format unless you apply it to the entire paragraph.*

Changing font properties

You can use either the Format menu or the Character Designer to change the font family, size, or style of selected text. You use the Paragraph Designer to change the default font properties of an entire paragraph. The font families and styles available depend on which fonts are installed.

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 change the font properties of text created with the Text Line tool as well as paragraph text.

Using font commands on the Format menu

Format changes you make using the Format menu commands take effect immediately. They are considered overrides when they don't match the font properties in the predefined formats.

To change font properties with Format menu commands:

Do the following:

- To change a font family, choose Format > Font and choose a font family from the list.
- To change a point size, choose Format > Size and choose a point size from the list. Choose Other to enter a point size not on the list.
- To change font style, choose Format > Style and choose a font style from the list. Many but not all of the choices that appear in the designers also appear here. To remove other style properties, choose Plain Text.

Note: *Even if a font has more than one weight—for example, Helvetica Condensed Bold and Helvetica Condensed Black—the Format > Style submenu will list only Bold. To choose other weights, use the Default Font properties of the Paragraph Designer or use the Character Designer instead.*

Using a designer to change font properties

Use the Paragraph Designer to change the default font properties of an entire paragraph. Use the Character Designer to change the font properties of specific text within a paragraph.

To change a font property using a designer:

1 Do one of the following:

• To change the default font properties of an entire paragraph, click in the paragraph, choose Format > Paragraphs > Designer, and then choose Default Font from the Properties pop-up menu in the Paragraph Designer.

• To change the font properties of specific text within a paragraph, select the text and choose Format > Characters > Designer.

• To change the font properties of text you will enter within a paragraph, click in the text and choose Format > Characters > Designer.

2 Change the settings in the designer. For information, see page 85.

3 Click Apply To Selection.


Using a designer to apply a capitalization style to text changes only the appearance of the text (for example, makes lowercase text appear in uppercase letters). To permanently change the text itself, use the Capitalization dialog box to replace selected text with text that is all uppercase, all lowercase, or initial caps. To display the dialog box, press Esc e Shift+c.

Adjusting superscripted, subscripted, and small cap text properties

Adjustments to the properties of subscript, superscript (including footnote references), and small cap text apply to all such text in the document.

To specify the size and shape of small caps or the size, shape, and placement of super- or subscripted text:

1 Choose Format > Document > Text Options.

2 Specify a size, offset, and stretch percentage.

When calculating the size and offset, FrameMaker multiplies the percentage you enter by the point size of the affected characters. For example, a 40% superscript offset value will raise a 10-point character 4 points.

The stretch percentage is the amount that characters are condensed or expanded. For information, see "Condensing and expanding characters," next.

3 Click Apply.


You can manually fine-tune the placement of superscripted or subscripted text by selecting it and then pressing Alt+arrow key (Windows), Option+arrow key (Macintosh), or Control+arrow key (UNIX).

Condensing and expanding characters

You can achieve some effects by stretching characters.

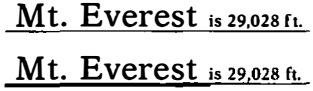
On looking towards the

On looking towards the

Text unchanged (top) and condensed 75% (bottom)

FONT CHANGES YOU CAN MAKE IN THE DESIGNERS You've probably seen many of the settings in other word processors, but a few may be new to you. The following list explains those that you may not be familiar with:

Numeric Underlining To use a single offset and thickness for an underline regardless of the character's font or size, choose Numeric Underlining. Neither regular nor numeric underlining affects tab characters. If you want the tab space to be underlined, format that tab stop so that it uses a nonbreaking space as a leader (see page 88).

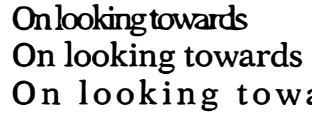


Numeric and regular underlining

Change Bar To display a change bar next to text, select Change Bar (see page 365).

Color To display the text in a different color, choose a color from the Color pop-up menu. If you defined your own colors, they appear in the pop-up menu.

Spread To add or subtract space between characters, enter a percentage for Spread. Spread (also called tracking) is expressed as a percentage of an em space. Normal spread is 0%.



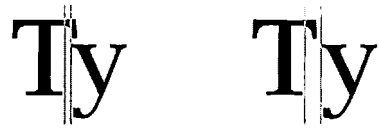
-10% spread (top), 0% spread (center), 10% spread (bottom)

Stretch To set the width of the character shapes, enter a percentage for Stretch (see page 84).

Capitalization To display all characters in uppercase but use slightly smaller capital letters for text that was in lowercase, choose Small Caps. For example, *Note* with the Small Caps property appears as NOTE.

Language To change the language associated with the text, choose from the Language pop-up menu. The language you choose affects the text in system variables as well as both spell-checking and hyphenation. For information, see page 67.

Pair Kern To adjust the space between two characters in the same word, select Pair Kern. Pair kerning also turns on ligatures, such as *fi* and *fl*, in printed documents (except in Windows, which does not support these ligatures). The kerning pairs and the ligatures that have been defined depend on the font. In UNIX, you can customize kerning pairs (see the online manual *Customizing FrameMaker Products*).



Kerning pairs turned on and off

Tsume To move a Japanese character closer to the characters next to it, select Tsume. (This option is available only when you can type Japanese text in documents and dialog boxes.) The amount of space a variable-width character (such as a parenthesis) can move is determined by the metrics for that character. For other ways to change spacing, see page 92.

Multiple Master (Macintosh) To define a new instance of a Multiple Master font, choose Multiple Master from the Weight or the Variation pop-up menu. Multiple Master appears in these pop-up menus only when a Multiple Master font is chosen in the Family pop-up menu.

To change the width of text precisely:

1 Do one of the following:

• To change the width of an entire paragraph, click in the paragraph, choose Format > Paragraphs > Designer, and then choose Default Font from the Properties pop-up menu.

• To change the width of specific text within a paragraph, select the text and choose Format > Characters > Designer.

2 Enter a percentage in the Stretch text box. A value of 100% means the width of characters is as defined for the font. A value less than 100% condenses the width; a value greater than 100% expands the width.

3 Click Apply To Selection.


In Japanese documents, use a stretch value greater than 100 to simulate *heitai* (horizontally stretched characters). Use a stretch value less than 100 and increase the point size of text to simulate *chotai* (vertically stretched characters).

To change the width of a text line by dragging:

1 Select the text line you want to change. You can also select a grouped object that includes a text line. (Be sure you select a text line and not a text frame. For information on text lines, see "Using text with graphics" on page 203.)

2 Drag one of its handles until the text is stretched to the shape you want. Dragging a corner handle changes the point size as well as the character width.

Working with combined fonts of Japanese and Western characters

In addition to containing the full Japanese syllabary, Japanese fonts include a set of Western characters to facilitate entering non-Japanese characters and numbers. You can define your own *combined font*—a font that uses a specified Western font with a specified Japanese font. For example, you can create a font that uses Mincho for Japanese characters but switches to Palatino for Western characters.

If you're working on a system that supports Japanese text and if combined fonts are included as part of a template, they will be available to you automatically as long as the specified fonts are installed. If your system supports the typing of Japanese text in documents and dialog boxes, combined fonts appear at the top of the font lists along with regular Western and Japanese ones.

To create or change a combined font:

1 Choose Format > Document > Combined Fonts. (This command will appear only if your system supports the typing of Japanese text in documents and dialog boxes.)

2 Do one of the following:

• To create a new combined font, enter a name in the Combined Font Name text box.

• To change a combined font, select its name from the Combined Fonts list.

3 Do the following:

• To specify the Japanese font, choose from the pop-up menu of font families in the Asian Text area.

• To specify the Western font, choose from the pop-up menu of font families in the Western Text area.

• To adjust the relative size and baseline offset of the Western text, enter values for Size and Offset. The size and offset of the Western text are percentages of the Asian point size. Use a negative offset to move the text below the baseline.

4 Do one of the following:

• To create a new combined font, click Add.

• To finish editing a combined font, click Change.

5 Click Done.

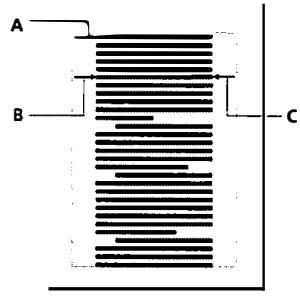
To copy a set of combined fonts:

Choose File > Import > Formats and select Combined Fonts. For details on importing formats from one document to another, see "Importing and updating formats in a document" on page 295.

Changing indents and alignment

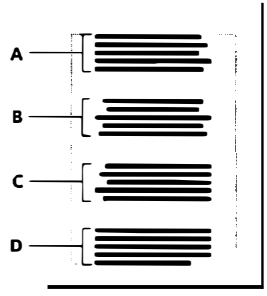
The left and right indents of a paragraph determine where the paragraph's left and right edges are positioned. Text lines up against both these edges when it's justified, and against one when it's left or right aligned.

You can specify different indents for the first line of a paragraph and for all lines after the first to achieve special effects such as a hanging indent.



A. First indent B. Left indent C. Right indent

The alignment property of a paragraph determines how the paragraph is positioned between the left and right indents (not between the edges of the text column).

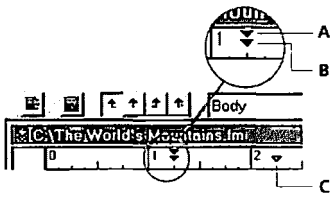


A. Left aligned B. Centered C. Right aligned D. Justified

To indent a paragraph using the ruler:

1 Click in the paragraph—or select the paragraphs—you want to indent.

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



A. First indent B. Left indent C. Right indent

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

To indent a paragraph using an indent value:

1 Click in the paragraph—or select the multiple paragraphs—you want to indent.

2 Display the Basic properties of the Paragraph Designer and enter the indents you want in the First, Left, and Right text boxes, and then click Apply To Selection. (A hanging indent uses a smaller value in the First text box than in the Left text box.)

To set a paragraph's alignment:

1 Click in the paragraph—or select the multiple paragraphs—whose alignment you want to set.

2 Do one of the following:

- Display the formatting bar and choose an alignment from the Alignment pop-up menu.
- Display the Basic properties of the Paragraph Designer, choose from the Alignment pop-up menu, and click Apply To Selection.

Changing tab stops

You can use tab stops to align text at specific places.

Changing or creating a tab stop is a two-step process. First, you need to define a tab stop. Then, you press the Tab key in a document to move the insertion point to the defined tab stop. If you press Tab and the insertion point doesn't move, a tab stop needs to be defined.

Tab stops will already be defined for many paragraph formats. To change the predefined tab stops, you can change the format by using the formatting bar or the Paragraph Designer.

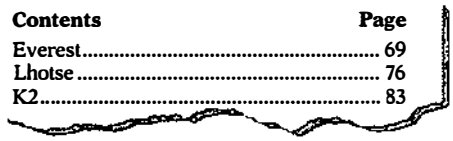
You can choose from four types of tab stops—left, center, right, and decimal.

A	B	C	D
Everest	Everest	Everest	2.6794
Lhotse	Lhotse	Lhotse	293.1
K2	K2	K2	18.36

A. Left tab stop B. Center tab stop C. Right tab stop D. Decimal tab stop

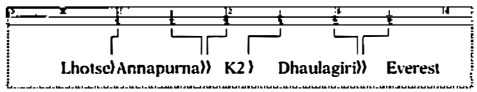
You can also specify a pattern of characters—a leader—to fill the space between a tab and the character following it. Typically, a leader is a series

of periods, but you can use any character or any series of characters. Tab leaders are useful in tables of contents that have a wide gap between columns.

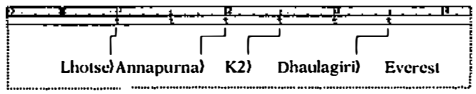


Tab leaders

Note: *Unlike word processors, FrameMaker uses tab stops that are absolute rather than relative. With relative tab stops, each time you press Tab, the insertion point moves to the next available tab stop. With absolute tab stops, the nth tab on a line moves the insertion point to the nth stop. If no corresponding tab stop is defined, FrameMaker's tab does nothing (the tab symbol overlays the current character).*



With FrameMaker's absolute tabs, you insert three tabs to move text (K2) to the third tab stop.



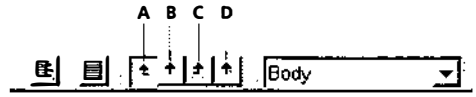
With relative t bs, one or two tabs can move text to the third tab stop.

To add, move, edit, or delete a tab stop using the formatting bar:

1 Click in a paragraph or select multiple paragraphs, and display the formatting bar. If you selected several paragraphs, only the tab stops common to all the selected paragraphs appear in the formatting bar.

2 Do one of the following:

- To add a tab stop, drag a tab stop symbol from the appropriate tab well on the formatting bar to the desired position below the top ruler.



A. Left B. Center C. Right D. Decimal

- To move a tab stop, drag it to a new position. FrameMaker moves tabbed text in the paragraph from the existing tab stop to the new position.



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

- 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. Enter the interval between tabs in the Repeat Every text box and click Edit.
- To change a tab stop, double-click it, enter 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.) Then click Edit. You can also drag a new tab stop on top of an existing one on the ruler to replace it.
- To delete a tab stop, drag it off the bottom of the top ruler.
- To delete all tab stops, double-click a tab stop and click Delete All.

To add, edit, or delete a tab stop using the Paragraph Designer:

1 Click in the paragraph—or select the multiple paragraphs—you want to change.

2 Display the Basic properties of the Paragraph Designer.

3 In the Tab Stops area, do one of the following:

- To add a new tab stop, double-click New Tab, make the desired settings, and click Continue.
- To edit a tab stop, double-click it, change the settings, and click Continue.
- To delete a tab stop, double-click it and click Delete.
- To delete all tab stops, double-click any tab stop and click Delete All.

4 Click Apply To Selection.

To define a leader for a tab:

1 Double-click the tab stop on the ruler.

2 In the Leader area of the dialog box, click one of the predefined tab leaders or enter your own custom leader.

3 Click Edit.

To specify a decimal tab character:

1 Double-click the tab stop on the ruler.

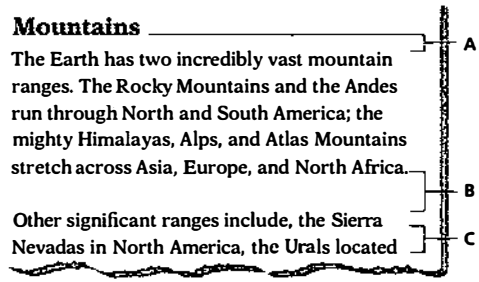
2 Enter the decimal character in the Align On text box in the Alignment area and click Edit. For example, you can use a comma when you're working with European decimals.

Changing spacing

You can control the space between paragraphs and lines (vertical spacing) and the space between words and characters (horizontal spacing). Spacing properties go by different names in different contexts. For example, the space between characters is often called *pair kerning;* adjusting the letter space in a line is *spread* or *tracking;* and the *line spacing* of a paragraph (measured from the baseline of one line to the baseline of the next) includes its *leading*.

Adjusting vertical spacing

Several properties affect the vertical spacing of a paragraph, as the following illustration shows.



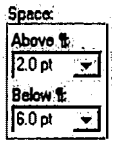
A. Space above paragraph B. Space below paragraph C. Line spacing

In a multicolumn layout, you can also adjust vertical spacing in columns by feathering (vertically justifying) the text in them. For information, see "Feathering text to the bottom of text frames" on page 271.

To change the space above and below a paragraph:

1 Click in a paragraph or select several paragraphs whose spacing you want to change.

2 Display the Basic properties of the Paragraph Designer and enter a value in the Space Above and Space Below text boxes, or choose values from the pop-up menus. (The space between paragraphs is determined by the Space Below setting of the first paragraph or the Space Above setting of the second paragraph, 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.

Note: *When an anchored frame is positioned below the current line and its anchor symbol appears in the last line of a paragraph, the space below the paragraph usually appears between the frame and the next paragraph. However, if the frame is anchored in a straddle paragraph, the space below is discarded. And if the frame is a straddle frame but is not anchored in a straddle paragraph, the space below appears between the anchor symbol and the frame.*



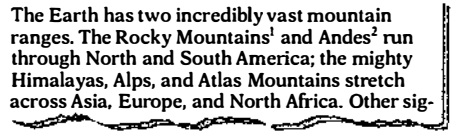
If you know the space you want between paragraphs but don't want to use the Paragraph Designer, select the paragraphs and choose Space Between from the Spacing pop-up menu on the formatting bar.

To change the space between lines of a paragraph:

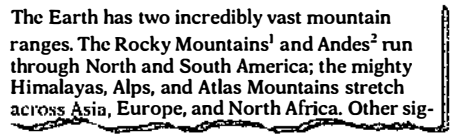
1 Click a paragraph or select several paragraphs whose spacing you want to change.

2 Display the Basic properties of the Paragraph Designer and choose a type of line spacing from the Line Spacing pop-up menu, or enter a value in the text box. (You can also choose from the Spacing pop-up menu on the formatting bar.)

3 To allow extra space between lines to accommodate superscripts, subscripts, rubi text, and larger font sizes that may appear in the paragraph, turn off Fixed.



Fixed line spacing



Line spacing not fixed

4 Click Apply To Selection.

Adjusting horizontal spacing

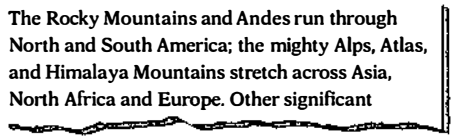
As FrameMaker fills a line of text, it adjusts the space between characters according to kerning and tracking properties. The spacing between words is based on the following values, which are stored as part of the paragraph format:

- The *minimum* spacing is the smallest space allowed between words.

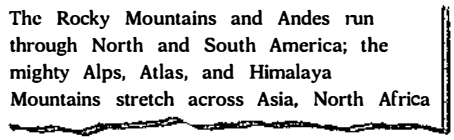
• The *maximum* spacing is the largest space allowed between words before FrameMaker tries to hyphenate words or add space between letters in justified paragraphs.

• The *optimum* spacing is what FrameMaker tries to achieve.

These values are expressed as a percentage of the standard space character for the paragraph's default font. Values below 100% create tighter word spacing; values above 100% create looser spacing.



Tight word spacing has a more justified look.



Looser word spacing has a more ragged right edge.

To adjust the space between words:

1 Click a paragraph or select several paragraphs whose spacing you want to change.

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

3 Click Apply To Selection.

Note: *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 avoid this, add extra space between characters in justified text by choosing Allow Automatic Letter Spacing in the Word Spacing area.*

To apply character spacing (pair kerning):

Select the Pair Kern option, as described in "Using a designer to change font properties" on page 83.

To apply spread (tracking):

Change the Spread, as described on page 85.

Adjusting spacing in Japanese documents

If your system supports the typing of Japanese text in documents and dialog boxes, you can adjust the following spacing properties:

• You can use a special group of properties in the Paragraph Designer to control some aspects of Japanese character spacing.

• You can also change the size, spacing, and alignment of rubi text throughout a document.

• You can affect the spacing of variable-width Japanese characters by selecting the Tsume font property (see page 85).

These properties can be part of a predefined format, but you can change that format for particular paragraphs if you need to.

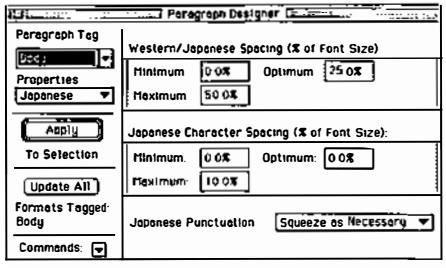
Adjusting the space around characters and punctuation

You can change the space between Japanese and Western characters, and also the spacing between Japanese characters.

To adjust the space between Japanese characters:

1 Click a paragraph or select several paragraphs whose spacing you want to change.

2 In the Paragraph Designer, display the Japanese properties. (If you're working in a Chinese or Korean interface, the property group's name is Chinese or Korean.) This group of properties is available only if your system supports the typing of Japanese text in documents and dialog boxes.



3 Do the following:

- To adjust the space between Japanese characters and Western ones, enter minimum, maximum, and optimum percentages in the upper group of text boxes.
- To adjust the space between Japanese characters, enter minimum, maximum, and optimum percentages in the lower group of text boxes.
- To determine the space between characters and special punctuation characters (yakumono), choose from the Punctuation pop-up menu. Squeeze as Necessary means space around punctuation is reduced only when special punctuation handling (kinsoku shori) occurs; Never Squeeze means no space adjustment is made around punctuation; and Always Squeeze means space is always reduced around punctuation.
- To achieve a monospaced look in Japanese text, choose Never Squeeze from the Punctuation pop-up menu and turn off Tsume (see page 85).

Adjusting rubi text size, placement, and spacing

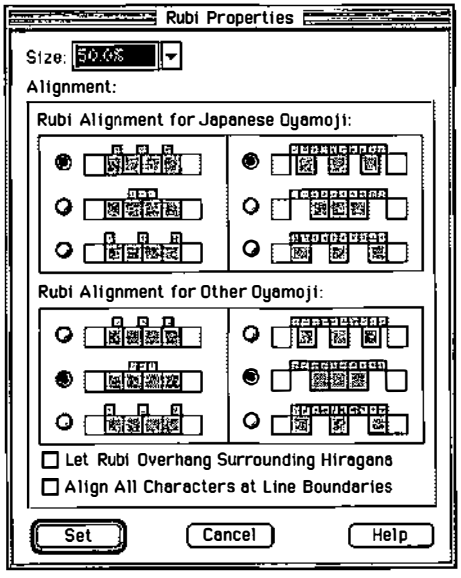
Rubi text is made up of small characters (usually kana) appearing above other text, called oyamoji. You can control the size of the rubi text as well as how it is spaced and aligned with respect to its underlying oyamoji text. Your settings affect rubi text throughout a document.



A. Rubi text B. Oyamoji text

To adjust the size, placement, and spacing of rubi text:

1 Choose Format > Document > Rubi Properties. This command is available only if your system supports the typing of Japanese text in documents and dialog boxes.



2 Choose a value from the Size pop-up menu or enter a value in the text box. The value you enter can be a percentage of the point size of the underlying oyamoji (such as 50%), a point size (such as 8pt), or any other unit of measurement, including Q units.

3 Do the following:

- To let rubi text overhang non-oyamoji text if it needs to, click Let Rubi Overhang Surrounding Hiragana.
- To remove preceding or trailing space when rubi text appears at the start or end of a line, click Align All Characters at Line Boundaries.

4 Click an option in the Rubi Alignment for Japanese Oyamoji area. The illustrations in the dialog box show how rubi text will be spaced and aligned when it's above Japanese characters and when its length is less than or greater than the underlying Japanese text.

5 Click an option in the Rubi Alignment for Other Oyamoji area. The illustrations in the dialog box show how rubi text will be spaced and aligned when it's above non-Japanese text and when its length is less than or greater than the underlying text.

6 Click Set.

Changing hyphenation and line breaks

When FrameMaker hyphenates text, it breaks words at the ends of lines so that the lines are approximately the same length. Hyphenation can be part of the paragraph format, but you can change that format for particular paragraphs if you need to.

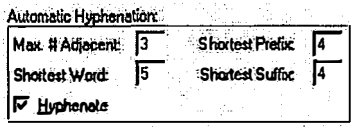
In addition to automatic hyphenation, you can hyphenate words and adjust line breaks manually.

Note: *Line break settings apply to Western text only. You can modify how lines break in Japanese text by modifying a MIF template (see the online manual* MIF Reference*).*

To change automatic hyphenation in paragraphs:

1 Click in a paragraph or select several paragraphs whose hyphenation you want to change.

2 Display the Advanced properties of the Paragraph Designer and do the following in the Automatic Hyphenation area:



- To let FrameMaker hyphenate the paragraph, select Hyphenate.
- To specify the maximum number of consecutive lines that can end with a hyphen, enter a value in the Max. # Adjacent text box.
- To specify the minimum length of a hyphenated word, enter a value in the Shortest Word text box.
- To specify the minimum number of letters that can precede and follow a hyphen, enter values in the Shortest Prefix and Shortest Suffix text boxes, respectively.

3 Click Apply To Selection.


To prevent the last word in a paragraph from hyphenating, set the maximum number of adjacent hyphens to 0 or choose None for the language for that word in the Character Designer. (However, setting language to None prevents the word from being spell-checked.)

To change the hyphenation of a word:

1 Click in the word you want to change.

2 Do the following:

- To add a discretionary hyphen—an allowed hyphenation point—at the insertion point, press Control+hyphen (Windows and UNIX) or Command+hyphen (Macintosh). A discretionary hyphen symbol (¬) appears above the word when text symbols are visible.
- To specify that the current word not be hyphenated, press Esc n s. A suppress hyphenation symbol (_) appears under the word when text symbols are visible. (In dialog boxes, you may need to enter a special code for the suppress hyphenation symbol; see Appendix A, "Typing in Dialog Boxes.")
- To enter a hyphen that will not be allowed to fall at the end of a line (a nonbreaking hyphen), press Esc hyphen h. (In dialog boxes, you may need to enter a special code for the nonbreaking hyphen; see Appendix A, "Typing in Dialog Boxes.")

To add or remove hyphenation points in a word anywhere in a document:

Use the Spelling Checker. For details, see "Checking spelling" on page 64.

To force a line break:

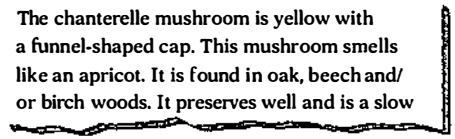
Click where you want to break the line and press Shift+Return. A forced return symbol (↵) appears at the end of the line when text symbols are visible.

To keep two words together on the same line:

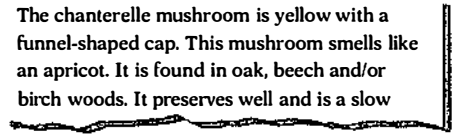
Select the space between the two words and press Control+space (Option+space on the Macintosh). FrameMaker places a nonbreaking space symbol (␣) between the words.

To specify the characters that can precede a line break:

Choose Format > Document > Text Options, enter the characters in the Allow Line Breaks After text box, and click Set. For example, you might want to remove the slash character from the list if you use terms such as *and/or*.



Default line breaks



Modified line breaks

Changing page and column breaks

FrameMaker breaks text across pages according to the settings stored in the document's paragraph formats, but you can change that format for particular paragraphs if you need to. The page-break controls in the paragraph formats make up a document's page-breaking rules—for example, that a heading must be followed by at least three lines of text on the same page.

To control where a paragraph starts:

1 Click in the paragraph you want to change.

2 Display the Pagination properties of the Paragraph Designer and do the following:

- To start a paragraph at the top of the next column, next page, next left page, or next right page, choose from the Start pop-up menu.
- To let a paragraph start anywhere, removing any special page break, choose Anywhere from the Start pop-up menu.
- To keep the paragraph in the same column as the next or previous paragraph, select Next ¶ or Previous ¶, or both. These properties keep the end of one paragraph together 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.
- To set the minimum number of widow lines and orphan lines—lines isolated at the top or bottom of a column—enter a value in the Widow/Orphan Lines text box. (To keep all lines of a paragraph in the same column, specify a large number, up to 100, for the Widow/Orphan Lines setting.)

3 Click Apply To Selection.

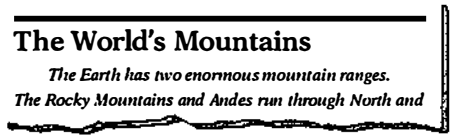


You can also set the Start property using the Special > Page Break command. Settings you make using this command appear as changes to the paragraph format just as if you had used the Paragraph Designer.

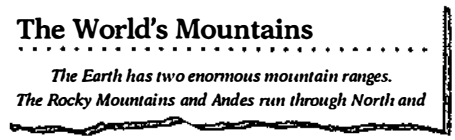
Adding graphics to paragraph formats

A paragraph format can include a line or other graphic that appears above or below a paragraph, but you can change that format for particular

paragraphs if you need to. For example, all top-level headings in a document might rest on a long thin line.



Graphic above



Graphic below

To put a graphic above or below a paragraph:

1 On a reference page, draw or import the graphic in a reference frame, or locate one already there that you want to use. For information on creating reference frames, see "Using reference frames on reference pages" on page 282.

2 Click in the paragraph you want to change. To put a line above or below several adjacent paragraphs, select all the paragraphs.

3 Display the Advanced properties of the Paragraph Designer and choose the name of a reference frame from the Frame Above ¶ or from the Frame Below ¶ pop-up menu. All reference frames appear in the pop-up menus.

4 Click Apply To Selection.



Because the Frame Above ¶ and the Frame Below ¶ settings can't place graphics to the right or left of a paragraph, you can't use these settings to put boxes around text. However, you can box text by using a single-cell table with outside ruling (see Chapter 5, "Tables").

Specifying formats for the paragraphs that follow

Well-designed templates often connect formats so that FrameMaker automatically applies a format to the paragraph that follows the current one—that is, to the new paragraph created when you press Return. For example, you can specify that a Body format follow a Head1 format, so that the next paragraph will be tagged Body when you press Return in a Head1 paragraph. If you press Return with this setting blank, FrameMaker applies the current paragraph's format to the new paragraph.

To specify a format for the paragraph that follows:

1 Click in the paragraph.

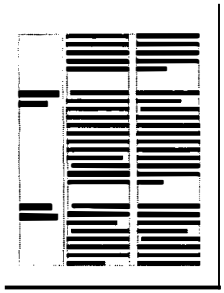
2 Display the Basic properties of the Paragraph Designer and choose a tag from the Next ¶ Tag pop-up menu. FrameMaker applies this tag when you press Return to create a new paragraph.

3 Click Apply To Selection.

Formatting text as headings

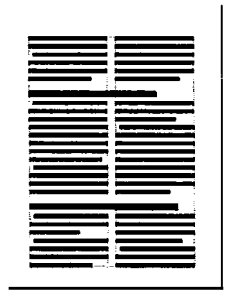
Paragraph formats include properties for creating the following types of special headings.

Side head Side heads stand to the side of the normal body text, so they are prominent and easy to scan. You can use them to create marginal notes or other types of text that you want to display outside of the normal body text.



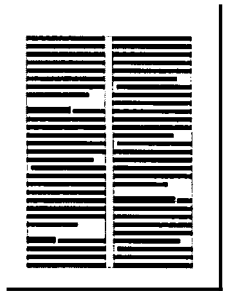
Side heads

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



Straddle heads

Run-in head Although run-in heads are 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.



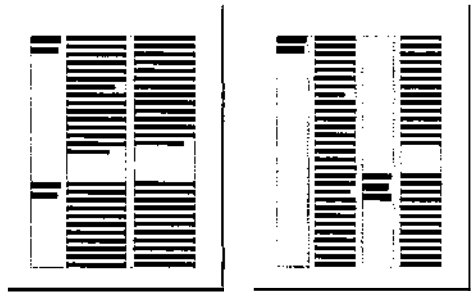
Run-in heads

Heading styles are part of a document's paragraph formats, but you can change that format for particular paragraphs if you need to.

Creating side heads

If you want a document to use side heads, you start by defining a side-head area in its layout. A side-head area is set up 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.

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, multicolumn text frame and in separate single-column text frames

To set up or change a side-head area:

1 Click in the text flow that you want to change to have a side-head area, or click in the text frame that has a side-head area you want to change.

2 Do the following:

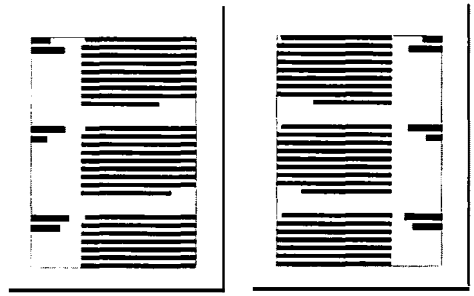
• To create or change the side-head area for the entire document, choose Format > Page Layout > Column Layout.

• To change the side-head area for a single text frame, click in the text frame and choose Format > Customize Layout > Customize Text Frame.

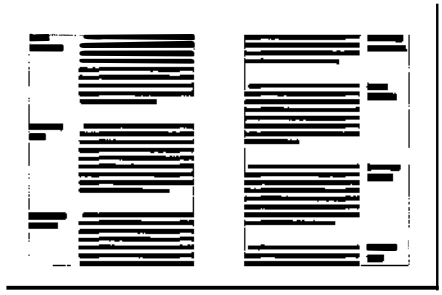
3 Select or turn off Room for Side Heads. This setting always applies to the entire flow, even if you are changing side-head settings for a single text frame.

4 Specify the width of the side-head area and the gap between the side-head and body-text areas. (The space above 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.)

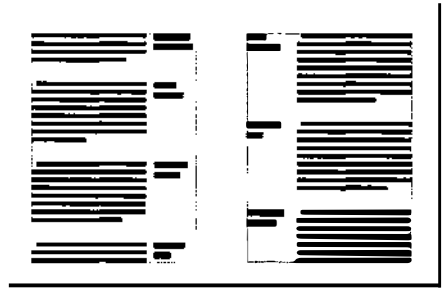
5 Choose an option from the Side pop-up menu to determine where you want side heads to appear.



Left side and Right side



Side Farther from Binding

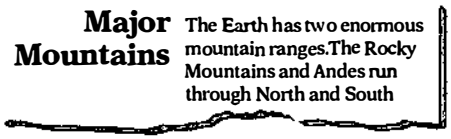


Side Closer to Binding

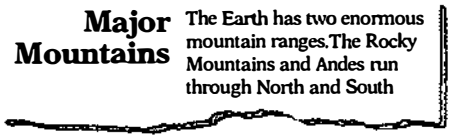
To create a side head:

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

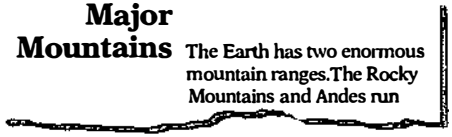
2 Display the Pagination properties of the Paragraph Designer, click Side Head, and choose an option from the Side Head Alignment pop-up menu.



First baseline alignment



Top edge alignment



Last baseline alignment

3 Click Apply To Selection.

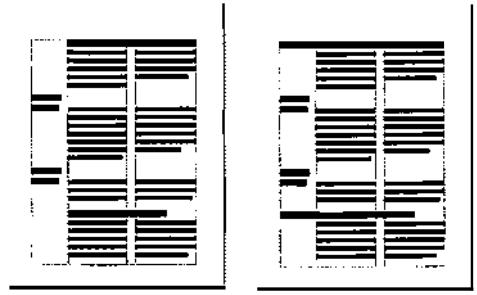
Creating straddle heads

Straddle heads span columns in a multicolumn text frame. When a heading paragraph straddles columns, the text above the heading is balanced across the columns.

To create a straddle head:

1 Click in the paragraph you want to change.

2 Display the Pagination properties of the Paragraph Designer and click Across All Columns or Across All Columns and Side Heads.



Across All Columns (left) and Across All Columns and Side Heads (right)

3 Click Apply To Selection.

Creating run-in heads

Because run-in heads have the same margins and are on the same line as normal body text, they typically have a different font or weight for contrast. They may also use a punctuation mark to set them off from the text that follows. If you find that the default punctuation is not suitable, you can easily override it with a new one on a case-by-case basis.

All of this is defined in the paragraph format, but you can change that format for particular paragraphs if you need to.

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

To create or change a run-in head:

1 Click in the paragraph you want to change. If the paragraph is already a run-in head, it will be on the same line as the paragraph following it; for this reason, be sure to click carefully.

2 Display the Pagination properties of the Paragraph Designer and click Run-In Head and, if necessary, enter the punctuation, space, or combination of punctuation and space that you want to use.

3 Click Apply To Selection.

4 Display the Default Font properties and change the run-in head's font so that it stands out from the surrounding text, if you want.

5 Click Apply To Selection.

To override the punctuation for a run-in head:

Enter the punctuation you want after you've typed the run-in head. FrameMaker ignores the punctuation specified in the Default Punctuation textbox but retains any special characters that are part of the default, including em and en spaces. For example, if the default punctuation is a period, you can override this by typing a colon at the end of the run-in head.

About numbered and bulleted lists

You create numbered and bulleted lists by using paragraph formats that have an autonumber format defined. As you add autonumbered paragraphs to your document, FrameMaker numbers them appropriately and renumbers existing autonumbered paragraphs if necessary.

Autonumbered paragraphs are numbered consecutively in a text flow. If your document contains several text flows, autonumbered paragraphs in each flow will be independent of the others.

You define autonumbering in the Numbering properties of the Paragraph Designer. An autonumber format can include a series label, a counter, tabs, and any additional text you need.

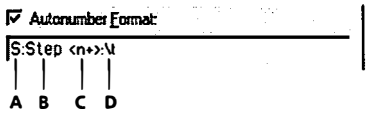
Note: *An autonumber format does not have to specify paragraph numbering. When used without building blocks, the "autonumber" format is a handy way to insert automatic text or symbols. For example, it can autoinsert a bullet symbol or the word* Note.

Series label Series labels identify different types of autonumber series within the same text flow. For example, if you want to number figures independently of tables or headings, you would specify a different series for each. (But each set of steps, for example, would *not* be a different series.)

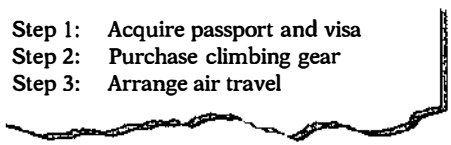
On the other hand, table and figure numbers must all be in the same series to be based on section numbers.

Counter A counter is a placeholder (*building block*) that FrameMaker replaces with a number or letter in the autonumber. For example, the counter <n+> increments the paragraph's number by 1; 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 details on counters, see "Using counters in autonumber formats" on page 104.

Tabs, text, and punctuation An autonumber format can also include tabs, text, bullets, spaces, or punctuation.



Autonumber format: A. Series label B. Text C. Counter D. Tab



Numbered list

You can change the autonumber format for particular paragraphs if you need to, or you can create your own format.

Formatting text as numbered lists

You create a numbered list by using paragraph formats that include numbering—in the form of special building blocks, called counters—in their autonumber formats.

Creating a numbered list sometimes involves formatting the first item in the list with a paragraph format that resets the counter to 1, and then formatting the remaining items with a different format that increments the counter. For example, you might apply a Step1 format to the first item in a list and then StepNext to the rest. Formats can also be defined in a way that lets you apply a single format to all items in a numbered list. The choice lies with the template designer. (For information, see "Resetting a series" on page 106.)

To create a numbered list:

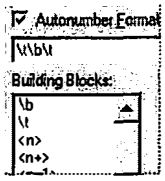
1 Select adjacent paragraphs that you want to autonumber. To change a single paragraph to be part of a numbered list, click in the paragraph.

2 Display the Numbering properties of the Paragraph Designer and enter a series label in the Autonumber Format text box if you need more than one autonumber series in the document.

A series label consists of any single printable character followed by a colon (for example, *S:*). If you use a series label, it must appear at the beginning of the format.

3 Specify the rest of the autonumber format. Enter any text you want to have appear automatically with the autonumber format. You can enter tabs or counters from the Building Blocks scroll list. When you select an item, it appears at the

insertion point in the Autonumber Format text box. For information on counters, see "Using counters in autonumber formats" on page 104.



Note: *You may have to use special codes to enter characters such as nonbreaking spaces, em spaces, and curved quotation marks. For information, see Appendix A, "Typing in Dialog Boxes."*

4 Select a Character Format for the autonumber in the Character Format scroll list. If you don't specify a format, the autonumber appears in the paragraph's default font.

5 Choose a position for the autonumber from the Position pop-up menu. Autonumbers at the end of paragraphs are rare except in equation formats.

6 Click Apply To Selection.

7 If you inserted a tab (\t) in step 3, set a corresponding tab stop for the paragraph format. For details, see "Changing tab stops" on page 88.

To remove autonumbering from a paragraph:

1 Click in a numbered list and then turn off Autonumber Format in the Numbering properties of the Paragraph Designer. You must click the check box twice to turn off the setting; clicking it only once changes it to As Is.

2 Click Apply To Selection.

Formatting text as bulleted lists

You create a bulleted list by using paragraph formats that include a bullet symbol in their autonumber format.

In addition to the regular bullet symbol (•) found in all text fonts, you can use any character in any installed font, including a dingbat font such as Zapf Dingbats. For example, you could define a Zapf Dingbats square (■) as a bullet symbol.

To create a bulleted list:

1 Select adjacent paragraphs that you want to make into a bulleted list. To change a single paragraph to be part of a bulleted list, click in the paragraph.

2 Display the Numbering properties of the Paragraph Designer and click the bullet and tab symbols (\b and \t) in the Building Blocks scroll list. (On the Macintosh, the bullet symbol is • instead of \b.) Or you can use spaces rather than a tab.

3 Click Apply To Selection.

4 If you inserted a tab (\t) in step 2, set a corresponding tab stop for the paragraph format. For details, see "Changing tab stops" on page 88.

To remove a bullet from a paragraph:

1 Click in a bulleted list and then turn off Autonumber Format in the Numbering properties of the Paragraph Designer. You must click the check box twice to turn off the setting; clicking it only once changes it to As Is.

2 Click Apply To Selection.

To use a special bullet symbol:

1 Create a character format that uses the font of the bullet symbol you want to use. For example, to use 9-point Zapf Dingbats, create a character format using that font. Give the format a descriptive name such as BulletFont.

For information on creating character formats, see "Creating new formats" on page 112.

2 Display the Numbering properties of the Paragraph Designer and enter 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, enter the lowercase letter *n*, which appears as (■) in that font. To find the character that corresponds to the bullet symbol you want, see the character set for that font (see the online manual *FrameMaker Character Sets* for the character sets for the Symbol and Zapf Dingbats fonts).

3 Click the tab symbol (\t) in the Building Blocks scroll list or enter spaces.

Note: *You may have to use special codes to enter characters such as nonbreaking spaces or em spaces. For information, see Appendix A, "Typing in Dialog Boxes."*

4 In the Character Format scroll list, click the bullet character format that you created.

5 Click Apply To Selection.

Using counters in autonumber formats

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



A. *Display style* ***B.*** *Increment value*

To indicate the display style, use a counter with one of the following 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 an increment value, as shown in the following examples.

To	Use
Keep the value the same	<n>
Set the value to 1 or to any other number you enter after the equal sign	<n=1>
Increase the value of the counter by 1	<n+>
Keep the value the same but not display it	< >
Reset to zero (or any other number) but not display it	< =0>

By default, each counter is initially set to zero, but you can specify a different initial value. Thereafter, the counter can maintain its current value, be incremented by 1, or be reset to a different value. For example, use <n=1> in the format that resets numbering to 1 at the beginning of a new set of numbered steps.

To keep the value the same but not display it, put a blank space between the angle brackets. If you leave out the blank space, the angle brackets appear as part of the autonumber format.

Using multiple counters in an autonumber format

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

These counters	In this format	Would appear as
<n+>.<n=0>	Head1	1.0
<n>.<n+>	Head2	1.1
<n>.<n+>	Head2	1.2
<n+>.<n=0>	Head1	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.

The following example shows multiple counters in section titles and subtitles. The counter before the period is incremented independently from the counter after the period.

Example	Autonumber format	Tag
1.0 Getting started	<n+>.<n=0>\t	Head1
1.1 Installing	<n>.<n+>\t	Head2
1.2 Backing up	<n>.<n+>\t	Head2
2.0 Entering data	<n+>.<n=0>\t	Head1

The following example uses as many as three counters in a single format.

Example	Autonumber format	Tag
1.0 Getting started	<n+>.<n=0>\t	Head1
1.1 Installing	<n>.<n+>\t	Head2
1.2 Backing up	<n>.<n+>\t	Head2
1.2.1 Errors	<n>.<n>.<n+>\t	Head3
1.3 Entering data	<n>.<n+>\t	Head2

The following example demonstrates outline style autonumber formats.

Example	Autonumber format	Tag
I Getting started	<R+>< =0>\t	Head1
A Installing	< ><A+>\t	Head2
B Backing up	< ><A+>\t	Head2
II Entering data	<R+>< =0>\t	Head1
A Opening a file	< ><A+>\t	Head2
B Saving a file	< ><A+>\t	Head2

The autonumber in the heading *Opening a File* is reset to A; the second counter in the previous paragraph's format resets the numbering to zero (without displaying it), so <A+> increments the counter to 1 (or A, the first letter of the alphabet).

The < > counter in the Head2 format keeps the value of the first counter the same but doesn't display it. If the < > counter were not in that position, the <A+> in the Head2 format would refer to the first counter (not the second), and FrameMaker would produce the following result.

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

Resetting a series

Some numbering series—such as a list of numbered steps—start at 1 every time they are used. You can reset such a series in two ways, as illustrated in the next two examples.

The first example shows how to restart series numbering by using the <n=1> building block in the format for the first step in the series, and then using <n+> in the format for subsequent steps.

Example	Autonumber format	Tag
Step 1. Unpack it.	S:Step <n=1>.\t	Step1
Step 2. Back it up.	S:Step <n+>.\t	StepNext
Step 3. Run setup.	S:Step <n+>.\t	StepNext
Step 1. Save your file.	S:Step <n=1>.\t	Step1

The second example shows another way to reset the counter so that you don't have to use a unique format to start a numbered list. Instead, a paragraph that introduces the list uses a format that resets the counter.

Example	Autonumber format	Tag
To install the software:	S:< =0>	StepIntro
Step 1. Unpack it.	S:Step <n+>.\t	Step
Step 2. Back it up.	S:Step <n+>.\t	Step
Step 3. Run setup.	S:Step <n+>.\t	Step

The < =0> counter in the StepIntro format resets the *S* series to zero but doesn't display the number.

If a counter is incremented, any omitted counters in the series to the right of it are reset to zero. For example, the following autonumber formats are equivalent:

S:<n+>< =0>\t

S:<n+>\t

Basing autonumbering on section numbers

You can create a different series for each type of numbering scheme in a document. For example, headings, figures, and tables could 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 number	Figure number	Table number
Section 1 1.1 1.2	Figure 1-1 Figure 1-2	Table 1-1 Table 1-2
Section 2 2.1 2.2	Figure 2-1 Figure 2-2	Table 2-1 Table 2-2

If you set up different series 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, construct autonumber formats in a single series (using the same series label for each format). The following table shows the autonumber formats you could create. The formats are presented in a table so that you can clearly see each counter's position in the string.

The counter's position determines how the counter is incremented.

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

Whenever a paragraph tagged SectionTitle occurs, the section number is incremented by 1, and the remaining counter values are reset to zero. Each <n+> counter in the remaining formats refer to a different type of item (headings, figures, and tables), so they're incremented independently.

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

Using Japanese numbering options

If your system supports the typing of Japanese text in documents and dialog boxes, you can use the following additional counters in autonumber formats.

Building block	Meaning	Characters, in this order
<zenkaku a>	Fixed-width lowercase Roman alphabet	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
<zenkaku A>	Fixed-width uppercase Roman alphabet	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
<zenkaku n>	Fixed-width Arabic numbers	０, １, ２, ３, ４, ５, ６, ７, ８, ９
<kanji kazu>	Standard kanji numbering, where double-digit numbers are made up from the traditional kanji characters for ten, one hundred, and so on	○、一、二、三、四、五、六、七、八、九、十、十一…
<kanji n>	Numbers used for street addresses, phone numbers, postal codes, and so on, where double-digit numbers are made up from the kanji characters for zero through nine	○、一、二、三、四、五、六、七、八、九、一○、一一…
<daiji>	Numbers used in financial or banking contexts made up of old-style kanji numerals	〇, 壱, 弐, 参, 四, 伍, 六, 七, 八, 九, 壱拾, 壱拾壱…
<hira gojuon>	Hiragana characters in the standard order	あ、い、う、え、お、か、き、く、け、こ、さ、し、す、せ、そ、た、ち、つ、て、と、な、に、ぬ、ね、の、は、ひ、ふ、へ、ほ、ま、み、む、め、も、や、ゆ、よ、ら、り、る、れ、ろ、わ、を、ん
<kata gojuon>	Katakana characters in the standard order	ア、イ、ウ、エ、オ、カ、キ、ク、ケ、コ、サ、シ、ス、セ、ソ、タ、チ、ツ、テ、ト、ナ、ニ、ヌ、ネ、ノ、ハ、ヒ、フ、ヘ、ホ、マ、ミ、ム、メ、モ、ヤ、ユ、ヨ、ラ、リ、ル、レ、ロ、ワ、ヲ、ン

Building block	Meaning	Characters, in this order
<hira iroha>	Hiragana characters in the literary order (rare)	い、ろ、は、に、ほ、へ、と、ち、り、 ぬ、る、を、わ、か、よ、た、れ、そ、 つ、ね、な、ら、む、う、ゐ、の、お、 く、や、ま、け、ふ、こ、え、て、あ、 さ、き、ゆ、め、み、し、ゑ、ひ、も、 せ、す
<kata iroha>	Katakana characters in the literary order (rare)	イ、ロ、ハ、ニ、ホ、ヘ、ト、チ、リ、 ヌ、ル、ヲ、ワ、カ、ヨ、タ、レ、ソ、 ツ、ネ、ナ、ラ、ム、ウ、キ、ノ、オ、 ク、ヤ、マ、ケ、フ、コ、エ、テ、ア、 サ、キ、ユ、メ、ミ、シ、ヱ、ヒ、モ、 セ、ス

Be sure you use these numbering options only with Japanese text and with Japanese fonts.

Redefining (updating) formats

Previous sections of this chapter explain how to change the format properties of specific passages of text from the predefined properties of the formats they are tagged with—that is, the properties stored in the Paragraph or Character Catalog. Alternatively, you can make the same changes to properties but then use them to redefine, or *update*, the stored formats and all the text in the document tagged with them. For example, you can update all Head1 paragraphs in a document to use a different font and to be side heads.

When you update a format, you can update all properties or just one group of properties. For example, you could change the default font family for all formats in a document without changing any other properties.



If you change properties in a designer and then decide you don't want to update the format, you can cancel the operation and reset the properties by simply clicking in text. You can also choose Reset Window from Selection from the Commands pop-up menu in the designer.

To update a paragraph format:

1 Do one of the following:

• To display the properties of a paragraph (including any overrides), choose Format > Paragraphs > Designer and click in a paragraph that has the format you want to update.

• To display the properties of a paragraph format stored in the catalog (that is, without overrides), choose Format > Paragraphs > Designer and then choose the format from the Paragraph Tag pop-up menu.

2 Change any of the paragraph's properties.

3 Click Update All.

If the paragraphs being updated have format overrides (that is, if their formats don't match the formats stored in the catalog), an alert asks whether you want to remove them.

To update a paragraph format using the formatting bar:

Click in the paragraph whose format you want to update and choose Update All from the Paragraph Format pop-up menu on the formatting bar.

To update specific properties of paragraph formats:

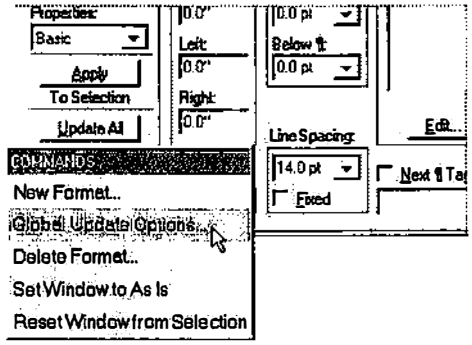
1 To update several formats, select consecutive paragraphs that have the formats you want to change. To update all paragraph formats or just one, skip this step.

2 Choose Format > Paragraphs > Designer, display the desired group of properties, and choose Set Window to As Is from the Commands pop-up menu. (FrameMaker won't change properties set to As Is.)

When set to As Is, text boxes are blank, check boxes are dim (struckout on the Macintosh), and pop-up menus display As Is (see page 81).

3 Change only the properties you want to update.

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



5 Click the current property group in the Use Properties area.

6 Do one of the following:

- To update all formats in the document, click All Paragraphs and Catalog Entries.
- To update all paragraphs in the selection and all paragraphs with the same tags, click All Matching Tags in Selection.
- To update formats with a specific tag, click All Tagged and choose a tag from the pop-up menu.

7 Click Update.

To update a single property group of a paragraph format:

1 Indicate the scope of the changes you want to make by doing one of the following:

- To update one paragraph format or all paragraph formats in the document with a property group from a paragraph, click in that paragraph or select consecutive paragraphs.

• To update more than one paragraph format but not all paragraph formats, select consecutive paragraphs that use the formats you want to update.

2 Choose Format > Paragraphs > Designer and delete the tag from the Paragraph Tag text box if the text box isn't empty. Deleting the tag sets the text box to As Is, which keeps FrameMaker from changing the tags of the formats you update.

3 Display the property group you want to update, and change the properties as needed.

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

5 Click the current property group in the Use Properties area.

6 Do one of the following:

• To update all formats in the document, click All Paragraphs and Catalog Entries.

• To update all paragraphs in the selection and all paragraphs with the same tags, click All Matching Tags in Selection.

• To update formats with a specific tag, click All Tagged and choose a tag from the pop-up menu.

7 Click Update.

To update a character format:

1 Choose Format > Characters > Designer and choose the format you want to change from the Character Tag pop-up menu.

2 Change any of the properties. Many character formats have properties set to As Is; be careful not to change them unless you want the updated format to apply that property.

3 Click Update All.

If the paragraphs being updated have format overrides, an alert asks whether you want to remove them.

To update specific properties of character formats:

1 To update several formats, select text that includes the character formats you want to change. To update all character formats or just one, skip this step.

2 In the Character Designer, choose Set Window to As Is from the Commands pop-up menu.

When set to As Is, text boxes are blank, check boxes are dim (struckout on the Macintosh), and pop-up menus display As Is (see page 81).

3 Change only the properties you want to update. (When it updates the other formats, FrameMaker won't change properties still set to As Is.)

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

5 Do one of the following:

• To update all characters in the document—including characters in text lines, the default font properties of all paragraph formats, and the properties of all character formats—click All Characters and Catalog Entries.

• To update all characters in the selection and all characters with the same tags, click All Matching Tags in Selection.

• To update formats with a specific tag, choose a tag from the pop-up menu.

6 Click Update.

To update several formats at once:

Import paragraph or character formats from another document by using File > Import > Formats. If any formats have the same name in both files, the imported format overwrites the document's format. For details, see "Importing and updating formats in a document" on page 295.

Renaming and deleting formats

You may need to rename or delete a format when designing a template. You may also need to rename a format if, for example, you want to import a catalog from a template and don't want a format to be overwritten.

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. If you want to change the format of these paragraphs or characters, you can then retag them (see "Globally applying formats to text" on page 82).

To rename a catalog format:

1 Choose Format > Paragraphs > Designer or Format > Characters > Designer and choose the format you want to rename from the Paragraph Tag or Character Tag pop-up menu.

Do this even if the format you want is already displayed, to ensure that the properties do not include any format overrides or As Is settings.

2 Enter a new name in the Paragraph Tag or Character Tag text box and click Update All.

3 Click OK.

To delete a format from a catalog:

1 Display the Paragraph Catalog (click ¶ in the upper right corner of the document window) or the Character Catalog (click *f*).

2 Click Delete.

3 Select the format in the scroll list and click Delete. You can delete additional formats if you want to.

4 Click Done.

To delete all unused formats from a catalog:

1 Display the Paragraph Catalog (click ¶ in the upper right corner of the document window) or the Character Catalog (click *f*).

2 Click Delete.

3 Click Delete until all formats have been removed, and then click Done.

4 Choose File > Utilities > Create & Apply Formats, and then click Continue. Any paragraph or character format used in the document is added back to the catalog. Formats with overrides reappear as new and separate formats. For information, see "Changing format overrides to new formats" on page 430.

Creating new formats

When working from a stable template, you rarely will need to create a new format. However, if you're designing a new template or if the template you're using is incomplete, you may need to create new formats.

The easiest way to create a format is to modify the properties of an existing 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.

When you're naming new formats, keep the following suggestions in mind:

- Use consistent naming conventions for similar kinds of paragraphs or text items within a paragraph. For example, if you use Head1 for first-level headings, use Head2 for second-level headings.
- If you'll want to apply formats by using the keyboard (by pressing Control+8 or Control+9), name the formats so that often-used ones are unique or alphabetically first in their letter group. For example, a catalog that has both Body and Bullet will allow for immediate access only to Body. To avoid this, rename Body to Normal, so that you can quickly access both formats from the status line.
- Give each format a name that's easy for you and others to remember, recognize, and type. Also if you assign a tag based on its use and not its appearance (for example, Emphasis rather than Italics), you'll be able to change the format properties without having to change the tag.
- Be aware of capitalization. Tags are case-sensitive: *Body* is not the same as *body*. Also, you may want related tags to appear together in the catalog. For example, Body and IndentedBody won't be next to each other but Body and BodyIndent will be.
- If you have many formats, you can avoid excessive scrolling in the catalogs by bringing often-used formats to the top of the catalog by preceding them with a period. Similarly, you can force rarely used formats to the bottom of the catalog by preceding them with a *z* or a tilde (~).

To create a paragraph format:

1 Click in a paragraph whose format is similar to the one you want to create. Be careful not to select multiple paragraphs so that no properties are set to As Is.

2 Choose New Format from the Commands pop-up menu in the Paragraph Designer and enter a name for the new format in the Tag text box.

3 To be able to update the new format or copy it to other documents by using the File > Import > Formats command, select Store in Catalog. Formats that aren't stored in the catalog can be applied to other paragraphs only by copying and pasting.

4 To apply the new format to the current paragraph, select Apply to Selection.

5 Click Create.

6 If you didn't select Apply to Selection in step 3, choose the new format name from the Paragraph Tag pop-up menu.

7 Modify any of the properties you want. Refer to the sections earlier in this chapter for details on modifying such things as font properties (see page 83), indent and alignment properties (see page 87), tab stops (see page 88), spacing properties (see page 90), line breaks and hyphenation (see page 94), page and column breaks (see

page 96), graphics as part of a paragraph format (see page 96), connecting formats (see page 97), headings (see page 97), and autonumbering (see page 101).

Don't set any property to As Is. Paragraph formats must have all properties specified. (An alert message warns you if not all settings are specified so you can go back and change any As Is properties.)

8 Click Update All.

To create a character format:

1 In the Character Designer, choose Set Window to As Is from the Commands pop-up menu. Properties set to As Is won't change when you apply the character format. When set to As Is, text boxes are blank, check boxes are dim (struckout on the Macintosh), and pop-up menus display As Is (see page 81).

2 Change only the properties you want to include in the character format. For information on modifying font properties, see page 83.

3 Choose New Format from the Commands pop-up menu in the Character Designer and enter a name for the new format in the Tag text box.

4 Select Store in Catalog.

5 To apply the new format to the current selection, select Apply to Selection.

6 Click Create.





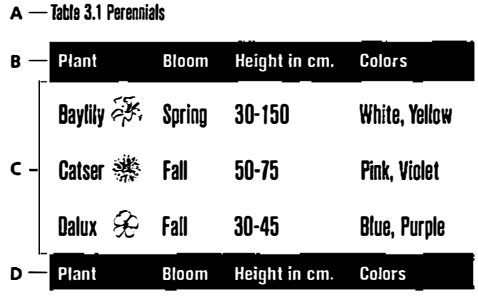
Chapter 5: Tables

When you insert a table in a document, it already has rows and columns with cells that you can fill in. It also has a particular format that helps to define its look. This chapter shows you how to insert a table and fill it with text and graphics, or convert existing text to a table.

The chapter also explains how to rearrange and resize columns and rows, rotate tables and cells, adjust cell margins and alignment, change ruling and shading, and remove or add a title. And it describes how to use the Table Designer to create table formats or change them globally across the document.

About tables

A table typically has heading and body rows and a title. Occasionally, it may have footing rows as well.



A. Table title B. Table heading C. Table body D. Table footing

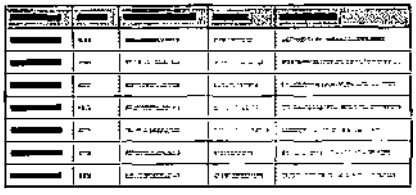
Tables can be complex or as minimal as a single body cell. See the following page for examples of some of the types of tables you can create.

The look of a table is determined by its format, which includes the following types of properties:

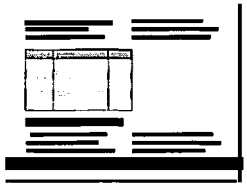
- Properties set in the Table Designer, such as a table's position, cell margins, regular ruling and shading, and whether it has a title. Changing the Table Designer properties of a format changes the appearance of tables that use that format.
- Three types of *default properties:* the number of body, heading, and footing rows; the number and width of columns; and paragraph formats for the title, heading, footing, and body cells of each column. All three are supplied when you first insert a table. Changing the default properties of a format does not change the appearance of tables that use that format, but it changes how a new, empty table looks when you insert it.

After you insert a table, you can perform extensive *custom formatting*, such as straddling or rotating cells, or applying special ruling or shading to selected cells. Custom formatting is not stored as part of the table format. For this reason, custom formatting is retained when you change or reapply a table format.

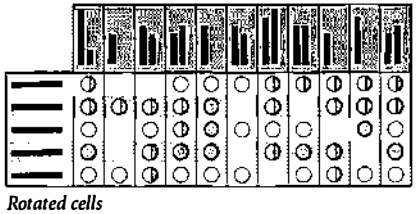
EXAMPLES OF TABLES



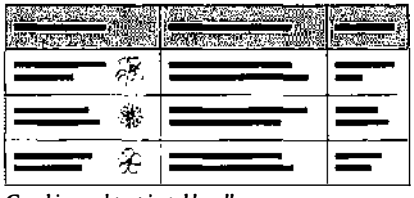
Basic table



Portrait table in a landscape document



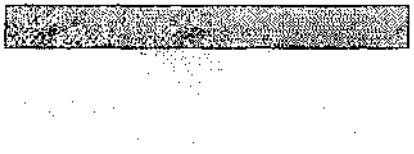
Rotated cells



Graphics and text in table cells



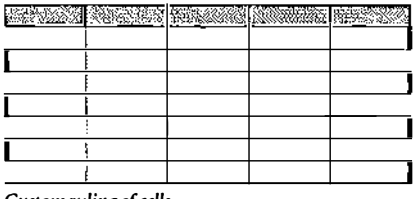
Simulated columns



Custom shading of cells



Table title used as a caption of a graphic in a cell



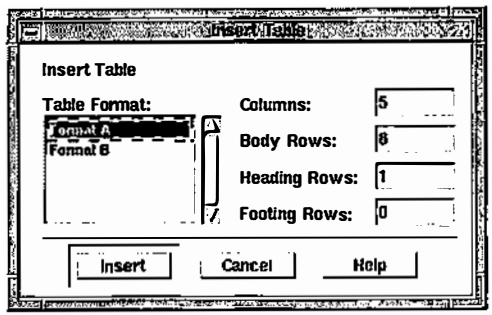
Custom ruling of cells

Right-click a table (on the Macintosh, Control-click) to display a context (shortcut) menu for tables. You can also use the QuickAccess bar to perform common tasks for tables. See "Using the QuickAccess bar" on page 36 and online Help.

When you insert a table, it's anchored at the insertion point and a table anchor symbol (⊥) appears there when text symbols are visible.

Inserting tables

When you insert a new, empty table, you select a format for the table. Table formats are stored in a catalog, as are paragraph and character formats. However, the Table Catalog appears in a dialog box, the Insert Table dialog box, rather than in a floating palette.



The Table Catalog is the list of table formats in the Insert Table dialog box.

To insert a new, empty table:

1 Click in the line of text to which you want to anchor the table. You can insert a table anywhere except in a footnote or directly in another table (see page 123 for how to insert a table within a table).

2 Choose Table > Insert Table.

3 Select a format for the table. If the format you need is not in the list, you can import the format from another document (see "Importing and updating formats in a document" on page 295) or create your own format (see "Creating table formats" on page 150).

4 If necessary, enter a different number of rows or columns in the text boxes.

5 Click Insert. An anchor symbol (⊥) appears at the insertion point when text symbols are visible. (Deleting the symbol deletes the table.)

Note: *In multicolumn page layouts, the table may straddle columns, and its position may be affected by straddle paragraphs. For information, see "Making tables straddle" on page 131.*

Filling in tables with text and graphics

Each intersection of a column and row is a table *cell*, and each cell can contain text and anchored frames. (Anchored frames, in turn, can contain graphics or other tables.) As you type text or insert an anchored frame in a cell, the cell's height expands as needed.

You can copy, cut, and paste the contents of cells just as you do text and graphics in any other part of a document. Special system variables let you specify continuation text in the titles or heading rows of multipage tables.

Typing and selecting text in tables

In addition to typing text in a table, you can also insert cross-references, footnotes, variables, and markers. The tab character is the only character you have to enter in a special way in a table cell.

You select text in a table cell in the normal way or with one of several shortcuts. Note that selecting the text in a cell is different from selecting the cell itself. When you select the cell itself, a selection handle is visible (see the next section).

To insert a tab in a table cell:

Press Esc Tab.

To select the contents of the next or previous cell:

Press Tab or Shift+Tab.

To select the contents of the cell below or above:

Do one of the following:

- (Windows) Press Control+Alt+Tab or Control+Alt+Shift+Tab.
- (Macintosh) Press Control+Tab or Control+Shift+Tab.
- (UNIX) Press Meta+n or Meta+p.

To select the contents of the current cell:

Press Esc t h a. If the cell contains just one paragraph, you can also triple-click the text to select the paragraph.

Selecting table cells

When you work in a table, you may need to select cells, rows, columns, or the entire table. When you select a cell itself rather than the text in a cell, a selection handle is visible.

Height in cm.	Colors
60-150	White, Yellow, Pink, Red, Violet
30-75	Pink, Violet
30-95	Yellow, Orange, Pink, Red, Rust, Blue
45-135	Pink, Blue

When you select a cell, you see its selection handle.

For information on selecting text in cells, see the preceding section.

To select a single cell:

Drag across the cell boundary and back, or Control-click the cell (on the Macintosh, Option-click it).

To select multiple cells:

Drag across all the cells you want to select or do one of the following:

- To select an entire row, press Esc t h r.

- To select an entire column, press Esc t h c. You can also select a column quickly by dragging from a heading cell into the first body cell.
- To select the entire table, press Esc t h t.

To extend a selection:

Click in the first cell you want to include in the selection and then Shift-click the last cell you want to include.

Copying or moving the contents of cells

You can paste a cell's contents from the Clipboard to 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 any custom ruling and shading).

To copy or move a cell's contents but not its format:

Make sure the selection handle is not visible when you select the cell's contents. Copy or cut the contents, and then paste.

To copy or move both a cell's contents and its format:

Select the entire cell by dragging across the border and then dragging back; the selection handle is visible when the cell is selected. Copy or cut the cell, and then paste. You can select multiple cells to copy or cut.

Formatting text in tables

You format text in a table cell just as you format paragraphs in a regular column of text—for example, with paragraph or character formats.

When you insert a new, empty table, the title and the heading, footing, and body cells for each column are assigned the default paragraph formats stored as part of the table format. You can apply a different format to any paragraph in any cell, and you can modify the format of any paragraph (see Chapter 4, "Text Formatting").

Adding or removing table titles

A table title appears above or below a table and is repeated on all pages of a multipage table. You can format title text 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.

Whether a table has a title and how it's formatted, is defined in the table format. You change the format by using the Table Designer.

When you insert a table with a title, an empty text frame appears for the title. If the title format has been defined to include an autonumber, the autonumber text appears. In either case, you type the text of the title yourself.

Plant	Bloom
Baylily	Spring
Catser	Fall
Dalux	Summer
Derana	Winter

Perennial Blooms

Table 3.1 Perennial Blooms

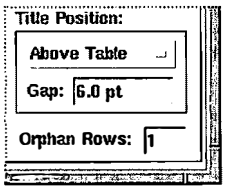
Plant	Bloom
Baylily	Spring
Catser	Fall
Dalux	Summer
Derana	Winter

Title centered below table and autonumbered title above table

To add or remove a table title:

1 Click in the table you want to change and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, choose Above Table, Below Table, or No Title from the Title Position pop-up menu.



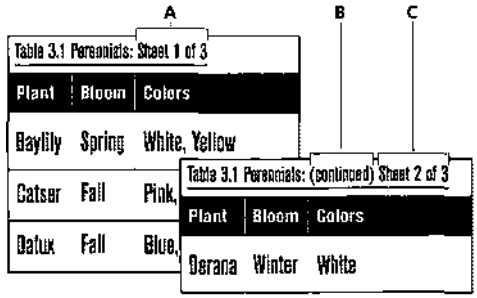
3 Specify the amount of space between the table and the title.

4 Click Apply to Selection.


To display the title only on the first page of a multipage table, set the title position to No Title and use a body paragraph as the title. To prevent the title from becoming separated from the table, make sure the anchor symbol is in the title text and that the table's Start property is set to Anywhere.

Adding "continuation" text

In a multipage table, you may want to display special "continuation" text in the title or in heading or footing rows. Two system variables include text for this purpose: Table Continuation and Table Sheet.



A. and C. Table Sheet variable B. Table Continuation variable

You can change the default definitions of these variables, just as you do for other system variables. For details, see "Changing variable definitions" on page 181.

To add continuation text:

1 On the first page of the table, click in the title or in the heading or footing where you want to insert the variable.

2 Choose Special > Variable.

3 Select either the Table Continuation variable or the Table Sheet variable and click Insert.

On the first page of a table, the variable appears as a nonbreaking space (␣). On subsequent pages, it displays the text in its definition—for example, *(Continued)*.

Placing graphics in table cells

To draw or import a graphic in a cell, you use an anchored frame placed inside the cell. The following steps provide general instructions on inserting a graphic 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.

Note: Avoid using cropped anchored frames in heading or footing cells of a table. Such frames might not be cropped when that cell repeats on subsequent pages.

To place a graphic in a cell:

1 Click in a paragraph in the cell where you want to place the graphic.

2 Do one of the following:

• To create an anchored frame where you can draw, use Special > Anchored Frame to create an anchored frame that's anchored at the insertion point (see Chapter 8, "Graphics").

• To create an anchored frame for an imported graphic, use File > Import > File to import the graphic.

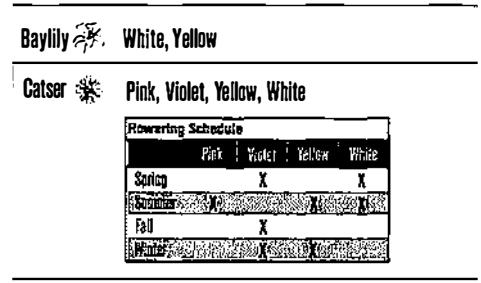
3 If the anchored frame is wider than the cell, resize the column (see "Resizing columns" on page 134).


A quick way to resize a column to match its contents is to select the column and press Esc t w.

4 If necessary, use Graphics > Align to center the graphic in the frame.

Inserting a table within a table

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 insert a table in the text frame and format it just as you would any other table.



The nested table is in an anchored frame.

To place a table in a cell:

1 Click in the cell in which you want to insert a table.

2 Use Special > Anchored Frame to create an anchored frame that's anchored below the current line (see Chapter 8, "Graphics"). 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.

3 If the anchored frame is wider than the cell, resize the column (see "Resizing columns" on page 134).

4 Use the Text Frame tool on the Tools palette to draw a text frame in the anchored frame (see "Using text with graphics" on page 203).

5 Click in the text frame and insert a table.

Converting between text and tables

If you used tabs or other separators to arrange text in columns, you can convert the text to a true table. Similarly, you can convert tables to text.

Converting text to tables

You can convert text that's already in your document to a table, or you can convert text in a text file as you open or import the file.

After converting text to a table, you might have to touch up the table, removing blank cells or recombining text that was split into two or more cells. In most cases, you can edit the table directly in the document. However, if you converted text that was imported by reference, you must edit the text in the original file.

To convert text already in your document to a table:

1 Select the text you want to convert.

2 Choose Table > Convert to Table.

3 Select a format for the table.

4 Specify how you want to convert paragraphs by doing the following:

- To convert text that uses tabs to separate information, click Tabs.
- To convert text that uses spaces to separate information, click Spaces and then enter the minimum number of spaces that indicate a separate cell.
- To convert text that uses other characters to separate information, click Other and then type the characters that can be used to separate cells.
- To convert each paragraph (such as those in a bulleted list) to a cell, click A Cell and then enter the number of columns you want in the table.

5 In the Heading Rows text box, enter the number of heading rows you want in the new table. If the paragraphs you're converting don't include headings and you want to fill in the headings later, select Leave Heading Rows Empty.

6 Click Convert.

To convert a text file to a table as you open the file:

1 Choose File > Open and select the text file you want to open.

2 If the Unknown File Type dialog box appears, select Text and then click Convert.

3 Click Convert to Table and then click Read.

4 Follow the instructions for converting text already in your document to a table, starting from step 3 in the previous procedure.

To convert a text file to a table as you import the file:

1 Click where you want to import the file.

2 Choose File > Import > File and select the text file you want to import and the import method. For information, see "Importing unformatted text" on page 378.

3 Click Convert to Table and then click Import.

4 Follow the instructions for converting text already in your document to a table, starting from step 3 (see page 124).

If you want to merge a text file into an existing table, import the text file (by copying) and convert it to a table. Then copy the rows and paste them into the existing table.

To touch up a table after conversion:

Do the following:

• To combine text that is split across two or more rows, cut and paste the text from the lower cells into the upper cell and delete the extra rows.

Plant› Bloom› Height in cm.› Colors¶
Baylily› Spring› 30-150› White, Yellow¶
› › › Golden¶
Catser› Fall› 50-75› Red, Violet¶

Plant	Bloom	Height in cm.	Colors
Baylily§	Spring§	30-150§	White, Yellow§
§	§	§	Golden§
Catser§	Fall§	50-75§	Red, Violet§

Plant	Bloom	Height in cm.	Colors
Baylily§	Spring§	30-150§	White, Yellow, Golden§
Catser§	Fall§	50-75§	Red, Violet§

The original tab-delimited text (top), the converted table (middle), and the table after touch-up

To quickly combine text in adjacent cells, select the cells, choose Table > Straddle, and then choose Table > Unstraddle. This leaves empty rows or columns that you can delete.

• To fix half-empty columns, cut and paste the text into the correct locations and delete the extra columns.

• To fix major errors, you may want to return to the original text (choose Edit > Undo if necessary), edit the text (for example, by deleting extra tabs and forced returns), and then convert the text to a table again.

Converting tables to text

You can convert any table to text within FrameMaker, or you can copy the table as text to another application. You can also convert all the tables in a document at one time.

To convert a table to text within FrameMaker:

1 Click in the table you want to convert to text.

2 Choose Table > Convert to Paragraphs.

3 Click Row by Row or Column by Column and click Convert.

Plant	Bloom
Baylily	Spring
Catser	Fall
Dalux	Fall
Derana	Winter

A	B
Plant	Plant
Bloom	Baylily
Baylily	Catser
Spring	Dalux
Catser	Derana
Fall	Bloom
Dalux	Spring
Fall	Fall
Derana	Fall
Winter	Winter

Table converted: A. Row by Row B. Column by Column

To copy a table to another application as text:

1 Copy the table to the Clipboard.

2 In another application, choose Edit > Paste. The table is pasted, row by row, with tabs separating table cells and a paragraph return at the end of each row.

To convert all tables in a document to text:

Save the document in Text Only format and specify how you want the tables converted (see "Saving documents in Text Only format" on page 41).

Copying, moving, and removing tables

You can remove tables either by cutting them, which places them on the Clipboard, or by deleting them, which does not.

To copy, move, or remove a table:

1 Select the entire table by doing one of the following:

- (Windows and UNIX) Control-triple-click a cell.
- (Macintosh) Option-triple-click a cell.

2 Do one of the following:

- To copy the table, choose Edit > Copy.
- To move the table, choose Edit > Cut. If a dialog box appears, click Remove Cells from Table and click Cut. Then click where you want to move the table and choose Edit > Paste.
- To remove the table (without changing the contents of the Clipboard), press Delete.

Changing the look of tables

When you insert a table, its appearance is determined by its table format. If the preset properties of the format are not to your liking, you can change them.

You can change the look of tables in many ways:

- Using the Table Designer, you can change the table's indents, margins, spacing, alignment, ruling, and shading.
- Using commands on the Table menu, you can rotate and straddle cells, change cell height and page breaks, and apply custom ruling and shading.

When you use the Table Designer to make a formatting change that doesn't match the table's predefined format, the change is a format *override*. Overrides will be lost if you reapply the predefined

format to the table. In the same case, changes made with the Table menu commands would not be lost.

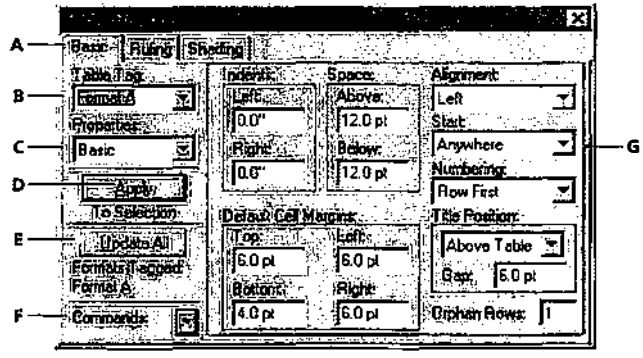
The following sections explain how to use the Table Designer and Table menu commands to change the look of tables. Template designers and other advanced users might also use the Table Designer to create new table formats and to change formats globally throughout a document (see "Creating table formats" on page 150).

Using the Table Designer

On the left side of the Table Designer, you choose a table format and property group. The table formats stored in the Table Catalog appear in the Table Tag pop-up menu. (In Windows, you can also click a tab to display a property group.)

On the right side of the Table Designer, you change the table's properties. The table's appearance doesn't change until you apply the properties.

THE TABLE DESIGNER The Table Designer includes several areas and commands for creating, changing, and overriding table formats. The designer contains several groups of properties, displaying one at a time (it's shown here displaying the Basic group of table properties).



A (Windows) Click a tab to display a group of properties.

B Choose from the Table Tag pop-up menu to display the stored properties for that format.

C Choose from the Properties pop-up menu to display a group of properties, either Basic, Ruling, or Shading.

D Apply all properties in all property groups (including the tag) to the current table's format.

E Update all table formats that have the same tag, including the format stored in the Table Catalog.

F Choose commands for updating specific properties of selected table formats.

G View or change the group's properties.

To display the Table Designer and a property group:

1 Choose Table > Table Designer.

2 Choose a group of properties from the Properties pop-up menu, or, in Windows, click a tab.

To apply property changes:

Click Apply To Selection. When you make a formatting change that doesn't match the table's predefined format, it's considered a format override.

Note: *You won't need to click Update All unless you want to make a global change—change the table format and all tables in the document with the same format. Because Update All redefines a format, use it with caution.*

To reset properties after making some changes in the Table Designer:

Do one of the following:

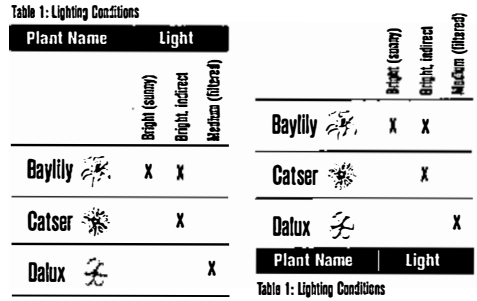
- To reset the properties to match the current table, including any format overrides, click in the table or choose Reset Window from Selection from the Commands pop-up menu.
- To reset the properties to match the stored table format, choose the format from the Table Tag pop-up menu. Do this even if its tag is already displayed in the Table Tag text box.

Applying different table formats

You select a format when you insert a new table, but you can apply a different format at any time.

When you apply a different format to an existing table, only the properties set with the Table Designer change. The following two categories of settings—which are not set in the Table Designer—do not change:

- Customizations made by using Table and Graphics menu commands, such as a forced page break, straddle cell, and rotated cells
- The number of rows and columns, the widths of columns, the paragraph format of the title, and the paragraph formats of text in the heading, body, and footing cell of each column—all of which are supplied when you first insert a table



When a new format is applied to this table, custom changes such as rotated cells are retained.

For information on table formats, see "About tables" on page 117.

To apply a different format to an existing table:

1 Click in the table that you want to apply a new format to.

2 Choose Table > Table Designer.

3 Choose the format you want to apply from the Table Tag pop-up menu, and click Apply To Selection.

Applying a format to several tables

You can apply a format to all tables in the document, to all tables with tags (format names) that occur in a selection, or to all tables that have a particular tag. For example, you could apply Format B to all tables currently tagged Format A.

When you apply a format to a table, only those properties set with the Table Designer change. Default properties not set in the Table Designer and custom settings are not affected. (These settings are described in "Applying different table formats" on page 128.)

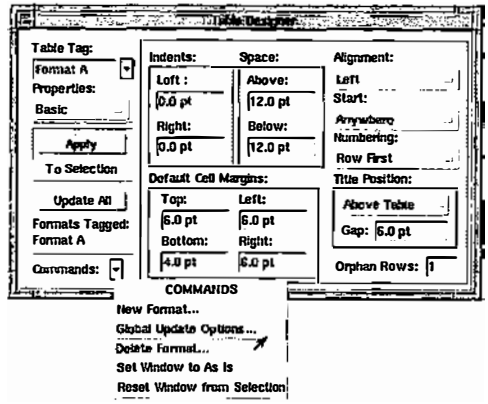
To apply a format to several tables with a certain tag:

1 Select the tables you want to change by doing one of the following:

- To apply a format to all tables in the document, click in any table.
- To apply a format to several tables, but not all tables, in the document, select consecutive tables. (To select multiple tables, you must select their anchor symbols.)

2 Choose Table > Table Designer.

3 Choose the format you want to apply from the Table Tag pop-up menu, and choose Global Update Options from the Commands pop-up menu.



4 Choose the tables you want to reformat by doing one of the following:

- To retag all tables in the document, click All Tables and Catalog Entries.
- To retag the tables in the selection and all tables with the same tags as these tables, click All Matching Tags in Selection.
- To retag all tables with a specific tag, choose a tag from the pop-up menu.

5 Click All Properties in the Use Properties area and click Update.

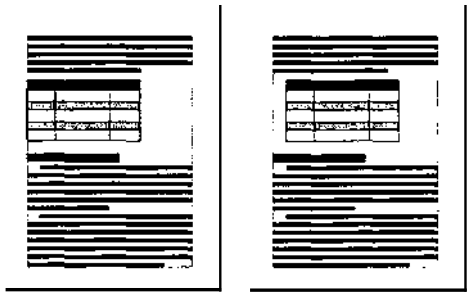
Positioning tables on a page

When you insert a table, the space above and below the table and its alignment and indents are determined by the table format. If you need to change these positioning properties, use the Table Designer.

Other positioning properties—straddling and text runaround—are not part of a table's format. You control these properties on a table-by-table basis.

Aligning and indenting tables

The alignment of a table determines how the table is positioned between its left and right indents.



Left-aligned with no indent, and left-aligned with indent

The left and right indents determine where the table's edge is positioned horizontally when it's left-aligned or right-aligned.

To align or indent a table:

1 Click in the table you want to change and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, do the following:

- To specify an alignment, choose it from the Alignment pop-up menu.
- To specify a left and right indent, enter values.

3 Click Apply to Selection.

Adjusting the space above and below tables

You specify the space above and below a table just as you control the space above and below a paragraph.

The space between a table and the paragraph above it is determined by the table's space above setting or the paragraph's space below setting, whichever is larger. The space between a table and the paragraph below it is determined by the table's space below setting or the paragraph's space above setting, whichever is larger. When the table is at the top or bottom of a column, the above or below setting is ignored.

To specify the space above or below a table:

1 Click in the table you want to change and choose Table > Table Designer.

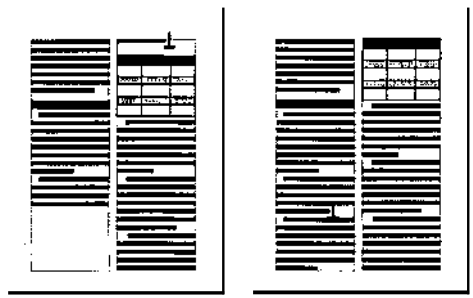
2 In the Basic properties of the Table Designer, enter spacing values in the Above and Below text boxes.

3 Click Apply to Selection.

Controlling where tables begin

Normally, a table appears below the line of text containing the anchor symbol. However, you can force a table to start at the top of a page or column, or you can let the table float.

If there is not enough room in the text column where a floating table is anchored, a floating table moves to the first text column that can hold it. However, the line of text containing the table's anchor symbol does not move. If the table moves to the next text column, text fills the space below the line containing the anchor symbol.



Normal table and a floating table

If you want a table to start at the very top of a page with no text preceding it, anchor it on the previous page and set the table to float. If you want it to always float, make its orphan setting a large number such as 200 (see "Keeping a minimum number of rows on a page" on page 139).

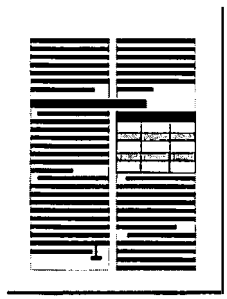
To control where a table begins:

1 Click in the table you want to change and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, choose the placement from the Start pop-up menu.

3 Click Apply to Selection.

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

For information on controlling how a table breaks across pages or columns, see "Controlling page breaks in tables" on page 138.

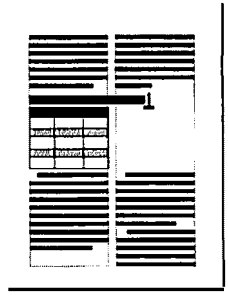
Making tables straddle

Tables may straddle columns in multicolumn layouts, and their positions may be affected by straddle paragraphs.

To make a table straddle:

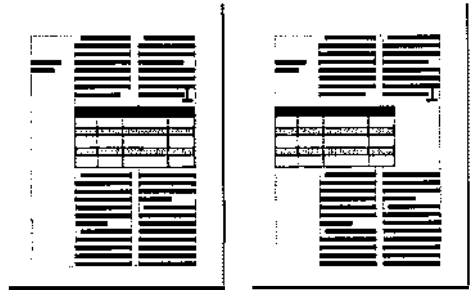
Do one of the following:

• Anchor the table in a straddle paragraph. A table anchored in a straddle paragraph—whatever the table's width—always straddles the full width of the text frame.



A table anchored in a straddle paragraph

• Extend the table width into a second column of the body area (see "Resizing columns" on page 134). If you want the table to straddle both the side-head area and the body area, extend it into the side-head area as well.



Straddling all columns and straddling side-head area

To unstraddle a table:

Do one of the following:

• To unstraddle a table that's anchored in a straddle paragraph, move the anchor to a nonstraddle paragraph.

• To unstraddle a table that's anchored in an unstraddled paragraph, resize the column widths of the table to fit in the text column (see "Adjusting rows and columns" on page 133).

Running text around tables

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's in an anchored frame or in a text frame that's disconnected from the main flow. (However, a table in a disconnected text frame won't autonumber with tables in the main flow.)

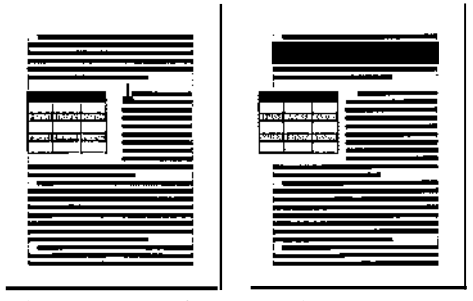


Table in an anchored frame and a table in a disconnected text frame

To run text around a table in an anchored frame:

1 Use Special > Anchored Frame to create an anchored frame with an anchoring position of Run into Paragraph.

2 Draw a text frame in the anchored frame and then place the table in it (see "Using text with graphics" on page 203).

To run text around a table that remains stationary on the page:

1 Draw a text frame directly on a page and drag it where you want it (see "Using text with graphics" on page 203). This type of text frame is not connected to the main flow.

2 Choose Graphics > Runaround Properties, click Run around Bounding Box, and click Set.

3 Insert a table in the text frame.

Adjusting rows and columns

You can add, delete, move, and resize rows and columns in a table and also make selected cells straddle several rows or columns.

Adding and deleting rows and columns

You can specify how many rows or columns you want to add and where you want to insert them.

To quickly add a row below the current one:

Press Control+Return. The new row uses the same paragraph formats as the previous row.

To add a row or column:

1 Click in a table cell next to where you want to add the row or column.

2 Choose Table > Add Rows or Columns and specify the number of rows or columns you want to add and where you want to insert them.

You can add rows above or below the indicated cell or in the heading or footing areas. You can insert columns to the left or right of the indicated cell.

3 Click Add.

The cells in the new rows or columns use the same paragraph formats as the current row or column. For example, when 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.

To delete a row or column:

1 Select the rows or columns you want to delete, making sure you select entire rows or columns. (If you don't, the contents of the selected cells are deleted without a prompt for a decision.)

2 Press Delete, click Remove Cells from Table, and click Clear.

Copying and moving rows and columns

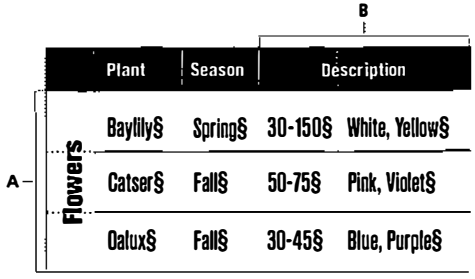
You can duplicate or move rows and columns—along with their contents—by copying or cutting them to the Clipboard and then pasting at a new location.

The cells on the Clipboard replace the current rows or columns according to the following rules:

- If the number of rows or columns on the Clipboard is equal to the number of selected rows or columns, they are replaced exactly.
- If the number on the Clipboard is greater than the number you select to replace, only as many rows or columns as will fit are pasted.

Straddling and unstraddling cells

You can combine cells horizontally into a single cell that straddles several columns, or 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.



A. Cell straddling rows B. Cell straddling columns

If you straddle cells that have contents, the contents of those cells also merge, creating a separate paragraph for each merged cell. You can also unstraddle cells.

To make a cell straddle several rows or columns:

Select the cells you want to straddle and choose Table > Straddle.

To unstraddle a cell:

Select the straddle cell and choose Table > Unstraddle. The contents of the straddle cell appear in the upper left new cell, not back in the original cells.

Sorting columns and rows

You can rearrange the cells of columns or rows into either ascending or descending order. Ascending order sorts from the beginning of the alphabet or the lowest number; descending order sorts from the end of the alphabet or the largest number.

Plant	Bloom
Catser	Fall
Oalux	Summer
Baylily	Spring
Derana	Winter

Plant	Bloom
Baylily	Spring
Catser	Fall
Oalux	Summer
Derana	Winter

Original table (left) and sorted by first column (right)

When sorting numbers, text is sorted after numbers, but dollar signs and other symbols are ignored and negative signs are significant—for example -9 or (9) sorts before 9 in an ascending sort.



You can sort dates or times as long as they are entered as text, use a consistent format, and include leading zeros. For example, if you're using dd/mm/yy and hh:mm:ss formats, enter **04/12/97** or **09:30:25**.

To sort a table:

1 Save your document (so that you can revert to your last saved version if the sort gives unexpected results).

2 Make sure there are no hidden conditional rows in the table (use Special > Conditional Text).

3 Do one of the following:

• To sort all columns or all rows in a table, click anywhere in the table.

• To sort certain columns or certain rows, select cells in the columns or rows.

4 Choose Table > Sort Table.

5 If you're sorting all rows or all columns, click Select All Body Rows.

6 Do the following:

• To sort the rows of the table, click Row Sort. If the rows contain heading or footing cells as well as body cells, only the body cells will be sorted.

• To sort the columns of the table, click Column Sort.

7 To sort uppercase letters apart from lowercase letters, select Consider Case.

Plant	Bloom
A. Baylily	Spring
a. Catser	Fall
B. Datux	Summer
b. Derana	Winter

Plant	Bloom
a. Catser	Fall
b. Derana	Winter
A. Baylily	Spring
B. Datux	Summer

Ascending sort with and without Consider Case selected

8 Choose a primary sort key by selecting from the Sort By text box and clicking Ascending Sort or Descending Sort.

You may sort straddle cells as long as they don't extend past a row or column that you're using as a sort key. (Use Table > Unstraddle and try again.)

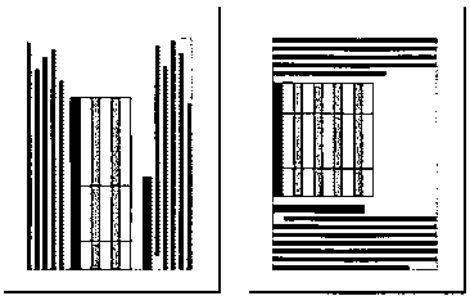
9 Optionally, choose a second and third sort key from the Then By areas.

10 Click Sort.

Rotating cells and tables

When you rotate a cell in a table, you can type in it just as you do in any other cell.

You can also rotate an entire table. The rotated table can be in a page of unrotated text or in a rotated page (one that uses a rotated master page). Place the table on a rotated page instead of rotating the table itself if you want background items (such as headers or footers) or body text to be rotated as well as the table.



On a rotated page (left) and with unrotated text (right)

To rotate a cell:

1 Select the cells you want to rotate and choose Graphics > Rotate.

2 Specify the orientation you want for the cells and click Rotate.

Plant Name	Light		
	Bright (sunny)	Bright, indirect	Medium (filtered)
Baylily	X	X	
Catser		X	
Datux			X

Rotated cells can save space.

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. For details, see "Adjusting the height of rows" on page 135.

To insert a rotated table in a page of unrotated text:

1 Insert an anchored frame (see page 227) and draw a text frame in it. For information on drawing a text frame, see "Using text with graphics" on page 203.

2 Insert the table in the text frame. For details, see "Inserting tables" on page 119.

3 Choose Graphics > Rotate and 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.

If you want to edit the table, unrotate the text frame and then rotate it back when you're finished.

To create a rotated table on a page with other rotated text:

Create a rotated master page and apply it to the body page where the table appears.

For details, see "Creating a rotated master page" on page 268 and "Assigning master pages to body pages" on page 269. If document editing causes the table to move to a different page, you'll need to reapply master pages.

Controlling page breaks in tables

If all the rows of a table don't fit in a text column, some of the rows move to the next page or column. You can control how the table breaks between pages or columns. For example, you can set the minimum number of rows that can appear on a page or column, or specify that two rows always appear together on the same page or column. You can also force a break at any row in a table.

When you insert a table, the minimum number of rows in a column or on a page is determined by the table format. You can change this number in the Table Designer.

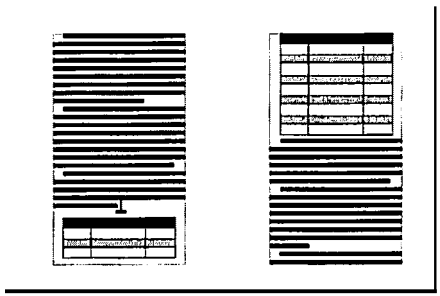
On the other hand, keeping two rows together and forcing a page break are not part of the format; they are custom settings, which you make on a case-by-case basis. If you apply a different format to the table, these settings are not overwritten.

For information on controlling where a table starts on a page or in a column, see "Controlling where tables begin" on page 131.

Keeping a minimum number of rows on a page

If a table won't fit on one page or in one column, the location of the page break is 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 in a column.

For example, the following figure shows a table with an orphan row property set to 3, so that at least three body rows must appear on each page. If there weren't room for three rows on the first page, the whole table would move to the next page.



At least three body rows must appear on each page.

To set the minimum number of rows on a page or in a column:

1 Click in the table you want to change and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, enter the number of rows in the Orphan Rows text box. The number can be between 1 and 255.

3 Click Apply to Selection.



Specifying a large orphan row setting, such as 99, prevents a table from breaking across columns or pages.

Keeping rows together

You can specify that a particular row should always stay with the previous or next row.

To keep rows together:

1 Select the row you want to keep together with the next or previous row and choose Table > Row Format.

2 In the Keep With area, choose Next Row or Previous Row and click Set.

Breaking tables at a specific place

Just as you can have a table or paragraph always start 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.

To add or remove a page break in a table:

1 Click in the row you want to change and choose Table > Row Format.

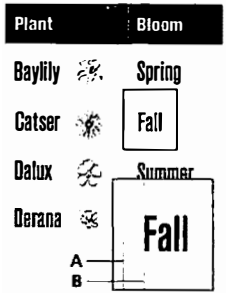
2 Do one of the following:

- To force the row to the top of the next column, choose Top of Column or one of the Top of Page options from the Start Row pop-up menu.
- To remove a page break, choose Anywhere from the Start Row pop-up menu.

3 Click Set.

Positioning and autonumbering text within cells

When you insert a table, its *cell margins*—the distance between the cell edge and the cell text frame—are determined by the table format. The indent properties of text in the cell, which are measured from the cell margins, are part of the text's paragraph format.



A. Left cell margins B. Paragraph's left indent

You can change the default cell margins for a table, and customize the margins and the vertical alignment of text in particular cells. You can also specify the direction of autonumbering within cells—across rows or down columns.

Setting default cell margins

Default cell margins apply to all cells in the table.

To set default cell margins in a table:

1 Click in the table you want to change and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, enter the values for the top, bottom, left, and right margins in the Default Cell Margins area.

3 Click Apply to Selection.

If you want text to look vertically centered, make the top margin larger than the bottom margin. For example, make the top margin 5 points and the bottom margin 3 points.

Customizing cell margins

You use the Paragraph Designer to change the default settings for the margins of specific cells. When you customize cell margins in a table this way and later apply a different format to the table, the custom cell margins are not overwritten by the new table format's default margins.

Because custom cell margins are part of a paragraph format, they aren't normally stored as part of the Table Catalog format. However, the paragraph formats of the first title paragraph and the first paragraph in the heading, body, and footing rows of each column are stored. If you customize the cell margins of any of these paragraphs and then store the table format in the catalog, future tables that use that table format will have the custom settings as their defaults.

To customize a cell margin:

1 Click in the first paragraph of the cell whose margins you want to customize.

2 Choose Format > Paragraphs > Designer to display the Paragraph Designer.

3 Choose Table Cell from the Properties pop-up menu.

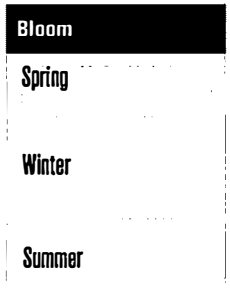
4 In the Cell Margin area, specify the margins you want to customize by doing one of the following:

- To create a margin relative to the default cell margin, choose From Table Format, Plus from the pop-up menu and then enter a value.
- To create a fixed margin measured from the edge of the cell, choose Custom from the pop-up menu and then enter a value.

5 Click Apply to Selection.

Customizing vertical alignment of text

You use the Paragraph Designer to change the default vertical alignment of specific cells. When you customize vertical alignment in a table this way and later apply a different format to the table, the custom vertical alignment settings are not overwritten by the new table format's default margins.



Top, middle, and bottom vertical alignment

You can specify the vertical alignment for individual cells—at the top, in the middle, or at the bottom. When you change the 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 table format's default alignment settings.

Because alignment settings are part of a paragraph format, they aren't normally stored as part of the Table Catalog format. However, the paragraph formats of the first paragraph in the heading, body, and footing rows of each column are stored. If you customize the alignment of any of these paragraphs and then store the table format in the catalog, future tables that use that table format will have the custom settings as their defaults.

To customize the vertical alignment of text in a cell:

1 Click in the cell you want to customize.

2 Choose Format > Paragraphs > Designer to display the Paragraph Designer.

3 Choose Table Cell from the Properties pop-up menu and then choose Top, Middle, or Bottom from the Cell Vertical Alignment pop-up menu.

4 Click Apply to Selection.

Specifying the direction of autonumbering

When you insert a table, the autonumbering direction of cells—either across rows or down columns—is determined by the table format. This property also sets the direction of autonumbering for table footnotes.

Color		Color	
1. Yellow	2. Orange	1. Yellow	4. Orange
3. Pink	4. Red	2. Pink	5. Red
5. Rust	6. Blue	3. Rust	6. Blue

Autonumbering across rows and down columns

To change the direction of autonumbering in a table:

1 Click in the table you want to change and choose Table > Table Designer.

2 In the Basic properties of the Table Designer, choose Row First or Column First from the Numbering pop-up menu.

3 Click Apply to Selection.

Working with ruling and shading

You can create more attractive and effective tables by using ruling and shading. For example, you could use ruling around the outside edges of a table and shading only in the heading cells. Or you could use ruling to separate all cells in a table and use shading for every other body row.

Plant	Bloom	Height in cm.	Colors
Baylily	Spring	30-150	White, Yellow
Catser	Fall	50-75	Pink, Violet
Dalux	Fall	30-45	Blue, Purple

All cells are ruled; every other body row is shaded.

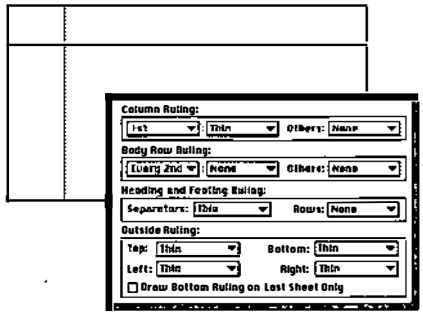
When you insert a table, its *regular ruling* and shading are determined by the table format. Regular ruling and shading affect entire rows and columns in a specified repeating pattern. You can use the Table Designer to change that format's ruling or shading properties for particular tables that use the format.

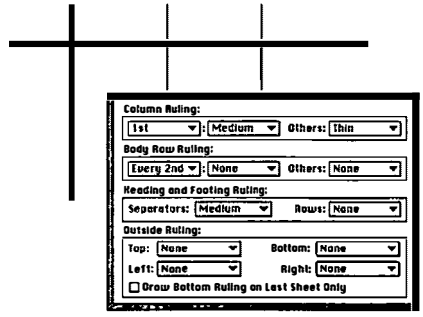
You can also set up *custom ruling* and shading for a table. Custom ruling and shading aren't limited to entire rows or columns and aren't part of the table format. If you customize the ruling or shading of a table and later apply a format to the table, the custom ruling or shading is not overwritten by the new format.

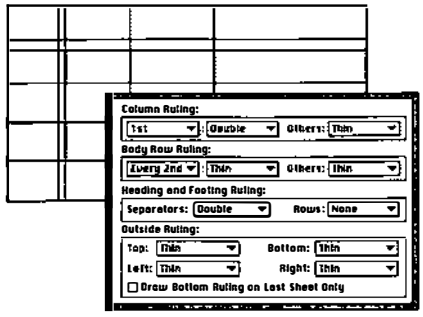
Setting up regular ruling

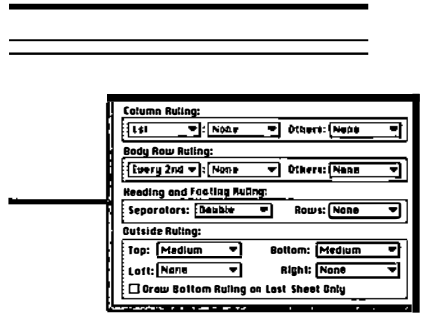
You can specify a ruling pattern for columns, body rows, heading and footing rows, and outside edges of a table. If you need to diverge from the pattern anywhere in the table, use a custom setting (see "Customizing ruling" on page 144).

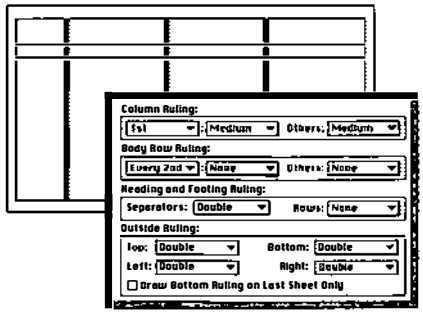
EXAMPLES OF REGULAR RULING

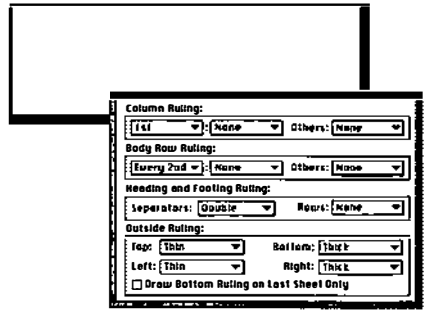












To set up or remove regular ruling:

1 Click in the table you want to change and choose Table > Table Designer.

2 In the Ruling properties of the Table Designer, set up the ruling styles for columns, body rows, heading and footing rows, and outside edges. For examples, see page 143.

3 Click Apply to Selection.

Customizing ruling

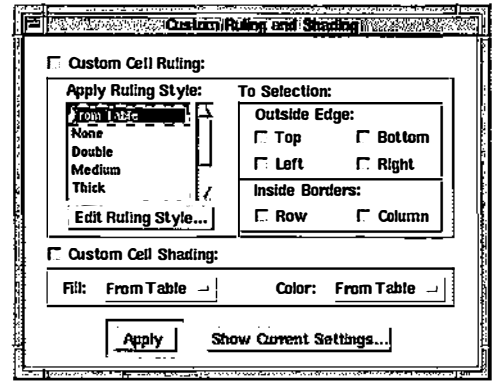
You can customize the ruling for individual cells, rows, or columns. Unlike a table's regular ruling, a table's custom ruling is not stored as part of the table format. Wherever the regular and custom settings are in conflict, the custom settings prevail.

To customize ruling or remove custom ruling:

1 Select the cells, rows, or columns that you want to customize.

2 Choose Table > Custom Ruling & Shading.

3 Select a custom ruling style, or select From Table to remove custom ruling.



The scroll list shows the document's predefined ruling styles. For information, see "Creating or changing ruling styles," next.

4 In the To Selection area, specify the parts of the current selection that you want to change.

5 To keep from inadvertently changing any shading, turn off Custom Cell Shading.

6 Click Apply.

Creating or changing ruling styles

You can create additional ruling styles (such as Double, Thick, or Thin line styles) and edit or delete existing ones. If you edit a ruling style, the change applies to both regular and custom ruling that use that style.


When editing ruling styles, you may want to zoom in to a high percentage. This lets you see slight differences in line thickness.

To create or change a ruling style:

1 Choose Table > Custom Ruling & Shading.

2 Select a style in the scroll list that 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 Enter the width and choose a color and pen pattern for the style.

5 Click Single or Double to specify single or double lines. If you click Double, specify a value for the gap separating the lines.

6 If you're creating a new style, type a name in the Name text box.

7 Click Set.

To delete a ruling style:

1 Choose Table > Custom Ruling & Shading.

2 Select the style you want to delete.

3 Click Edit Ruling Style and click Delete. If the style was used for a table's regular ruling, the occurrences of the style use no ruling. If the style was used for custom ruling, the table's regular ruling is restored.

Setting up regular shading

You can specify a shading percentage for heading and footing rows and two percentages for body rows or columns. For example, you can fill the heading row and every other body row with different shades. If you need to diverge from the regular shading anywhere in the table, use a custom setting (see "Customizing shading" on page 147).

To set up regular shading:

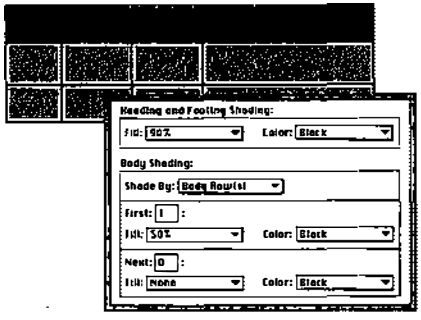
1 Click in the table you want to change and choose Table > Table Designer.

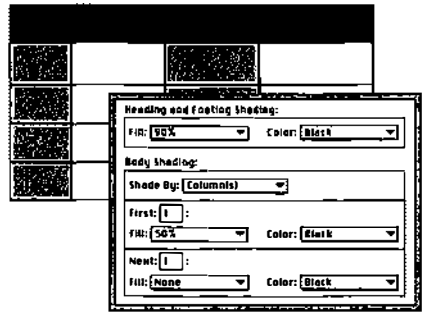
2 In the Shading properties of the Table Designer, specify the shading for heading and footing rows and for body rows or columns. For examples, see page 146.

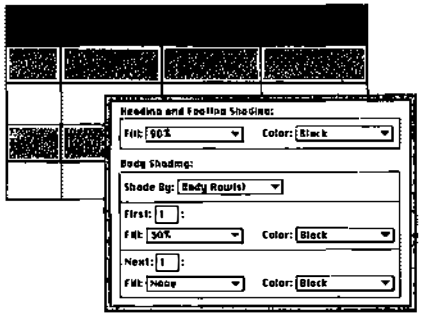
Note: *You can't shade both rows and columns in one table by using the Table Designer alone. However, you can achieve the effect by using custom shading (see "Customizing shading" on page 147) along with the regular shading.*

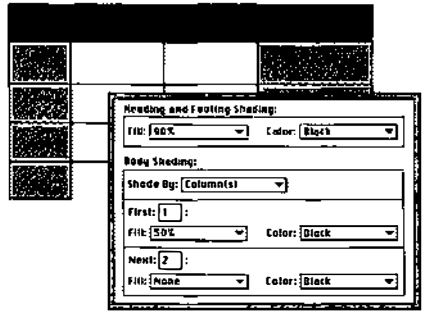
3 Click Apply to Selection.

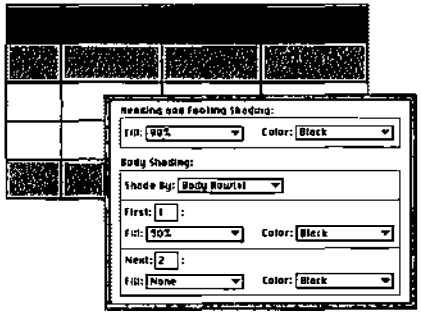
EXAMPLES OF REGULAR SHADING

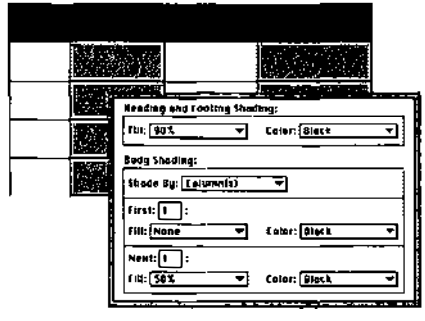










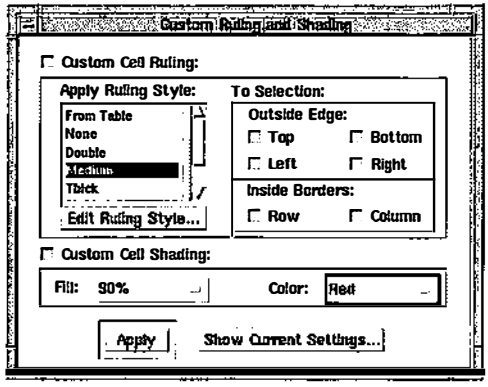


Customizing shading

As with ruling, you can customize the shading or color 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. Wherever the regular and custom settings are in conflict, the custom settings prevail.

To customize shading or remove custom shading:

1 Select the cells, rows, or columns that you want to customize and choose Table > Custom Ruling & Shading.



2 Specify a fill percentage and color for the shading. Choose From Table to remove custom shading.

3 To keep from inadvertently changing any ruling, turn off Custom Cell Ruling.

4 Click Apply.

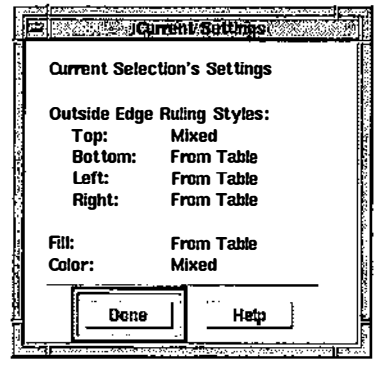
Displaying a cell's ruling and shading settings

Because regular and custom ruling and shading work together, you sometimes need to determine which is which.

To display a cell's ruling and shading settings:

1 Select the cells, rows, or columns that have the ruling and shading properties you want to see.

2 Choose Table > Custom Ruling & Shading and click Show Current Settings.



In the dialog box, Mixed means that the selected cells use more than one custom ruling style, fill, or color. From Table means that the selected cells use the regular ruling or shading set in the Table Designer.

Redefining (updating) table formats

If you're a template designer or if your document lacks a format you need, you may need to globally redefine (update) a table format throughout a document.

To change a table format, you change a table's properties and then change 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 (see "About tables" on page 117). In addition, properties set in the Table Designer (but not default properties that aren't changed in the Table Designer) are applied to existing tables in the document that have the same tag.


If you change properties in the Table Designer and then decide you don't want to update the format, you can cancel the operation and reset the properties by simply clicking in text. You can also choose Reset Window from Selection from the Commands pop-up menu in the Table Designer.

To redefine a table format:

1 Click in a table whose format you want to redefine and choose Table > Table Designer. If the table you click in has format overrides, these overrides—not the catalog format's definition—appear in the Table Designer.

2 If you want to base the changed format on the catalog format, without any overrides, choose the format tag from the Table Tag pop-up menu, even if the tag you want is already displayed in the Table Tag text box.

3 Do the following:

• Use the Table Designer to change any of the settings for the Basic, Ruling, or Shading properties.

• Change any of the default properties, such as the number of rows and columns, widths of columns, and the paragraph format of the title and of the first paragraph of each column. These properties are supplied when you first insert a new, empty table (see "Applying different table formats" on page 128).

4 Click Update All. If any of the tables being updated contain format overrides, an alert message asks whether you want to remove them.

Changing properties in several table formats at the same time

You can change specified properties of several table formats at the same time. For example, you can change all table formats from centered to left-aligned. Rather than update each format separately, you can update them all at the same time.

To change specific properties in several table formats:

1 Select the tables whose formats you want to redefine by doing one of the following:

• To redefine the format of all tables in the document, click in any table.

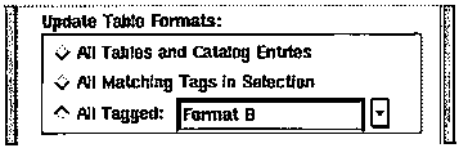
• To redefine several table formats, but not all formats in the document, select consecutive tables that use the formats you want to redefine. (To select multiple tables, select their anchor symbols.)

2 In the Table Designer, display the group of properties from which you want to apply one or two properties.

3 Change the properties as needed.

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

5 Choose the table formats you want to apply the properties to.



6 Click the current property group in the Use Properties area and click Update. If any of the tables being updated contain format overrides, an alert message asks whether you want to remove them.

FrameMaker applies the properties to the Table Catalog formats you specified and to all tables in the document with the same tags.

Using one group of properties to redefine other formats

You can use a group of properties from one table format to redefine (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.

To use a group of properties from one table format to redefine another table format:

1 Select the tables whose format you want to redefine by doing one of the following:

• To redefine one table format or all table formats in the document, click in any table.

• To redefine several table formats, but not all formats in the document, select consecutive tables whose formats you want to redefine. (To select multiple tables, select their anchor symbols.)

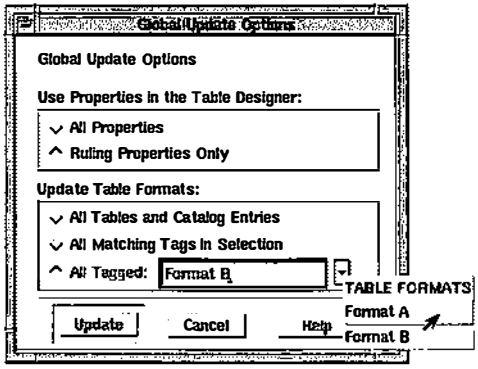
2 In the Table Designer, choose the property group you want to update—Basic, Ruling, or Shading.

3 Delete the tag from the Table Tag text box if the text box isn't empty. Deleting the tag sets the text box to As Is, which keeps FrameMaker from changing the tags of the formats you update (see page 81).

4 Change any of the table's properties.

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

6 Choose the table formats you want to apply the properties to.



7 Click the current property group in the Use Properties area and click Update. If any of the tables being updated contain format overrides, an alert message asks whether you want to remove them.

FrameMaker applies the properties to the Table Catalog formats you specified and to all tables in the document with the same tags.

Renaming and deleting table formats

You may need to rename or delete a table format when designing a template. You may also need to rename a table format if you want to copy an entire catalog from a template and don't want a format to be overwritten.

Deleting a format from a catalog does not affect any tables that have the same tag—the tables simply have a format that isn't stored in the catalog. If you want to change the format of these tables, you can then retag them (see "Applying different table formats" on page 128).

To rename a table format:

1 Click in a table whose 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 stored format properties—not overrides—are displayed.

3 Type a new name in the Table Tag text box and click Update All.

4 Click OK.

To delete a format from the Table Catalog:

1 In the Table Designer, choose Delete Format from the Commands pop-up menu.

2 Select the format in the scroll list and click Delete. You can delete additional formats if you want to.

3 Click Done.

Creating table formats

Typically, you insert tables using the table formats already defined in the document. Occasionally, you may need to override a table format or customize it in special cases. In part, the previous sec-

tions describe how to insert tables based on predefined table formats and how to make changes to the predefined formats for particular tables.

If you're a template designer, however, or if your document lacks a format you need, you may need to create a table format. You can create a new format by modifying the properties of an existing table and storing the format in the Table Catalog with a different tag.

To create a new table format:

1 Click in a table that has a format similar to the one you want to create. (The more similar it is to the format you're defining, the fewer changes you'll have to make.)

2 Set up the rows and columns by adding or deleting body, heading, and footing rows and adjusting columns as necessary. (See "Adjusting rows and columns" on page 133.)

3 Use the Table Designer to modify any of the following table properties:

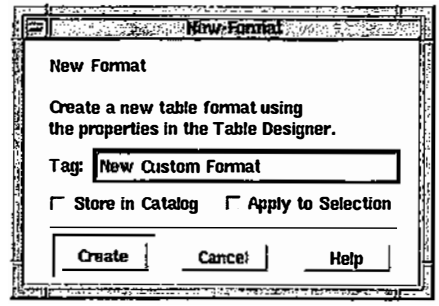
- Its position in the text frame (see "Positioning tables on a page" on page 130)
- Whether it has a title (see "Adding or removing table titles" on page 121)
- Its Orphan Rows setting (see "Controlling page breaks in tables" on page 138)
- Its cell margins (see "Positioning and autonumbering text within cells" on page 140)
- Its ruling and shading (see "Working with ruling and shading" on page 142)

Don't set any property to As Is. Table formats must have all properties specified. (An alert message warns you if not all settings are specified so you can go back and change any As Is properties.)

4 Use the Paragraph Designer to create or change any of the following paragraph formats, which are stored as part of a table format: the paragraph formats of the first title paragraph and the first paragraph in the heading, body, and footing rows of each column.

5 When the table looks the way you want, choose New Format from the Commands pop-up menu in the Table Designer.

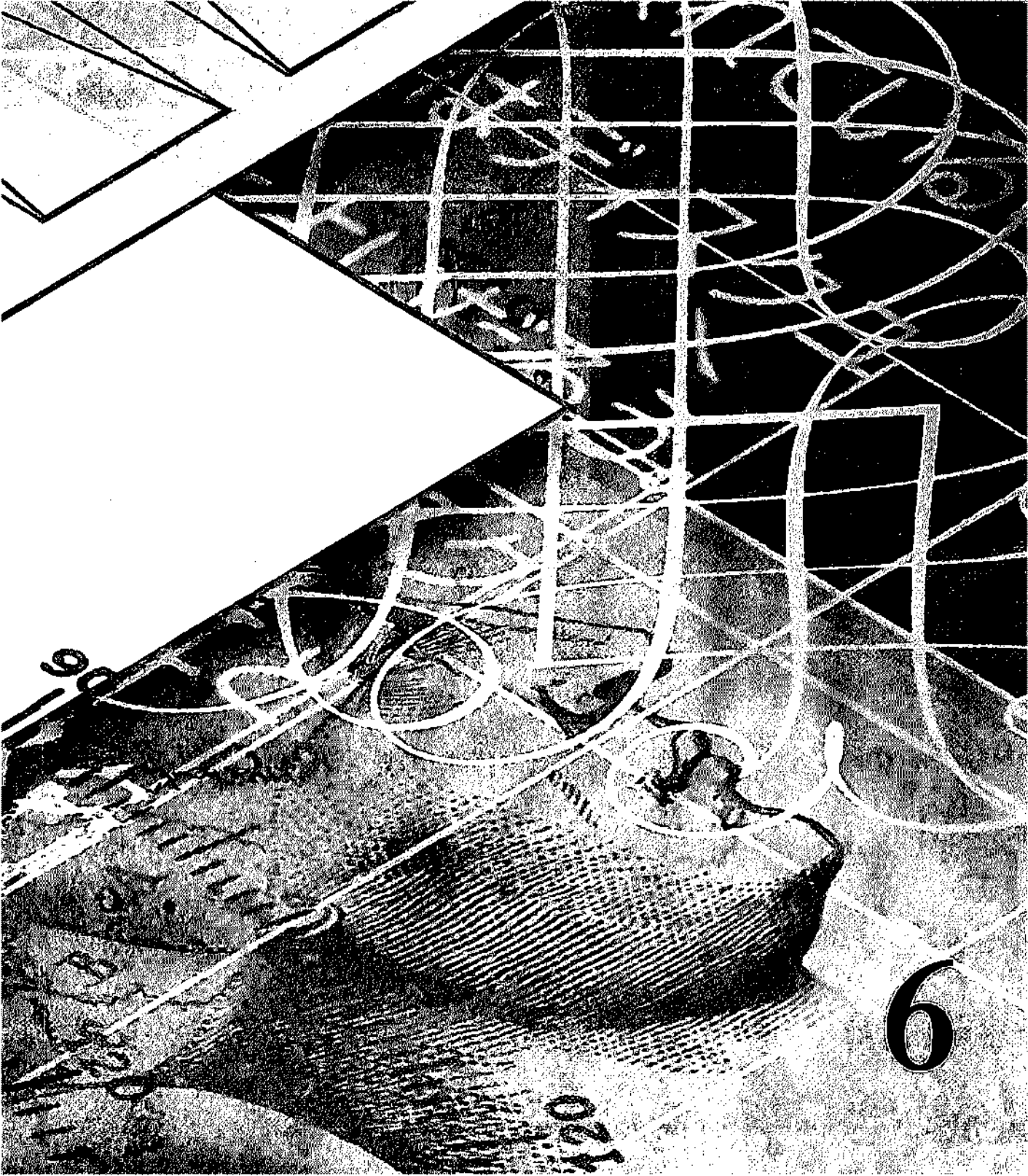
6 Enter a name for the new format in the Tag text box.



7 To store the format in the Table Catalog, select Store in Catalog.

8 To apply the new format to the current table, select Apply to Selection.

9 Click Create.


6



Chapter 6: Cross-References and Footnotes

In FrameMaker, you don't need to type the text of cross-references, and you don't need to revise that text when headings and page numbers change. When you need a cross-reference, you specify its source and the predefined wording to use—for example, whether it contains the heading text, section number, or page number. FrameMaker inserts the text of the cross-reference (for example, *See "Volcanism and plate tectonics" on page 7-71*) for you. Later, if page numbers or headings change when you edit the source documents, FrameMaker can automatically update the cross-references.

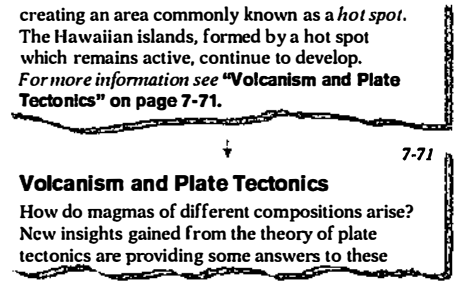
You can also add footnotes to body text and tables; FrameMaker numbers and positions the footnotes for you as you type.

About cross-references

FrameMaker provides two types of cross-references—to paragraphs and to specific spots within paragraphs. In both cases, FrameMaker uses markers to keep track of the sources of cross-references.

Paragraph cross-references

Paragraph cross-references refer to a heading or some other text that occupies a whole paragraph. If the paragraph extends beyond the page on which it begins and the cross-reference includes a page number, the page number is that of the beginning page. Because most cross-references are to entire one-line or two-line paragraphs—for example, headings, figure titles, and table titles—you'll probably use paragraph cross-references most of the time.


creating an area commonly known as a *hot spot*. The Hawaiian islands, formed by a hot spot which remains active, continue to develop. *For more information see* **"Volcanism and Plate Tectonics" on page 7-71.**

7-71

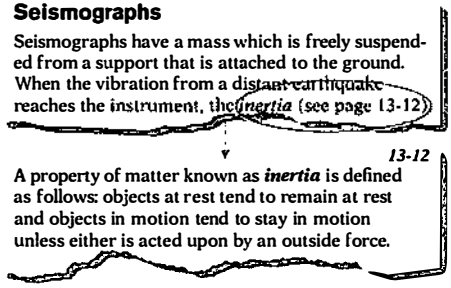
Volcanism and Plate Tectonics

How do magmas of different compositions arise? New insights gained from the theory of plate tectonics are providing some answers to these

Paragraph cross-reference

Spot cross-references

Spot cross-references refer to an individual word or phrase—a spot—in a paragraph, rather than to the beginning of the paragraph. For example, use a spot cross-reference to refer to a definition that appears in the middle of a paragraph of text.



Spot cross-reference

Cross-reference markers

FrameMaker uses a marker (of type Cross-Ref) to keep track of the source of each cross-reference. If you move a marker and then update cross-references, the marker's new location is used to update the cross-reference.

For paragraph cross-references, the marker text contains a number assigned to the marker, and the paragraph tag and text of the paragraph being cross-referenced. (The marker text is not updated, so the tag and text may not match the cross-reference.) For spot cross-references, the marker text is the text you typed for the marker.

When you insert a paragraph cross-reference, a cross-reference marker is inserted for you automatically at the beginning of the paragraph if necessary. Before you insert a spot cross-reference, however, you must insert a marker manually to mark the spot.

Within a document, when you copy and paste text that contains a cross-reference marker, the marker is not duplicated. The cross-reference continues to refer to the text in its original location.

Inserting cross-references

Paragraph cross-references are easier to create than spot cross-references because you don't have to manually mark a particular spot. Paragraph cross-references also make it easier to edit a document that contains them, because you don't have to work around an easy-to-miss marker in the middle of a paragraph as you do with spot cross-references.

Note: *If you use the next procedure to insert a paragraph cross-reference to a text inset, the cross-reference marker will be lost when the text inset is updated. To prevent the marker from being lost, you must first insert a cross-reference to the paragraph in the text inset's source document in the way described on page 158.*

To insert a paragraph cross-reference:

1 If you're cross-referencing another document, open that document. You must have write permission to the document in order to add a cross-reference 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 (graphic objects created with the Text Line drawing tool).

3 Choose Special > Cross-Reference.

4 If you're cross-referencing information in another document, choose the name of that document from the Document pop-up menu.

5 Choose Paragraphs from the Source Type pop-up menu. All the tags in the document's Paragraph Catalog appear in the scroll list.

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 tagged Head1, select Head1 in the Paragraph Tags scroll list. All Head1 paragraphs then appear in the Paragraphs scroll list.

7 In the Paragraphs scroll list, select the paragraph to cross-reference.

8 Choose the format of the cross-reference from the Format pop-up menu. The menu lists the cross-reference formats in the current document.

9 Click Insert. FrameMaker puts the cross-reference at the insertion point and a marker (T) at the start of the paragraph to which the cross-reference refers. FrameMaker inserts a marker only if a cross-reference marker isn't already there.

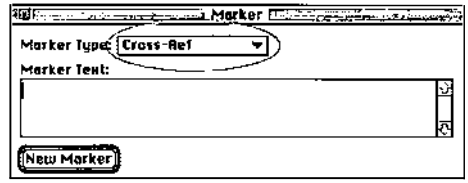
To insert a spot cross-reference:

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 (see the next procedure).

2 Choose Special > Marker.

3 Choose Cross-Ref from the Marker Type pop-up menu.



4 Enter an identifying word or phrase for the marker in the Marker Text box. The marker text can be up to 255 characters long. (Each character in a Japanese font counts as two characters.)

For example, if you insert a marker where *inertia* is defined, you can enter **Definition of inertia**. This text appears in the Cross-Reference dialog box to help you identify the source. It doesn't appear in the cross-reference itself.

5 Click New Marker. A marker symbol (T) appears at the insertion point when text symbols are visible.

6 Insert a cross-reference as if it were a paragraph cross-reference (see page 156) but in step 5, choose Cross-Reference Markers from the Source Type pop-up menu. Then select the marker text in the Cross-Reference Markers scroll list, choose a cross-reference format, and click Insert.


To display the information that is kept in cross-reference markers, you can generate a list of Cross-Ref markers (see page 303). Alternatively, you can use Edit > Find/Change to find markers of type Cross-Ref (see page 60).

To insert a cross-reference to a paragraph in a text inset:

1 Open the source of the inset by double-clicking the inset and then clicking Open Source.

2 Insert a cross-reference to the paragraph anywhere in the source document (see page 156).

3 Delete the cross-reference text. The marker will remain.

4 Save the source document and then update the text inset by using Edit > Update References in the document that contains the text inset.

5 Insert another cross-reference to the paragraph, this time in the document that contains the inset. The cross-reference uses the marker in the updated inset.

Displaying the source of a cross-reference

You can easily display the source of any cross-reference, even if the source is in a different document.

To display the source of a cross-reference:

- Double-click the cross-reference and then click Go to Source. You can also use one of the following shortcuts:
- (Windows) Alt-Control-click the cross-reference.
- (Macintosh) Control-Option-click the cross-reference.
- (UNIX) Control-right-click the cross-reference.

FrameMaker displays the page that contains the source of the cross-reference. To display the source in a different window, hold down Shift while using one of the preceding shortcuts.

Editing cross-references

You copy, move, and delete cross-references just as you do regular text. You can also edit a cross-reference in the following ways:

- Reword the cross-reference by choosing a different cross-reference format.
- Refer to different information by choosing a different source.

If you want to edit the text of the cross-reference as you do regular text, you must convert it to text. After conversion, the text can no longer be updated as a cross-reference.

To select a cross-reference:

Click it once.

To choose a different source or format for a cross-reference:

1 Double-click the cross-reference.

2 Specify a source or format in the same way that you would when inserting a cross-reference (see page 156).

3 Click Replace.

To convert a cross-reference to text:

1 If you're converting a single cross-reference, select it; otherwise, click in the document.

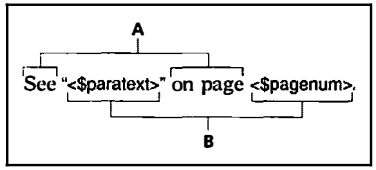
2 Choose Special > Cross-Reference.

3 Click Convert to Text.

4 Indicate the scope of cross-references to convert and click Convert.

Creating cross-reference formats

Cross-reference formats help maintain a consistent cross-reference style throughout a document by determining the appearance of each cross-reference—its wording, the information it contains, and its character format. For example, the format of the cross-reference *See "Volcanism and plate tectonics" on page 7-71* determines that the section title is in quotation marks. The cross-reference format also provides the words *See* and *on page*, and it provides building blocks that represent the actual section title and page number.



A. Text you type B. Building blocks

A cross-reference format consists of a name and a definition. The entire definition, including building blocks, can be up to 255 characters long.



FrameMaker templates include several cross-reference formats. You can change them or create others. If another document contains the cross-reference formats you want, you can import them into your document (see "Importing and updating formats in a document" on page 295 and "Changing the format of files in a book" on page 348).

To create a cross-reference format:

1 Choose Special > Cross-Reference.

2 Click Edit Format.

3 Type a name for the cross-reference format in the Name text box. Format names are case-sensitive; *page* and *Page* would be different formats.

4 Do the following:

• To use text (such as *See* or *on page*) in a cross-reference format, click in the Definition text box and enter the text. For information, see the next section.

• To include a building block that refers to source information, such as a page number or heading text, click in the Definition text box and then click the building block in the Building Blocks scroll list. The building block appears at the insertion point. For information, see "Using building blocks for source information" on this page.

• To change the character format within the cross-reference, click in the Definition text box and then click the character format at the bottom of the Building Blocks scroll list. The building block appears at the insertion point. To return to the default paragraph format before the end of the cross-reference, insert <Default ¶ Font> in the definition. For information, see "Using building blocks for character formats" on page 161.

5 Click Add and then click Done. The new cross-reference format appears in the Formats pop-up menu in the Cross-Reference dialog box.

Including text

You can include specific characters or words in the cross-reference. In most cases, you simply enter the text in the Definition text box. But a few characters are entered or displayed differently. For example, an angle bracket (< or >) in a cross-reference format ordinarily signals a building block. To include an angle bracket as part of the text, precede it with a backslash (\).

Note: *In Windows and on UNIX systems, some special characters are entered or displayed differently in dialog boxes. In Windows, you enter a sequence of characters beginning with a backslash (\); these sequences are listed in Appendix A, "Typing in Dialog Boxes." On UNIX systems, the backslash sequences may appear in text boxes, even though you don't have to type the sequences to enter the characters.*

Using building blocks for source information

You use building blocks to include information about the source of the cross-reference, such as its paragraph text (but not the cross-reference marker text), paragraph autonumber, or page number. Building blocks for source information appear in angle brackets (< and >) and begin with a dollar sign ($). The following building blocks are grouped by the type of information they represent.

Source file FrameMaker provides the following building blocks for referring to the source file-name.

Building block	Meaning
<$filename>	The name of the source document
<$fullfilename>	The full pathname of the source document

Source paragraph FrameMaker provides the following building blocks for referring to the source paragraph.

Building block	Meaning
<$pagenum>	The page number of the source paragraph
<$paratext>	The text of the source paragraph, excluding its autonumber (If the character format of text in the source paragraph was changed by applying a Character Catalog format, the font family, superscript, and subscript properties are preserved in the text of the cross-reference.)
<$paratag>	The tag of the source paragraph
<$paranum>	The source paragraph's entire autonumber, including any text in the autonumber format
<$paranumonly>	The source paragraph's autonumber counters, including any characters between them

Paragraph preceding the source paragraph A cross-reference to a subsection often needs to identify the section that contains it. For example, a cross-reference to a subheading might identify the main heading under which it is found, as in the following: *See "Types of plate boundaries" in "Plate tectonics."* In the example, *Types of plate boundaries* is the source paragraph, and *Plate tectonics* is the main heading under which the source paragraph appears.

FrameMaker provides the following building blocks for referring to a paragraph preceding the source. In each of the building blocks, replace *tag* (in brackets) with the tag of the paragraph to which you want to refer, but don't delete the brackets. For example, if you want to refer to the text of the preceding paragraph tagged Head1, use <$paratext[Head1]>.

Building block	Meaning
<$pagenum[*tag*]>	The page number of the preceding paragraph with the specified tag
<$paratext[*tag*]>	The text of the preceding paragraph with the specified tag, excluding its autonumber (If the character format of text in the source paragraph was changed by applying a Character Catalog format, the font family, superscript, and subscript properties are preserved in the text of the cross-reference.)
<$paratag[*tag*]>	The tag of the preceding paragraph with the specified tag
<$paranum[*tag*]>	The entire autonumber of the preceding paragraph with the specified tag, including any text in the autonumber format
<$paranumonly[*tag*]>	The autonumber counters of the preceding paragraph with the specified tag, including any characters between them

Important: *Don't use a paragraph tag that includes brackets.*

Using building blocks for character formats

All formats in the document's Character Catalog appear at the end of the Building Blocks scroll list. You insert them as you do other building blocks.

If you don't insert a character format in a cross-reference format, FrameMaker uses the font at the insertion point when a cross-reference is inserted

with that format. 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.

Important: *Don't use a character tag that includes angle brackets.*

Examples of cross-reference formats

The first four examples in the following table include building blocks that refer to the source paragraph. The first two include the source paragraph's text and autonumber. The third includes only the source paragraph's text. The fourth includes only the page number of the source paragraph.

Example	Format
Chapter 4, "Climatic Effects."	<$paranum>, "<$paratext>."
Section 2.3.4, *Volcanoes.*	Section <$paranumonly>, <TitleFont><$paratext>.
See *Plate tectonics,* next.	See <TitleFont><$paratext> <Default ¶ Font>, next.
page 23	page <$pagenum>
See "Magma" in "Volcanoes."	See "<$paratext>" in "<$paratext[Head1]>."

The last example includes a building block that refers to a paragraph preceding the source paragraph. In this example, the cross-reference format could also be the following:

See "<$paratext>" in "<$paratext[Title, Head1]>."

In this case, the cross-reference refers to either the chapter title (Title) or the section heading (Head1), whichever is closer to the *Magma* source paragraph.

Editing cross-reference formats

When you change or delete cross-reference formats, the changes are reflected immediately in all cross-references that use the affected formats.

You can change the format of cross-references in a text inset (text imported by reference) 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.

To change a cross-reference format:

1 Choose Special > Cross-Reference and click Edit Format.

2 In the Formats scroll list, select the format you want to change, and then edit the definition. You can use text and building blocks in the same way you do when creating a cross-reference format (see page 160).

3 Click Change, and then click Done. If cross-references in the document use the format, the Update Cross-Reference dialog box appears. Indicate the scope of cross-references to update, and then click Update.

To delete a cross-reference format:

1 Choose Special > Cross-Reference and click Edit Format.

2 In the Formats scroll list, select the format you want to delete.

3 Click Delete, and then click Done. If cross-references in the document use the format, you are asked whether you want to convert these cross-references to text.

Maintaining cross-references

If you edit the source of a cross-reference or if the pagination of the source document changes, the cross-reference may no longer be accurate. You can update cross-references to be sure that they show correct information from the source.

Normally, FrameMaker updates all cross-references when you open a document. It also updates all internal cross-references and cross-references to open documents when you print a document. You can also update cross-references manually. If the document contains unresolved cross-references—cross-references to sources that FrameMaker can't find—you'll need to help locate the sources.

Note: *FrameMaker does not update cross-references when opening a document in the following circumstances: when fonts or dictionaries are missing, when opening a document saved with an earlier version of FrameMaker, and when opening a MIF file.*

Suppressing automatic updating

If a document contains many cross-references, you can improve its opening time by suppressing automatic updating of the cross-references. After you suppress automatic updating, cross-references are no longer updated when you open the document. However, internal cross-references and cross-references to open documents are still updated automatically when you print.

To suppress automatic updating:

1 Choose Edit > Update References.

2 Choose Suppress Automatic Updating from the Commands pop-up menu.

3 Select Suppress Automatic Updating of All Cross-References, and then click Set.

4 Click Done. Cross-references will be updated only when you print or when you manually give instructions to update.

Updating cross-references manually

You should update all cross-references in a document before distributing the document. Also routinely update 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 books" on page 345.

FrameMaker doesn't update cross-references that refer to information in hidden conditional text. Show the text that contains the sources of the cross-references before updating the cross-references.

To update cross-references in a document manually:

1 Choose Edit > Update References.

2 Select All Cross-References, and then click Update. If FrameMaker resolves all the cross-references, you're finished. If FrameMaker can't resolve all the cross-references, the Update Unresolved Cross-References dialog box appears. To resolve the cross-references, follow the instructions in the next section.

Resolving cross-references

Occasionally, FrameMaker can't update a cross-reference for one of the following reasons:

- The marker indicating the source of the cross-references has been moved to a different file, or the file itself has been moved or renamed.
- The marker indicating the source has been deleted.

When FrameMaker can't resolve a cross-reference during an automatic update (when opening or printing), an alert message appears. You can resolve the cross-references after dismissing the message.

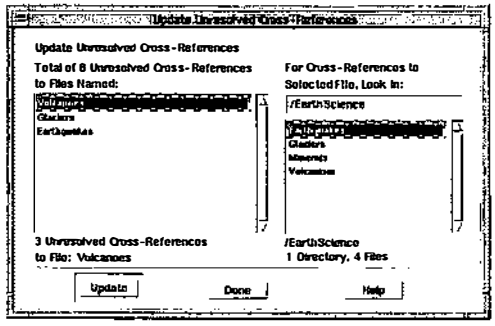
If you want to inspect all the unresolved cross-references at the same time, you can generate a list of unresolved cross-references.

To resolve a cross-reference when a marker has been moved to another file or the file has been renamed:

1 Choose Edit > Update References.

2 Choose Update Unresolved Cross-References from the Commands pop-up menu.

3 In the Total of Unresolved Cross-References scroll list, select the file that used to contain the source of an unresolved cross-reference. The text below the scroll list indicates how many cross-references to the selected file are unresolved.



In this example, the file contains eight unresolved cross-references. The source for three of them was in the Volcanoes file.

4 In the Look In scroll list, select the file that contains the source. In the example, if you renamed the Volcanoes file to Volcanism, you would resolve the cross-reference by selecting Volcanism in the Look In scroll list.

If you can't locate the file that contains the source, use the next procedure to resolve the cross-reference.

5 Click Update. If FrameMaker can't perform the update, select a different file in the Look In scroll list, and then try again.

6 To resolve cross-references to any other file listed in the Total of Unresolved Cross-References scroll list, repeat steps 3 through 5.

7 Click Done.

To resolve a cross-reference when a marker has been deleted:

1 Choose Edit > Find/Change.

2 Choose Unresolved Cross-Reference from the Find pop-up menu and click Find. FrameMaker finds the first unresolved cross-reference and selects it. The marker text of the last-used source marker for the cross-reference appears in the Find text box to help you locate the source.

3 If you no longer need the cross-reference because the source text itself was deleted, delete the cross-reference. Otherwise, do one of the following:

- If FrameMaker finds an unresolved paragraph cross-reference, double-click the cross-reference to display the Cross-Reference dialog box, specify a different source, and click Replace.
- If FrameMaker finds an unresolved spot cross-reference, insert a new cross-reference marker in the appropriate text (see page 157). Use exactly the same marker text that appears in the Find/Change dialog box.

4 Repeat steps 2 and 3 until all unresolved cross-references are resolved.

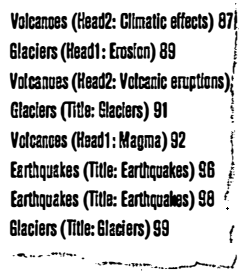
To generate a list of unresolved cross-references:

1 Choose File > Generate/Book.

2 Choose List of References from the List pop-up menu, and then click Generate.

3 Move Unresolved Cross-Refs to the Include References scroll list, and then click Generate.

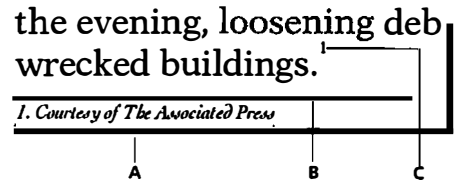
The generated list includes the page number of each unresolved cross-reference, indicates whether each missing source is internal (in the current document) or external (in a different document), and includes additional information—for example, the tag and text of the source paragraph. The tag and text may be inaccurate because they aren't updated after you initially insert the cross-reference. For spot cross-references, the list includes the marker text.



Generated list of unresolved cross-references

Working with footnotes

When you insert a footnote reference and footnote, FrameMaker gives it a number, formats the text of the footnote, and inserts a separator if the footnote is the first one in a column.



A. Footnote B. Footnote separator C. Footnote reference

As you insert, move, and delete footnotes, FrameMaker adjusts the numbering. As you edit the surrounding text, FrameMaker moves the footnotes from page to page as needed.

The footnote reference and the footnote itself usually appear in the same column. When you insert a footnote reference in a table, the footnote appears 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.

To insert a footnote:

1 Click where you want the footnote reference to appear. You can insert a footnote reference in a column of text or in a table cell.

2 Choose Special > Footnote. 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. (Footnotes are numbered consecutively in a text flow. If your document contains several text flows, footnote numbering in each flow will be independent of the others.)

3 Type the text of the footnote at the insertion point. When you finish typing the footnote, return to the main text by clicking in it or by choosing Special > Footnote again.


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.

To change a footnote:

Select the footnote text and edit it as you do other text. You can't change a footnote number, because FrameMaker maintains the numbering.

To duplicate, move, or delete a footnote:

1 Select the footnote reference (not the footnote text).

2 Do one of the following:

- To duplicate or move the footnote, use Edit > Copy, Edit > Cut, and Edit > Paste.
- To delete the footnote, press Delete.

Keeping a footnote in the same column as its reference

FrameMaker sometimes can't keep footnotes in the same column as the corresponding footnote reference. 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, you can force a column or page break before the footnote reference to keep the reference and the footnote together in the same column.

Adding text to a footnote may cause the last footnote in a column or on a page to move to the bottom of the next column or page. To reduce the chance of a footnote not fitting in a column, allocate more space for footnotes in a column (see "Changing footnote properties" on page 168).

Inserting more than one reference to a footnote

You can create a single footnote that has several footnote references—for example, a table footnote with references in several cells.

Type	Depth in Kilometers	Greatest Richter Magnitude
Shallow	0-60[a]	8.6
Intermediate	60-300[a]	7.5
Deep	300 or more	6.9

a. Approximately 90% of all earthquakes occur at depths between 0 and 100 Kilometers

Two references for one footnote

You create multiple footnote references by inserting the first reference in the usual way and then using cross-references for additional footnote references.

To insert more than one reference to a footnote:

1 Insert the first footnote reference.

2 If necessary, create a cross-reference format for additional footnote references.

The cross-reference format must display the footnote number correctly. For example, if footnote references are displayed in superscript, and if the document contains a Superscript character format, a cross-reference format defined as <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 Choose Special > Cross-Reference to insert a cross-reference to the footnote where you clicked. Use the cross-reference format you created in step 2.

5 Click Insert. FrameMaker inserts a cross-reference that is identical to the original footnote reference.

Maintaining cross-references to footnotes after editing

After you edit a document, make sure the additional references to footnotes are accurate. For example, a cross-reference to a footnote reference may be misnumbered, or the footnote—unless the reference is in a table—may be on the wrong page. If a cross-reference is misnumbered, update the cross-references in the document (see "Maintaining cross-references" on page 163). If the footnote is on the wrong page, fix the page break or move the footnote.

Changing footnote formats

You can change any of the footnote properties—for example, the style of numbers, the numbering format, or the paragraph format to use for footnote text. 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 different formats for document and table footnotes.

Changing footnote properties

When you change footnote properties, all the changes except the paragraph format are applied to both new and existing footnotes.

To change footnote properties:

1 Do one of the following:

• To change document footnote properties, click in a text frame outside a table.

• To change table footnote properties, click in a table cell.

2 Choose Format > Document > Footnote Properties. Depending on where you clicked, either the Footnote Properties dialog box or the Table Footnote Properties dialog box appears.

3 Do the following:

• To adjust the maximum height allowed for footnotes in a column, enter a value in the Maximum Height Per Column text box.

• To use a different paragraph format for new footnotes, enter the format's tag in the Paragraph Format text box. (The format must be stored in the document's Paragraph Catalog.) To use a different format for an existing footnote, apply the format to it directly.


By default, documents may include paragraph formats named Footnote and TableFootnote to be used for new footnotes. To change the look of footnotes, change these formats (see Chapter 4, "Text Formatting").

• To change the numbering style, choose a style from the pop-up menu or enter a style in the Custom text box.

The menu includes numbers and letters. Your custom style can use any combination of numbers, letters, and symbols, which will be used in the order you enter them. If you use symbols in a custom style and your document contains more footnotes than symbols, the symbols are repeated. For example, if you use the two symbols * and †, and the document contains three footnotes, the third footnote is marked **. The footnote number will appear in the default font of the footnote's paragraph format.

Note: *In Windows and on UNIX systems, some special characters are entered or displayed differently in dialog boxes. In Windows, you enter a sequence of characters beginning with a backslash (\); these sequences are listed in Appendix A, "Typing in Dialog Boxes." On UNIX systems, the backslash sequences may appear in text boxes, even though you don't have to type the sequences to enter the characters.*

• Choose whether you want document footnote numbers to be restarted on each page or numbered sequentially throughout the document. When you number sequentially, you can start from any number. The numbering of table footnotes always starts over with each table.

• Specify the format of the footnote reference in main text and of 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.

4 Click Set.

Changing the footnote 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 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 (see page 281). Their names are the same as the paragraph formats used for these footnotes—by default, Footnote and TableFootnote.



Reference page



Footnote separator on body page

To change the footnote separator:

1 Choose View > Reference Pages and display the page that contains the footnote separator frame.

2 Resize the frame or edit its contents (see Chapter 8, "Graphics"). You can change the size or position of the line in the frame, 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.



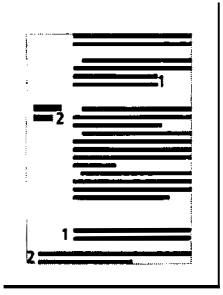
To add space, but not a line, between the body text or table and the footnotes, leave the separator frame empty.

3 Choose View > Body Pages.

Using footnotes in multicolumn layouts

The placement of footnotes in multicolumn layouts depends on the location of the footnote reference and on the presence or absence of side heads or text that straddles columns.

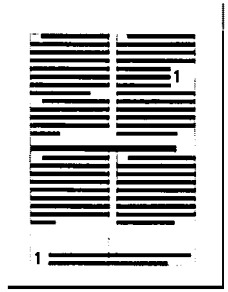
Side heads In a single-column document with side heads, footnotes in the body column run the width of the body column, but footnotes in a side head span the side-head area *and* the body column.



Footnotes in side head span body column and side-head area.

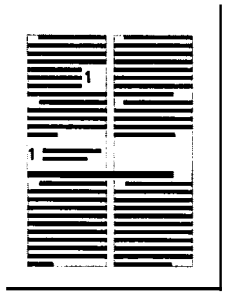
If you want a footnote in a side head to be aligned with footnotes in the body column, change the indents of the footnote in the side head area by adding a distance equal to the width of the side-head area plus the gap (see "Changing indents and alignment" on page 87).

Straddles In a multicolumn format where some text straddles all columns and other text does not, footnotes may or may not straddle the columns. Footnotes whose references appear in straddle text always straddle the columns, and these footnotes appear at the bottom of the text frame. Footnotes whose references appear in nonstraddle text straddle the columns if the footnotes' paragraph format is set to Across All Columns (in the Pagination properties of the Paragraph Designer).



Footnote across all columns

If the paragraph format is set to In Column, the footnote appears either just above the next straddle paragraph (if there is one on the page) or at the bottom of the column.



Footnote in column

If the footnotes appear out of order, select Across All Columns for the footnote paragraph format to force all footnotes to appear in numerical order at the bottom of the page.

Working with endnotes

Endnotes appear at the end of a document rather than at the bottom of a page or below a table. You type the endnotes at the end of the document just as you would any other paragraphs, give the endnotes paragraph autonumbers, and then use cross-references to the autonumbered paragraphs as endnote references.

FrameMaker does not automatically maintain endnotes. If you change the order of endnote references while editing the document, you'll need to rearrange the endnotes in matching order. If you delete an endnote, you'll need to delete the reference to it manually. If you're not willing to maintain the endnotes in these ways, use footnotes. FrameMaker automatically maintains footnote order and numbering.

To create endnotes:

1 Type the first endnote at the end of the document and assign it the paragraph format for endnotes. The paragraph format should include an autonumber so the endnotes will be numbered consecutively.

2 Click where you want to insert the endnote reference and cross-reference the endnote. Use the cross-reference format you created for endnotes.

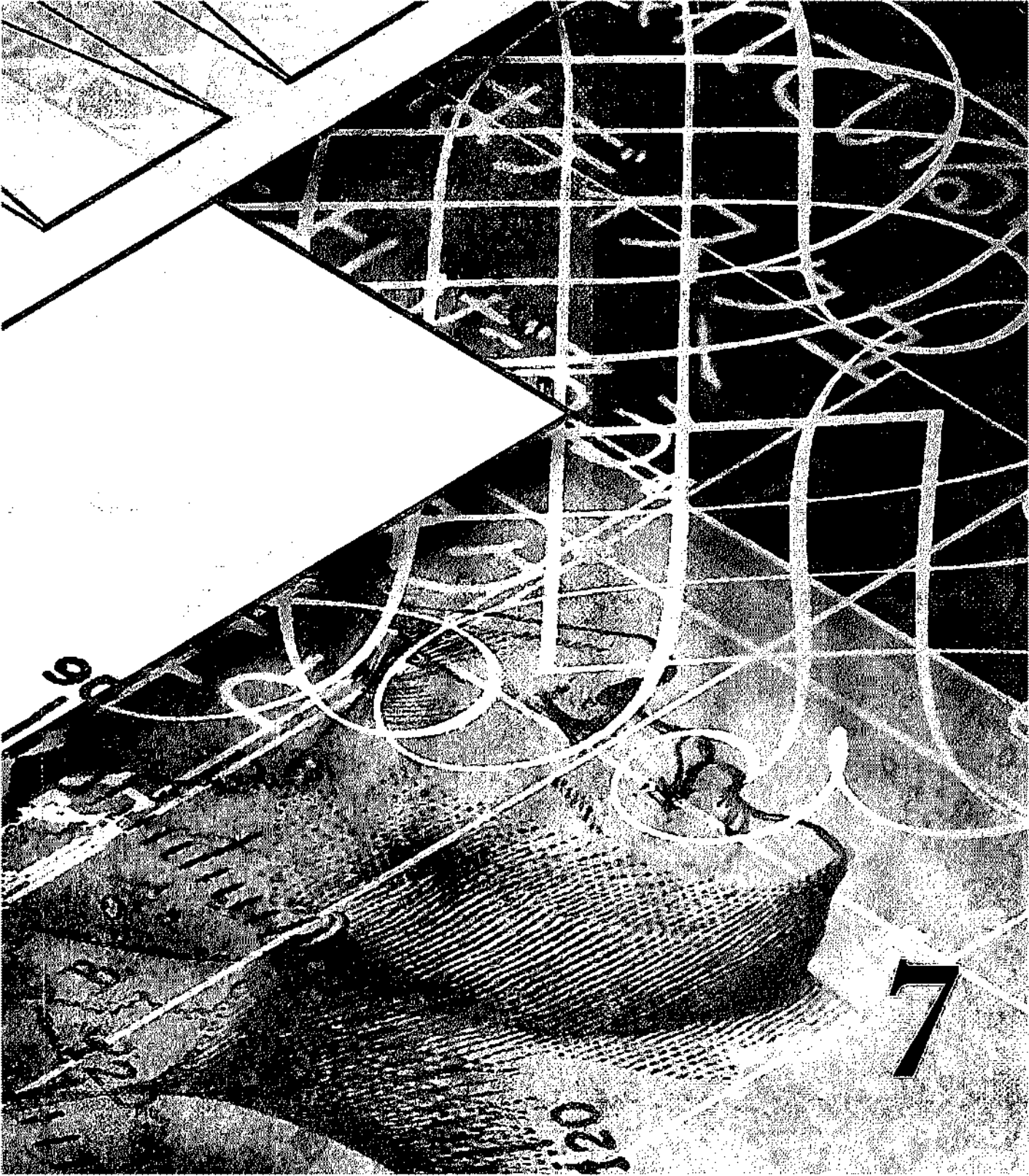
For example, if endnote references are to be displayed in superscript, and if the document contains a Superscript character format, the cross-reference format <Superscript><$paranumonly> displays the autonumber of the endnote paragraph as a superscript.

3 Create additional endnotes as you created the first one.

To maintain endnotes:

Do the following:

- If you change the order of endnote references while editing the document, rearrange the endnotes to match the order of the references. Then update the cross-references to update the endnote reference numbers. For information on updating cross-references, see "Maintaining cross-references" on page 163.
- If you delete an endnote, delete all references to it. Otherwise, the reference will be an unresolved cross-reference.


7



Chapter 7: Variables

To use a short passage of text (for example, a word or phrase representing a product or company name) in several places in a document, or to include system information that is updated automatically (for example, the current date), use variables. Variables save you the trouble of typing or changing the text yourself.

About variables

Variables are useful when you expect certain text to change often or when you know the same text will be used in several places. User variables, such as a product name, are defined by you. System variables, such as the current date, use information supplied by FrameMaker and your computer system.

User variables

Each user variable has a name and a definition. A definition includes text and optional building blocks for the character format of the text. For example, suppose you define a variable as follows:

<BookTitleFormat>The Earth Sciences

If the BookTitleFormat character format is defined as small caps, this variable will appear on the page as THE EARTH SCIENCES.

You can change the definition of any user variable. For example, if you're using a variable to represent the title of a book, you can change the definition of the variable when the book's title changes. When you change the definition, all occurrences of the variable in your document are updated to use the new definition.

The standard 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.

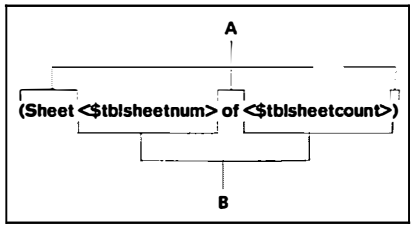
System variables

Documents come with a set of system variables. The variables display information that the system generates—for example, the current page number, the page count of the document, or the current date. You can't add to the set, delete a variable from it, or rename a variable.

Each system variable has a name and a definition. A system variable definition can contain the following items:

- Building blocks for system information such as the month, day, year, and filename
- Text characters such as the comma and the spaces that appear in the date *May 1, 1997*
- Building blocks for character format changes

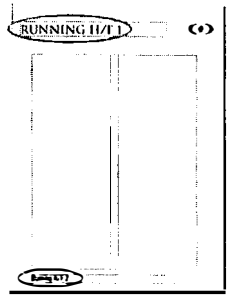
For example, the Table Sheet variable that appears in a table title as *(Sheet 3 of 5)* has the following definition.



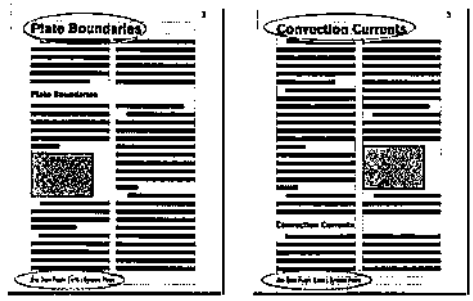
A. Text you type B. Building blocks

You can change the definition—the way the information is displayed—by adding, removing, or rearranging building blocks and by editing the text in the definition. For example, you can change the format used to display the current date. For a complete list of the system variables and their default definitions, see page 178.

Probably the most common way to use system variables is in background text frames such as headers and footers. (A background text frame is on a master page and doesn't have a flow tag.) The contents of these text frames appear on the corresponding body pages. For example, you can use system variables to create running headers and footers that contain chapter titles, section headings, or other information that may change from page to page.



System variable names appear on master pages.



FrameMaker provides values on body pages.

The values of system variables inserted on master pages are updated automatically. However, if you place a system variable on a body or reference page, the value is updated only when you open or print the file. You can also manually update the value of the variable when the file is open.

Inserting variables

You can insert a variable on any type of page in a document—a body page, master page, or reference page. You can insert a variable in a text frame but not in a text line.

To insert a variable:

1 Click where you want to insert the variable. If you're inserting the Current Page # variable or a running header/footer variable (see page 183), you must click in a background text frame on a master page.

2 Choose Special > Variable.

3 Select a variable in the Variables scroll list.

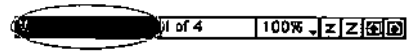
The scroll list contains the variables allowed at the insertion point in the document. For example, if the insertion point is in a text frame on a body page, the scroll list doesn't contain the Current Page # variable. The user variables appear in the scroll list after the system variables. The last system variable is Table Sheet.

4 Click Insert.

In most cases, the value of a variable inserted on a master page appears on both the master and the corresponding body pages. However, if you insert the Current Page # variable, a number sign (#) appears on the master page, and the actual page number appears on the body page. If you insert a running header/footer variable, the variable name appears on the master page, and the value appears on the body page.

To insert a variable by using the keyboard:

1 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.



2 Start typing the variable name.

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. You need to type only enough letters to identify the variable uniquely. For example, if the only variable that begins with *B* is BookTitle, the phrase *BookTitle* appears in the Tag area when you type **B**.

3 Press Return to insert the variable in the document. If you decide to cancel the operation, Press Control+c or click in the document without pressing Return.

DEFAULT VALUES FOR SYSTEM VARIABLES Most system variables can be inserted on a body, reference, or master-page. However, the Current Page # and Running H/F variables can be inserted only in a background text frame on a master page.

System variable	Default definition (US English version)	Example of display
Current Page #	<$curpagenum>	3
Page Count	<$lastpagenum>	18
Current Date (Long)	<$monthname> <$daynum>, <$year>	October 11, 1997
Current Date (Short)	<$monthnum>/<$daynum>/<$shortyear>	10/11/97
Modification Date (Long)	<$monthname> <$daynum>, <$year>, <$hour>:<$minute00> <$ampm>	September 24, 1997, 10:48 am
Modification Date (Short)	<$monthnum>/<$daynum>/<$shortyear>	9/24/97
Creation Date (Long)	<$monthname> <$daynum>, <$year>	July 1, 1997
Creation Date (Short)	<$monthnum>/<$daynum>/<$shortyear>	7/1/97
Filename (Long)	<$fullfilename>	(Windows) c:\Memos\Staffing.fm (Macintosh) Disk:Memos:Staffing.fm (UNIX) /usr/tom/Memos/Staffing.fm
Filename (Short)	<$filename>	Staffing.fm
Running H/F 1	<$paratext[Title]>	The Turbulent Oceans
Running H/F 2	<$paratext[Heading1]>	Threat of Extinction
Running H/F 3	<$marker1>	Plate tectonics
Running H/F 4	<$marker2>	Volcanoes
Table Continuation	(Continued)	(Continued)
Table Sheet	(Sheet <$tblsheetnum> of <$tblsheetcount>)	(Sheet 1 of 2)

Editing variables

When you insert a variable, its value is displayed at the insertion point. You can then move it, replace it with another variable, or delete it.

You can't edit occurrences of a variable directly in a document. To change the variable, you change its definition (see "Changing variable definitions" on page 181), or you convert it to editable text and

then edit the text in the document. If you convert the variable to text, however, the text is no longer updated when the variable definition changes.

To copy or move a variable:

1 Click the variable to select it.

2 Copy or move the variable as you do editable text—by using the Edit > Copy, Edit > Cut, and Edit > Paste commands.

To replace a variable:

1 Double-click the variable to display the Variable dialog box.

2 Select a different variable in the Variables scroll list and click Replace.

Deleting variables

You can delete an occurrence of a user or system variable. You can also delete the definition of a user variable. Deleting a variable definition converts all occurrences of the variable in your document to editable text.

To delete a variable in a text inset, delete the variable in the source document.

To delete one occurrence of a variable:

Click the variable once to select it and press Delete. Backspacing the insertion point over a variable doesn't delete the variable.

To delete a user variable definition:

1 Choose Special > Variable.

2 Select the variable in the Variables scroll list and click Edit Definition.

3 Click Delete and then click Done.

Converting variables to text

After you convert a variable to text, you can edit the text. However, the text will no longer be treated as a variable.

To convert a variable to text:

1 If you want to convert a single occurrence of the variable, select it.

2 Choose Special > Variable and click Convert to Text.

3 Do one of the following:

- To convert a single occurrence of a variable, click Selected Variable.
- To convert all occurrences of a particular variable, select the variable in the Variables Named scroll list.
- To convert all variables in the document, click All Variables.

4 Click Convert.

Updating system variables on body or reference pages

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 appears. However, if the value (not the definition) of a variable changes, occurrences of the variable on body and reference pages will be updated automatically only when

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 manually.

To update system variables manually:

1 Choose Special > Variable.

2 Click Update and then click OK.

Importing variable definitions

When you want to use another document's variable definitions, copy those definitions to your document or to files in a book by using the File > Import > Formats command. For information, see "Importing and updating formats in a document" on page 295 and "Changing the format of files in a book" on page 348.

Creating user variables

Before you create a user variable, 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.

If you don't specify a character format in the variable definition, the variable uses the format at the insertion point. If you change the character format for the variable, the change applies only to the variable, not to the text that follows.

To create a user variable:

1 Click in a text frame and choose Special > Variable.

2 Click Create Variable.

3 Enter the name and definition of the variable. Variable names are case-sensitive; *Title* and *title* would be different variables. The complete definition, including typed text and character formats, can be up to 255 characters long.

To include an angle bracket in a variable definition as text, precede it with a backslash (\).

Note: *In Windows and on UNIX systems, some special characters are entered or displayed differently in dialog boxes. In Windows, you enter a sequence of characters beginning with a backslash (\); these sequences are listed in Appendix A, "Typing in Dialog Boxes." On UNIX systems, the backslash sequences may appear in text boxes, even though you don't have to type the sequences to enter the characters.*

4 To change the character format within the variable definition, do the following:

- To use a character format stored in the Character Catalog, place the insertion point in the Definition text box where you want to change the character format and then click the character format in the Character Formats scroll list. The scroll list includes all the formats in the Character Catalog of the current document.

Important: *Don't use a character format whose tag includes angle brackets.*

- To change the character format back to the paragraph's default font before the end of the variable, place the insertion point in the Definition text box where you want to change the character format, and then click <Default ¶ Font> in the Character Formats scroll list.

5 Click Add. The variable appears in the User Variables scroll list.

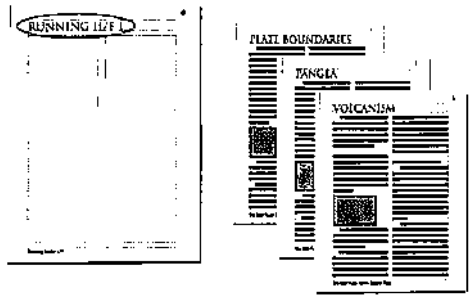
6 To add more user variables, repeat steps 3 through 5.

7 Click Done to return to the Variable dialog box and then click Done.

Changing variable definitions

You can change a variable's definition at any time. For example, if you use a variable for a product's code name, you'll eventually need to change the definition to the final product name.

When you change the definition of a variable, the variable is immediately updated throughout the document, regardless of the type of page on which it appears. If the variable is in a header or footer on a master page, you may need to redisplay a body page to see the update.



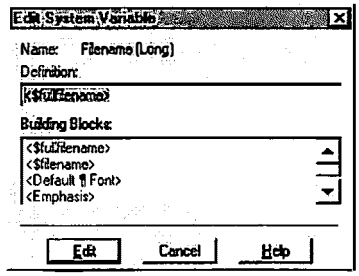
Variables are immediately updated throughout a document.

Note: *If a variable is in a text inset that uses the source document's formats, you must change the variable definition in the source document. For information on text insets and their formatting options, see "Importing formatted text" on page 376.*

To change a variable definition:

1 Click in a text frame and choose Special > Variable. If you're changing the definition of the Current Page # variable or a running header/footer variable, you must click in a background text frame on a master page.

2 Select a variable in the Variables scroll list and click Edit Definition.



3 Do one of the following:

- For user variables, edit the name or definition and click Change.
- For system variables, edit the definition and click Edit. You can insert a building block for system-supplied information or for a character format at the insertion point by clicking the building block in the Building Blocks scroll list. Only the building blocks for information that is appropriate for the variable (for example, <$fullfilename> and <$filename> for the filename variables) appear in the scroll list. All the character formats in the Character Catalog appear at the bottom of the scroll list.

You can change the text and character format within the definition as described in "Creating user variables" on page 180.

4 If you're editing a user variable, you can edit additional variables by selecting them in the scroll list, changing their definitions, and clicking Change.

5 Click Done to return to the Variable dialog box and then click Done.

Changing definitions of date and time variables

FrameMaker includes both long and short versions of variables for the current date, the date the document was last modified, and the date the document was created (for example, *February 17, 1997 1:12 pm*). FrameMaker provides the following building blocks for date and time variables.

Building block	What it displays	Example
<$second> <$second00>	Seconds	8 or 32 08 or 32
<$minute> <$minute00>	Minutes	8 or 32 08 or 32
<$hour> <$hour01> <$hour24>	Hours	8 or 12 08 or 12 08 or 22
<$ampm> <$AMPM>	Morning or evening designation	am or pm AM or PM
<$daynum> <$daynum01>	Number of the day	8 or 28 08 or 28
<$dayname> <$shortdayname>	Name of the day	Monday Mon
<$monthnum> <$monthnum01>	Number of the month	8 or 12 08 or 12
<$monthname> <$shortmonthname>	Name of the month	August Aug
<$year> <$shortyear>	Year	1997 97

FrameMaker uses the language of the current paragraph to determine the language used in date and time variables. For example, the current date variable may appear as *10 December 1997* in an English paragraph but as *10 Dezember 1997* in a German paragraph. If you change the language of a paragraph, the system variables in the paragraph are updated to use the new language.

If your system supports the typing of Japanese text in documents and dialog boxes, the following additional building blocks are available for Japanese dates.

Building block	Example
<$daynumkanjikazu>	一 or 三十一
<$daynumkanjinumeric>	一 or 三一
<$monthnumkanjikazu>	一 or 十二
<$monthnumkanjinumeric>	一 or 一二
<$imperialyear>	**1** or **10**
<$imperialyear01>	**01** or **10**
<$imperialyearspecialkanjikazu>	元 or 十
<$imperialyearspecialkanjinumeric>	元 or 一〇
<$imperialyearkanjikazu>	一 or 十
<$imperialyearkanjinumeric>	一 or 一〇
<$imperialera>	平成

Japanese dates appear in a variable when the variable uses a Japanese font family and the Language property is set to Nihongo.

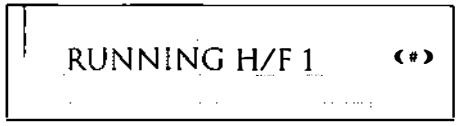
Creating running headers and footers

A running header/footer variable gives information about the contents of a page and can change from page to page. You might use running header/footer variables to include information such as the number and title of the current chapter, the name of the current first-level section, or the current page number.

About running header/footer variables

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 (Running H/F 1, Running H/F 2, Running H/F 3, and Running H/F 4).

Running header/footer variables can refer to a paragraph with a particular tag—usually a title or heading paragraph—or to marker text. You can use these variables with their default definitions, or you can customize them—for example, by changing the tag that appears in the variable definition.



Variable name appears on master page.



Value appears on body page

You insert a running header/footer variable in a background text frame on a master page in the same way that you insert variables elsewhere (see page 177).

By default, the Running H/F 1 and Running H/F 2 variables use definitions that refer to paragraphs, and the Running H/F 3 and Running H/F 4 variables use definitions that refer to markers. You can change these default definitions either before or after you insert the variable. For information on the building blocks you can use in running header/footer variables, see the following sections. For instructions on changing a variable definition, see page 181.

Displaying paragraph text, tags, or autonumbers

The most common use of running headers and footers is to show the text, autonumber, or tag of paragraphs with a specified tag. For example, a running header might show the current section heading or chapter number.

FrameMaker searches 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.

The following building blocks in running header/footer variables refer to a paragraph tag.

Building block	What it displays
<$paratext[*paratag*]>	The paragraph's text
<$paranum[*paratag*]>	The paragraph's autonumber, including any text in the autonumber format
<$paranumonly[*paratag*]>	The paragraph's autonumber counters, including any characters between them
<$paratag[*paratag*]>	The paragraph's tag

Follow these guidelines for using paragraph tag building blocks:

- Don't use a paragraph tag that includes brackets.
- Replace *paratag* in the building block with the tag of the paragraph for which you want to display information. Don't delete the brackets. For some examples, see "Running headers and footers based on paragraph tags" on page 185.
- You can include more than one paragraph tag in the *[paratag]* part of a building block. When you include multiple paragraph tags, FrameMaker uses the first paragraph it finds with one of the tags. Separate the tags with commas, as in the following example:

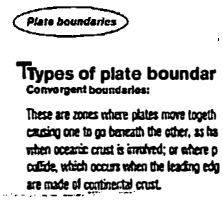
<$paratext[Head1, Head2]>

RUNNING HEADERS AND FOOTERS BASED ON PARAGRAPH TAGS The following table contains examples of running headers and footers that refer to paragraph tags.

Running header/footer variable definition	Explanation	Examples of display
<$paratext[Head1]>	The text of the first paragraph that FrameMaker finds with the tag Head1	Types of plate boundaries
<Header><$paratext [Head1]>	The text of the first paragraph with the tag Head1 (The text appears in the Header character format—uppercase, italic letters.)	*TYPES OF PLATE BOUNDARIES*
<$paranum[ChapTitle]>	The complete autonumber of the first paragraph with the tag ChapTitle	Chapter 2
<$paranumonly[ChapTitle]>	The autonumber counters for the first paragraph with the tag ChapTitle	2
<$paratag[Chapter]>	The tag of the first paragraph with the tag Chapter	Chapter
<$paratext[ChapTitle, AppendixTitle]>	The text of the first paragraph with either the ChapTitle or AppendixTitle tag	PLATE TECTONICS

Displaying 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. When text symbols are visible, marker symbols (T) indicate the location of markers.



Page header contains abbreviated heading.

In this example, the marker in the heading contains the marker text *Plate boundaries*. A running header/footer variable then displays the marker text in the page header.

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 a marker of the specified type. You can use two marker types for running headers or footers: Header/Footer $1 and Header/Footer $2.

To display text from a marker:

1 Insert a Running Header/Footer variable in the header or footer on a master page (see page 177). 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 (see page 181). 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 Special > Marker.

5 In the Marker dialog box, choose either Header/Footer $1 or Header/Footer $2 from the Marker Type pop-up menu, enter the marker text, and click New Marker. When you enter the marker text, make sure that the spaces, punctuation, and capitalization are as you want them.

Note: *You can't format marker text in the Marker Text box. To format the marker text, insert a character format building block before the marker building block in the system variable definition.*

Displaying 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. (For information on conditional text, see Chapter 15, "Conditional Text.") A predefined variable is not included for this purpose, but you can redefine any of the existing running header and footer variables to use the condition tag building block. Unlike the system variables that refer to a paragraph or a marker, variables with the condition tag building block search only on the current page.

To display a condition tag:

1 Insert a Running Header/Footer variable in the header or footer on a master page (see page 177).

2 Edit the definition of the variable to use the <$condtag [*hitag, …,lotag, nomatch*]> building block(see page 181).

Replace *hitag, lotag,* and the ellipsis with one or more condition tags you want FrameMaker to find. 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, enter a nonbreaking space (a backslash followed by a space) in place of *nomatch.*

FrameMaker searches a page for the condition 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 appears first in the definition appears as the value of the variable.

Displaying the security level

If your document contains classified information, you can use condition tags in running headers or footers to display the highest security level on a page.

To display the highest security level on a page:

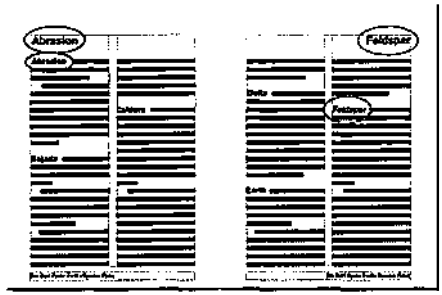
1 Apply condition tags such as Top Secret and Secret to the classified information.

2 Set up headers or footers to include these tags on pages that contain classified information. For example, to display Top Secret on pages that contain both Top Secret and Secret information

and Unclassified on pages that contain neither condition tag, define the building block as <$condtag[Top Secret,Secret,Unclassified]>.

Creating dictionary-style headers or footers

You can use dictionary-style headers or footers to show the range of information that appears on one body page or on two facing body pages. Dictionary-style headers or footers appear frequently in documents such as dictionaries, indexes, and glossaries.



Headers show first entry on left and last on right.

To create a dictionary-style header or footer:

1 Insert a different running header/footer variable in the header or footer of each of two facing master pages (see page 177). For example, 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 (see page 181). Replace *paratag* with the paragraph tag of dictionary terms.

3 In the same way, edit the definition of the variable on the right master page to use the <$paratext[+,*paratag*]> building block. The plus sign (+) tells FrameMaker to find the last paragraph on the page matching the tag rather than the first paragraph.





Chapter 8: Graphics

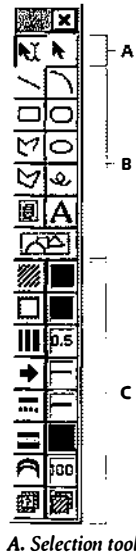
In FrameMaker, you can draw rectangles, ovals, and polygons, as well as straight and curved lines. You can create complex illustrations by combining several objects, and include text in illustrations. You can also specify object properties (such as fill pattern, line width, and color), and you can resize, reshape, rotate, and rearrange objects.

You can also place illustrations directly on the page, in anchored graphic frames that move with the text, or in unanchored graphic frames that crop the edges of the illustration. For information on anchored frames, see Chapter 9, "Anchored Frames." For information on unanchored graphic frames, see "Cropping or masking graphics" on page 222. For information on importing graphics, see Chapter 17, "Importing, Linking, and Exporting."

Displaying the Tools palette

You use the Tools palette to select drawing tools and to apply properties. The Tools palette contains the following:

- Selection tools that control how you select text and objects
- Drawing tools for drawing objects
- Pop-up menus for changing an object's drawing properties



A. Selection tools B. Drawing tools C. Drawing properties

On the Macintosh and on UNIX systems, a large Tools palette includes some commands from the Graphics menu. The properties appear in areas where you can click to apply them rather than choosing them from a pop-up menu.

To display the Tools palette:

Click the Tools button (◢) on the right side of the document window.

To toggle between the small and large Tools palettes (Macintosh and UNIX):

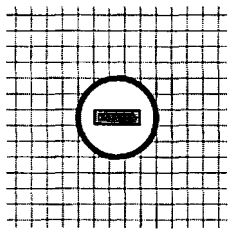
Do one of the following:

- (Macintosh) Click the zoom box in the upper right corner of the Tools palette.
- (UNIX) Click the Tools palette toggle ( ) in the lower left corner of the Tools palette.

Using grids

Two grids help you draw and align objects:

- The visible grid appears as horizontal and vertical lines on-screen, but not on the printed page. A graphic frame contains its own visible grid, which begins at the upper left corner of the frame.



Visible grid

- The invisible snap grid attracts objects to it. As you draw, rotate, resize, or drag objects (and when you drag indent and tab stop symbols on the ruler), they snap to the invisible grid.

Note: *If Snap and Gravity are both selected in the Graphics menu, gravity takes precedence. For information on Gravity, see page 213.*

To show or hide the visible grid:

Choose View > Grid Lines. If the visible grid doesn't appear in a text frame, change the frame's fill pattern to None (see page 199).

To turn the snap grid on or off:

Choose Graphics > Snap.

To change the grid spacing:

1 Choose View > Options.

2 Do one of the following:

- To set the space between lines in the visible grid, choose the spacing from the Grid Lines pop-up menu.
- To set the interval for the snap grid, enter the interval in the Grid Spacing text box.
- To set the snap interval for rotating objects, enter the number of degrees in the Snap Rotate text box.

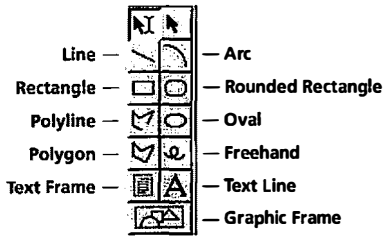


If you intend to use the grids together, make the visible grid spacing a multiple of the snap grid interval. For example, if the snap grid spacing is 0.125 inch, you could make the visible grid spacing 0.125 inch, 0.25 inch, or 0.5 inch.

3 Click Set.

Drawing objects

The Tools palette contains tools for drawing objects.



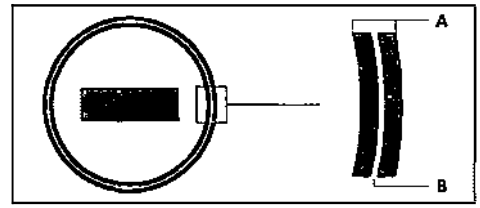
Drawing tools

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. You can also use the Rectangle or Oval tool and the Graphics > Set # Sides command to create a regular polygon (a polygon with equal sides and equal angles).

Use either the Text Frame tool or the Text Line tool to add text to a graphic, and use the Graphic Frame tool to crop objects. For an overview of text frames and graphic frames, see page 202. For information on cropping objects, see page 222.

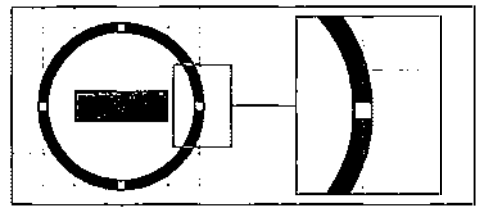
About paths

An object's path is an imaginary line through the center of the object's border. The path appears as an outline when you draw an object.



A. Border B. Path

FrameMaker uses the path to position objects. For example, when you use the Align command to align objects, the objects are aligned along their paths, not along the outside of their borders. When the snap grid is on as you draw, FrameMaker aligns the path with the snap grid.



Objects are aligned along their paths.

Using the drawing tools

Drawing an object is a simple series of clicks or drags. As you draw, you see the outline of the object.

When you draw an object, the pointer is a cross hair (+). After you draw, the pointer normally changes back to an arrow (↖) so you can select

objects, or to an I-beam (I) so you can select or type text. To draw another object, you usually have to click a drawing tool again (see page 196).

When you draw an object directly on a page, it doesn't move with the text, although text can run around the object. If you want the object to be "anchored" to surrounding text (that is, to move as you edit the text), you can draw the object in an anchored frame, or draw it on a page and then move it into an anchored frame. For information, see Chapter 9, "Anchored Frames."

When you draw an object, it uses the drawing properties that are selected on the Tools palette. The object is also selected, to make changing these properties easier. For information on applying properties, see page 198.

To draw a straight line:

1 Click the Line tool (\).

2 Click at the start and end of the line. You can also drag from the beginning to the end of the line. To draw a horizontal or vertical line, or a line at a 45-degree angle, Shift-click or Shift-drag.

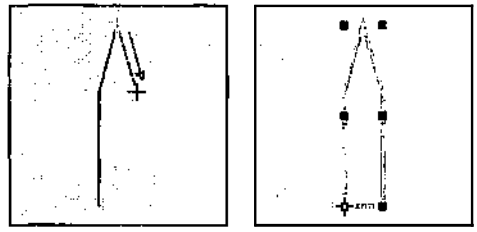

To draw several lines that touch one another, use the Polyline tool to draw several connected lines as a single object (see page 213). You can also use the Line tool to draw the lines and then use the Gravity feature to make sure they touch one another.

To draw a polyline or polygon:

1 Click the Polyline tool (M) or the Polygon tool (M).

2 Click at each vertex in turn. To draw a horizontal or vertical segment, or a segment at a 45-degree angle, Shift-click.

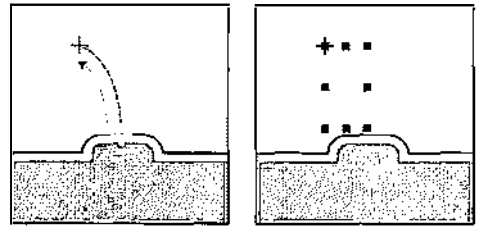
3 Double-click at the last vertex.


Click at each vertex and then double-click to end.

To draw an arc:

1 Click the Arc tool (⌒).

2 Put the pointer where you want to start the arc and drag along the path of the arc. To draw a circular arc, Shift-drag.


Drag and then release.

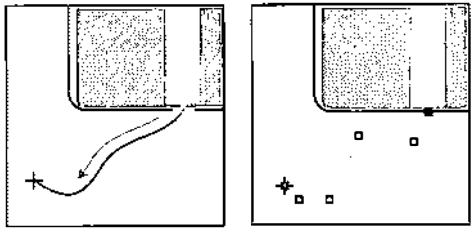
If the arc isn't the shape you want (for example, if it's concave rather than convex), don't release the mouse button. Drag the cross back to the starting point and draw the arc again, dragging along the path you want the arc to trace.

Initially, the angle of the arc will be 90 degrees. For information on changing the angle, see page 221.

To draw a freehand curve:

1 Click the Freehand tool ( ).

2 Put the pointer where you want to start the freehand curve, and drag along the path of the curve. The snap grid is ignored for all but the first point of a freehand curve; however, you may want the snap grid to be off when you draw the curve.



Drag and then release.

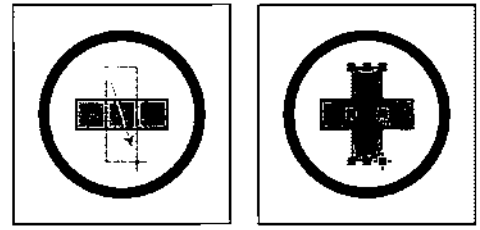
When you release the mouse button, FrameMaker approximates a curve along the path you drew and displays reshape handles and control points so you can reshape the curve. For information, see "Resizing and reshaping objects" on page 217.

For more precise control over the shape of a freehand curve, create a curve by drawing polylines or polygons and then smoothing them. For information on smoothing, see page 218.

To draw a rectangle, a rounded rectangle, or an oval:

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.



Drag and then release.

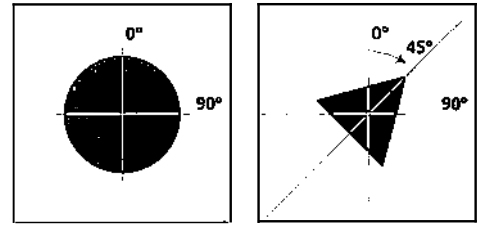
To draw a border around a graphic, draw a rectangle with a fill pattern of None around the graphic.

To draw a regular polygon:

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 Graphics > Set # Sides.

3 Specify the number of sides and the start angle of the polygon, and click Set.



Original object and regular polygon, with number of sides = 3 and start angle = 45°

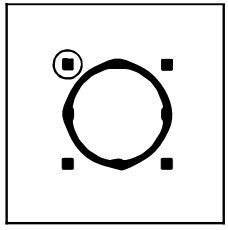
To draw several objects of the same type without clicking the tool each time:

Do one of the following:

- For all objects except text lines, Shift-click the tool. To stop using the tool, click another drawing tool or one of the selection tools (↖I,↖) on the Tools palette.
- For text lines, press Return at the end of a text line and continue typing. For information on creating text lines, see page 203.

Selecting objects

You select objects to change their properties or to edit the objects. When an object is selected, handles appear around it.

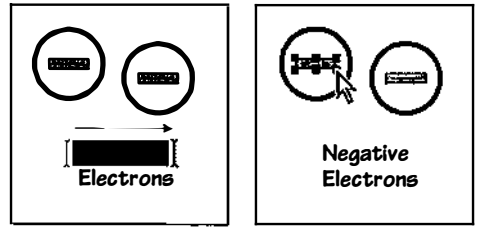


Selection handle

You can select several objects at the same time, 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. When you select a graphic frame, any selected objects are deselected.

The following tools are available for selecting:

- The Smart Selection tool (↖I) allows you to place an insertion point or select text when the pointer is over text, and to select objects when the pointer is over an object. When the Smart Selection tool is active, the pointer changes shape as you move it—to an I-beam (I) over text or to a hollow arrow (↖) over objects. In general, use the Smart Selection tool as you work.



With an I-beam pointer, you can select only text.
With a hollow arrow pointer, you can select only objects.

- The Object Selection tool (↖) always selects objects. 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 you click in text with the Object Selection tool active, you select the text line or text frame as an object rather than put an insertion point in the text.

To activate a selection tool:

Click the Smart Selection or Object Selection tool on the Tools palette.

To keep the Object Selection tool active after drawing an object:

Shift-click the tool on the Tools palette. Otherwise, FrameMaker reverts to the Smart Selection tool after you draw an object.

To select an object:

Click the object. If the object is transparent—that is, if it has a fill pattern of None—click its border. When you click overlapping objects, FrameMaker selects the frontmost object.

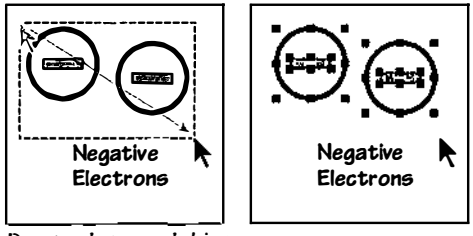
To select a text line or text frame when the Smart Selection tool is active:

Do one of the following:

- (Windows and UNIX) Control-click the text line or text frame.
- (Macintosh) Option-click the text line or text frame.

To select several objects in the same area:

Point outside the objects and drag diagonally to draw a selection border around them. All objects you want to select must be completely within the selection border.



Drag to select several objects.

Note: *If you move the object rather than draw a selection border (because the pointer was over an object), immediately choose Edit > Undo. Then draw a selection border in the way described in the following procedure.*

To force FrameMaker to draw a selection border:

Do one of the following:

- (Windows and UNIX) Control-Shift-drag.
- (Macintosh) Hold down Command-Shift-drag.

To add an object to a selection:

Shift-click the object. You can also Control-click the object (Windows and UNIX) or Option-Shift-click it (Macintosh).

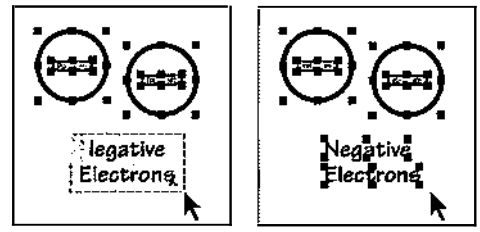
To add a text line or text frame to the selection when using the Smart Selection tool:

Do one of the following:

- (Windows and UNIX) Control-click.
- (Macintosh) Option-Shift-click.

To add several objects in the same area to a selection:

Shift-drag diagonally to draw a selection border.



Shift-drag to add objects to the selection.

If any objects within the selection border were selected when you began dragging, they are deselected.

To select all objects in a graphic frame or on a page:

Do one of the following:

- To select all objects in a graphic frame, select the frame or any object in the frame, and then choose Edit > Select All in Frame.
- To select all objects on a page, click outside any objects or text on the page and choose Edit > Select All on Page.

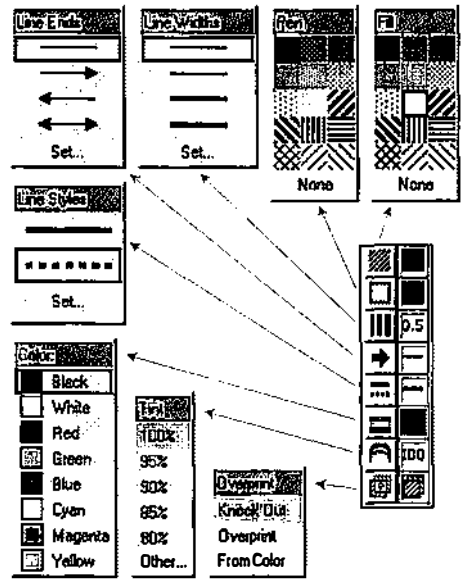
To deselect objects:

Do one of the following:

- To deselect an object, click outside it.
- To deselect one of several selected objects, Shift-click the object (not a handle). You can also Control-click the object (Windows and UNIX) or Option-Shift-click it (Macintosh).
- 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 and Shift-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.

Applying and changing drawing properties

An object's drawing properties include the fill pattern, pen pattern, line width, line ends, color, and whether the line is solid or dashed. You change drawing properties from pop-up menus on the Tools palette.



Pop-up menus on the Tools palette

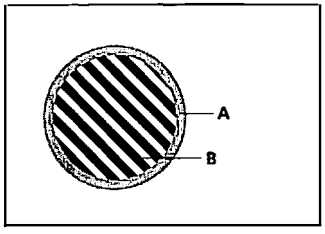
You can change drawing properties before you draw an object, or you can select objects that you've already drawn and then change their properties. After you change a property, it becomes the *current property*—that is, it will be applied to any object you draw. For example, if you choose a line width of 1 point, this is applied to all newly drawn objects until you choose another line width or exit FrameMaker.

You can also make objects look alike by applying one object's properties to another object.

You can customize the choices that appear on the Tools palette. For information on changing the line widths, line ends, or line styles, see page 200. For information on changing the colors in the Color pop-up menu, see page 243. For information on changing the pen or fill patterns you can choose on UNIX systems, see the online manual *Customizing FrameMaker Products.*

To apply a fill pattern or pen pattern to a selected object:

Choose the pattern from the Fill pop-up menu ( ) or Pen pop-up menu ( ). You can fill any objects except lines, text lines, and equations.



A. Pen pattern B. Fill pattern

The eight gray fill and pen patterns have the following percentages: 100, 90, 70, 50, 30, 10, 3, and 0 percent (no ink, typically white).

To make an object transparent (so objects in back of it show through), choose a fill pattern of None. If you don't want the object to have a border, choose a pen pattern of None. To see the border of an object that uses both a pen and a fill pattern of None, choose View > Borders.

To choose 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.

To change the ends of an arc, a line, a polyline, or a freehand curve:

Choose the line end from the Line Ends pop-up menu ( ). You can use no arrowhead or place an arrowhead at the beginning, at the end, or at both ends.

To make a line or object's borders solid or dashed:

Choose a solid or dashed style from the Line Styles pop-up menu ( ).

To assign a color to an object:

1 Choose the color from the Color pop-up menu ( ).

2 To use a tint of the color, choose a tint value from the Tint pop-up menu ( ). If the value you want doesn't appear on the menu, choose Other from the pop-up menu, enter a tint value, and click Set.

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 (see page 245).

You can also assign the same color to all objects in a document (see page 242).

Note: *To control whether an object overprints or knocks out objects beneath it, use the Overprint pop-up menu. For information, see page 246.*

To change the color of text in a text frame:

Use the Character Designer or the Paragraph Designer. For details, see "Using a designer to change font properties" on page 83.

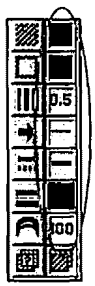
To inspect an object's drawing properties or apply them to other objects:

1 Select the object that has the properties you want to inspect or copy.

2 Hold down Shift and choose Graphics > Pick Up Object Properties. The properties of the selected object become the current properties on the Tools palette.

3 If you want to apply the properties to other objects, select the objects you want to change.

4 Click the current object properties you want to apply to the selected objects.



Current drawing properties

Changing line properties

You can change the following line properties that appear on the Tools palette:

- The values assigned to the line widths that appear in the Line Widths pop-up menu. (For information on changing the line widths that appear on UNIX systems when you start FrameMaker, see the online manual *Customizing FrameMaker Products*.)
- The cap style, which determines the appearance of any line ends that don't have an arrowhead.
- 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.)

In Windows and on the Macintosh, the new line width settings remain until you change them. The other new settings remain until you change them or exit FrameMaker. On UNIX systems, the new settings remain until you exit FrameMaker.

None of the changes described in this section are applied automatically to existing objects. However, you can apply the new settings to both new and existing objects.

To change line width settings:

1 Choose Set from the Line Widths pop-up menu on the Tools palette.

2 Do one of the following:

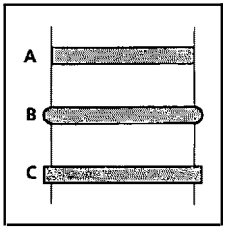
• To change the line widths, enter the new line widths and click Set. You can enter the values in any order. When you click Set, the line widths are sorted from smallest to largest. The widths that appear in the pop-up menu don't change.

• To revert to the line widths you had when you started FrameMaker, click Get Defaults.

To change the line cap style:

1 Choose Set from the Line Ends pop-up menu on the Tools palette.

2 Select a line cap style and click Set.



A. Butt B. Round C. Projecting

To change the dashed line style:

1 Choose Set from the Line Styles pop-up menu on the Tools palette.

2 Click one of the patterns and click Set.

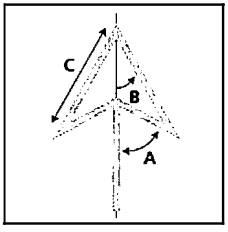
You can also create custom dashed line styles. For information, see the online manual *Customizing FrameMaker Products* (Windows and UNIX) or *MIF Reference* (Macintosh).



To create a dotted line that uses round dots, use a dashed line style of short dashes with a round line cap.

Changing the arrow style

You can choose from among several preset arrow styles. Arrow styles are determined by their base angle, tip angle, and length.



A. Base angle B. Tip angle C. Length

None of the changes described in this section are applied automatically to existing objects. However, you can apply the new arrow style to both new and existing objects.

To change or customize arrow styles:

1 Choose Set from the Line Ends pop-up menu on the Tools palette.

2 Do one of the following:

• Click a preset arrow style and click Set.

• Fill in a custom base angle, tip angle, length, and style, and then click Set. You can use the following values for the custom options.

Option	Values
Base Angle	Between 10 and 175 degrees (and at least 5 degrees greater than the tip angle)
Tip Angle	Between 5 and 85 degrees
Length	Between 0 and 255 points
Style	Filled  Hollow  Stick 

FrameMaker ignores the Base Angle option when you use 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.

The following table contains sample custom arrows and their settings.

Arrow	Base Angle	Tip Angle	Length
	70 degrees	30 degrees	10 points
	80 degrees	30 degrees	10 points
	70 degrees	15 degrees	10 points
	70 degrees	30 degrees	5 points
	120 degrees	30 degrees	5 points

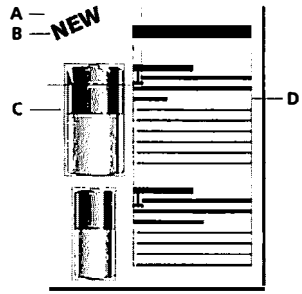
About frames

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. For information, see Chapter 9, "Anchored Frames."

Unanchored frames are used to crop graphics that stay in the same place on the page. You can also use unanchored frames to hold reference art. You draw unanchored graphic frames with the Graphic Frame tool on the Tools palette. For details, see "Cropping or masking graphics" on page 222, and "Using reference frames on reference pages" on page 282.

If you want the graphic to appear at a specific location on a page (for example, for a logo or a bleed tab), 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.

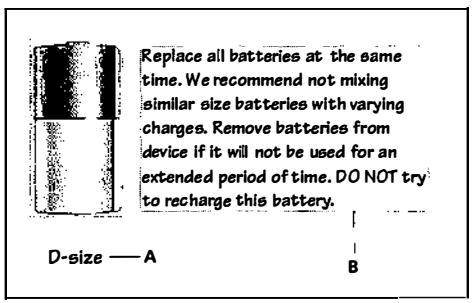


A. Graphic drawn on page B. Text line C. Anchored frame D. Text frame for document text

You can use text frames along with graphics—for example, as callouts or captions. You can also use text frames in anchored frames to create effects such as the sidebar that appears on page 32 of this manual. For single lines of text in graphics, you can also use the Text Line tool. For details, see the following section.

Using text with graphics

You can add single lines of text or text frames to a graphic.



A. Text line B. Text frame

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 to the next line. You typically use text lines for single-line callouts and for text you want to resize in the same way that you resize other objects.

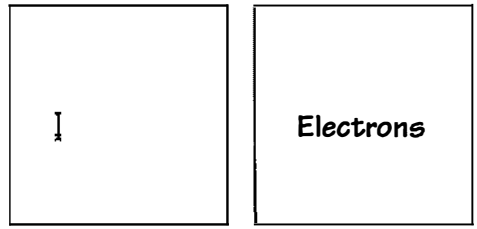
You can assign character formats and a spell-checking language to text lines. However, text lines can't have paragraph formats, and they can't contain anchored frames, markers, variables, cross-references, or conditional text.

Unlike a text line, a *text frame* can contain more than one line of text. You use text frames for multiline callouts, paragraphs of text, and any other text you want FrameMaker to wrap automatically from line to line. When graphics overlap text in a text frame, you can run the text around the graphics.

To add a text line to a graphic:

1 Click the Text Line tool (A). The pointer changes to a crossed I-beam (I) 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 document to place an insertion point, and then type the text. FrameMaker uses the last character format you typed or selected in the document.



Click and then type.

The text line is left aligned on its alignment point (where you clicked). For information on changing the alignment of a text line, see page 212.

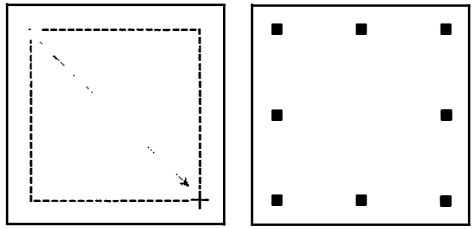
3 To create several text lines, press Return at the end of one text line to create another. You can then select the text lines independently and move them as needed.

To change the character format of text in a text line, use the font commands on the Format menu or the Character Designer (see "Changing font properties" on page 83). To change the font of several text lines at the same time, select the text lines as objects and change their format.

To add a text frame:

1 Click the Text Frame tool ( ).

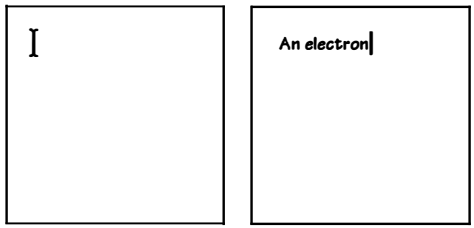
2 Drag diagonally where you want to add the text frame.



Drag and then release.

3 Specify the number of columns and the gap between them, and then click Set.

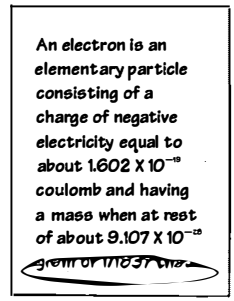
4 Double-click in the text frame to place an insertion point in it, and then type the text.



Double-click and then type.

Fixing text frames that overflow

When the text you type overflows the text frame, the insertion point moves below the bottom of the frame and the new text doesn't appear. The bottom border of the text frame appears as a solid line when borders are visible.



Overflowing text frame

You can enlarge the frame so the text fits, or you can connect the flow of the text frame to another frame (see page 277). You can also decrease the font size of the text.

To enlarge a text frame:

1 Do one of the following to select the text frame:

- (Windows and UNIX) Control-click the text frame.
- (Macintosh) Option-click the text frame.

2 Drag a handle to enlarge the frame.

Creating reverse text

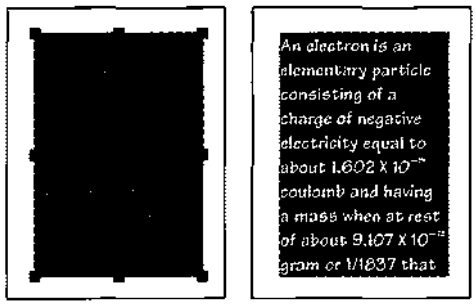
You can create reverse text (text that appears in a light color on a dark background) for special emphasis. The reverse text can be in a text frame or a text line.

To create a reverse text frame:

1 Set the desired fill pattern and color of the text frame.

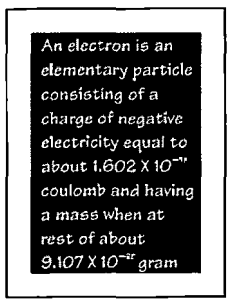
2 Set the text frame's pen pattern to None.

3 Change the color of the text with the Character Designer or the Paragraph Designer (see "Using a designer to change font properties" on page 83).



Set color of text frame and then change color of text.

4 If necessary, change the indentation and alignment of the text with the Paragraph Designer (page 87).



Centered between equal left and right indents

To create a reverse text line:

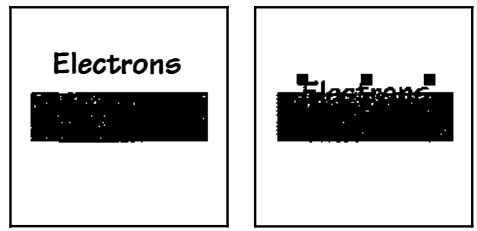
1 Draw an object to act as the background for the text. Generally, it's best to use a nearly black fill pattern for the object.

2 Outside the background object, add a text line and type its text.

3 Do one of the following to select the text line:

- (Windows and UNIX) Control-click the text line.
- (Macintosh) Option-click the text line.

4 Move the text line so part of it disappears into the background object.

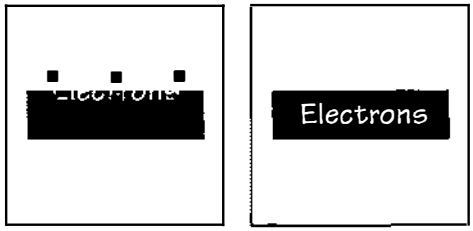


Draw object and text line and then move line part of the way.

5 Choose a light color from the Color pop-up menu on the Tools palette. The text appears partially cut out of the background object.

If the text doesn't appear in front of the object, choose Graphics > Bring to Front. If you still have trouble, make sure the current color view of the document shows the text line's color as Cutout. For details, see "Viewing colors" on page 245.

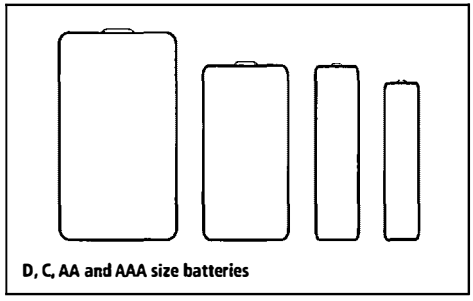
6 Move the text line so all its letters appear cut out of the background object.



Choose a light color and then move the text line all the way.

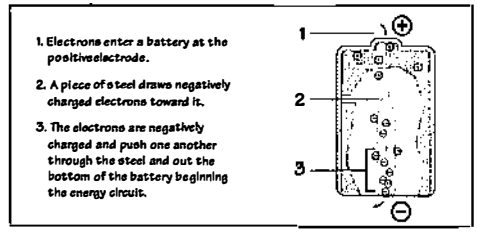
Adding titles to illustrations

You can include a text line or text frame in a graphic as a title. You can also use a paragraph above or below an anchored frame as a title for the frame's graphic. However, you may find it easier to use table commands instead.



Single-cell table with table title below

You can also use multicell tables to achieve various effects with graphics and text. For example, the next example is a two-cell table. The first cell contains several autonumbered paragraphs; the second cell contains the figure.



One-row table containing two cells

This section provides guidelines for setting up the paragraph formats, table formats, and anchored frames you'll need if you want to use single-cell tables and their titles for illustrations and their captions.

To use a table for an illustration and its title:

1 Use the Table > Insert Table command to create a single-cell table wide enough for your figure.

2 Use the Table > Table Designer command to specify the location of the title (see page 121).

3 Type the text of the title.

4 Format the table title. (Use the methods described in Chapter 4, "Text Formatting.")

5 Store the format for the table title in the Paragraph Catalog (see "Creating new formats" on page 112).

6 Change the cell's paragraph format to turn off fixed line spacing so that the size of an anchored frame can affect the paragraph's line spacing. For details, see "Changing spacing" on page 90.

7 Create an anchored frame in the cell, anchored at the insertion point (see page 227). If necessary, the cell grows vertically to accommodate the frame's height.

8 Put the graphic in the anchored frame and resize the frame.

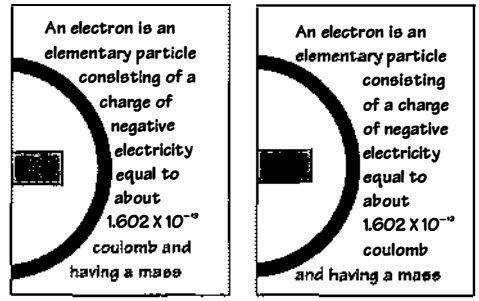
9 If the frame is wider than the cell, change the column's width. You can select the table cell and drag a handle to change the width, or you can use the Table > Resize Columns command (see "Resizing columns" on page 134).

10 Store the table format in the Table Catalog (see "Creating table formats" on page 150).

11 The next time you add a table for a figure and its title, either use the Table > Insert Table command or copy and paste the table.

Running text around graphics

You can make the text in a text frame run around a graphic that overlaps the text. (However, text will not run around a text line or an equation.) When a graphic is placed directly on a 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.



Text run around contour and run around bounding box

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 "Anchored frames run into paragraph text" on page 233.

When text in a text frame runs around a graphic, FrameMaker does not feather text (see page 271) in that frame.

To set runaround properties for a graphic:

1 Draw or place the graphic on a 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. Otherwise, the document may contain an insertion point, which will cause the graphic to be placed in an anchored frame.

2 Select the graphic. If the graphic is made up of several objects, select all the objects.

3 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 Graphics > Send to Back.

4 If the graphic's runaround properties aren't set as you want them, choose Graphics > Runaround Properties and do one of the following:

- To make text run around the graphic, click a runaround style and enter a gap.
- To prevent text from running around the graphic, click Don't Run Around.

Note: *If the Style setting is As Is when you display the Runaround Properties dialog box, you selected several graphics that have different runaround properties.*

5 Click Set.



If the settings don't produce exactly the results you want, add an object (with a pen and fill pattern of None) near the graphic to create the desired contour for the text to run around.

Editing and arranging objects

You can edit and arrange objects in a number of ways:

- You can move, duplicate, and delete objects.
- You can connect objects as you draw, resize, or reshape them.
- You can rearrange objects in relation to one another by changing their stacking order, aligning them, and spacing them apart.
- You can join individual lines and curves to create complex outlines, which you can then fill or color.

Cutting, copying, pasting, and deleting objects

You can use the Edit menu commands to cut, copy, and paste objects to and from the Clipboard. When you use Edit > Cut or Edit > Copy, the cut or copied objects remain on the Clipboard until you choose Cut or Copy again.

You can also duplicate or delete objects quickly without using the Edit menu commands.

To cut, copy, and paste an object by using the Clipboard:

1 Select the object and choose Edit > Cut or Edit > Copy.

2 Do one of the following:

- To paste the object on a page, click in the margin of the page.

• To paste the object in an existing graphic frame, click the frame's border to select the frame.

• To paste the object in text, click in the text where you want to paste the object.

3 Choose Edit > Paste. 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 the object.

When you paste an object into text, FrameMaker creates an anchored frame to hold the object, and centers the object in the frame. An anchor symbol (⊥) appears at the insertion point when text symbols are visible.

To copy an object by dragging:

1 Select the object.

2 Point on the object (not on a handle), and do one of the following:

• (Windows) Alt-drag the duplicate of the object, or right-drag the object and then choose Copy Here from the shortcut menu that appears. To constrain the duplicate's movement to either a horizontal or vertical direction, hold down Shift while you drag.

• (Macintosh) Command-Control-drag the duplicate of the object. To constrain the duplicate's movement to either a horizontal or vertical direction, hold down Shift while you drag.

• (UNIX) Control-drag the duplicate of the object with the middle mouse button. The duplicate's movement is constrained to either a horizontal or vertical direction depending on the direction you initially drag it. 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 delete an object:

Select the object and press Delete.

Moving objects

You can quickly move an object by dragging it, or you can make small position adjustments by moving the object with the arrow keys. You can also specify its exact position by using a dialog box. To move an object by dragging it, you must drag its border (not a handle).

To move an object by dragging:

1 Select the object.

2 Do one of the following:

• Drag in the direction you want to move the object.

• 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 shows 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). When rulers are visible, lines in the rulers show you the object's position. If the snap grid is on, objects snap to the invisible grid as you drag them.

To move an object in small increments:

Select the object and do one of the following:

• (Windows) Hold down Alt and press an arrow key to move 1 point, or hold down Alt+Shift and press an arrow key to move 6 points.

• (Macintosh) Hold down Option and press an arrow key to move 1 point, or hold down Option+Shift and press an arrow key to move 6 points.

• (UNIX) Hold down Control and press an arrow key to move 1 point, or hold down Shift+Control and press an arrow key to move 6 points.

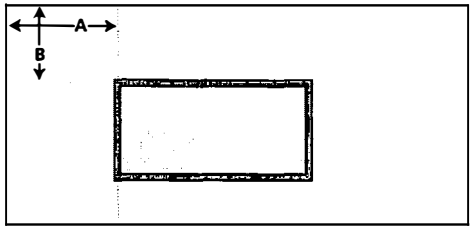
The preceding distances assume a 100% zoom setting. The actual distance moved depends on the current zoom setting, so you can do finer work when you're zoomed in closer. For example, at 200% zoom, the distance is halved. At 50% zoom, the distance is doubled.

To specify the exact position of an object:

1 Select the object and choose Graphics > Object Properties.

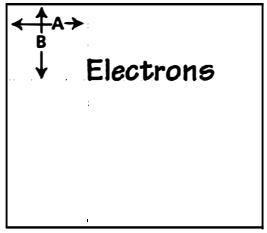
2 Do one of the following:

• For all objects except text lines and equations, specify the offset from the top and left edges of the page or graphic frame in the Offset From area.



A. Offset from left B. Offset from top

• For text lines and equations, specify the offset in the Alignment Point Offset area.

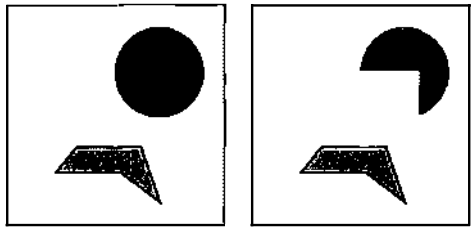


Left-aligned text line: A. Offset from left B. Offset from top

3 Click Set.

Changing the stacking order of objects

When you draw or paste an object, FrameMaker places it in front of all other objects on the page or in a graphic frame. You can control how objects overlap by putting them in front of or in back of other objects.



Circle in front and circle in back

To change the stacking order of objects:

Select one of the objects and do one of the following:

- To put an object in front of other objects, choose Graphics > Bring to Front.
- To put an object in back of other objects, choose Graphics > Send to Back.

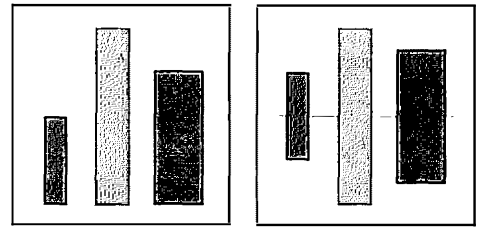


To create a drop shadow, stack two objects and offset them slightly.

Aligning objects

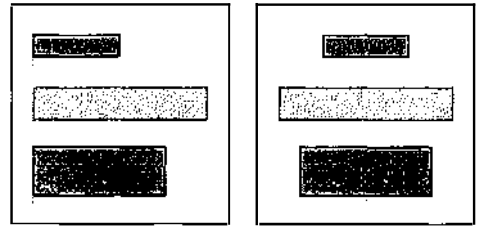
You can align objects (except graphic frames) with one another in the following ways:

- You can align objects along a horizontal line by specifying the top/bottom alignment.



Bottoms aligned and top/bottom centers aligned

- You can align objects along a vertical line by specifying the left/right alignment.



Left sides aligned and left/right centers aligned

To align objects:

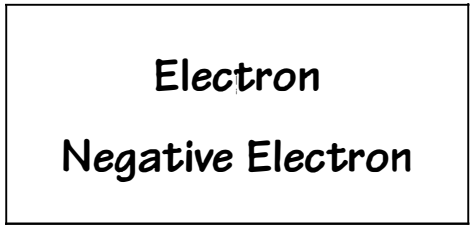
1 Select the objects and choose Graphics > Align. To align a single object in a graphic frame or on a page—for example, along the left side of a graphic frame—select only the object you want to align.

2 Choose the alignment you want and click Align. To align objects in only one direction, set the other direction to As Is.

FrameMaker aligns the objects—along their paths—with the last object you select. If you selected objects by dragging a selection border, FrameMaker aligns the objects with the frontmost object.

Aligning text lines

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 then maintains the text line's alignment when you insert text.



Centered text line remains centered as you type.

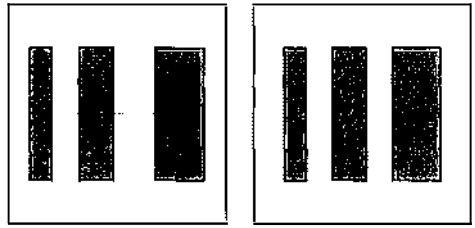
To change the alignment of a text line:

1 Select the text line and choose Graphics > Object Properties.

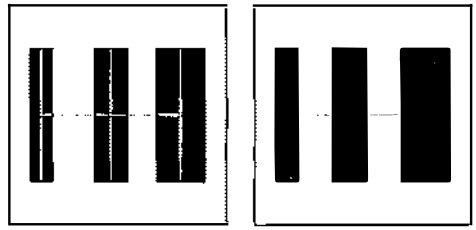
2 Choose a new alignment from the Alignment pop-up menu and click Set.

Distributing objects

You can move objects—distribute them—so they have an equal amount of space between them. You can distribute objects horizontally and vertically.



Objects before and after distributing (with zero edge gap)



Equidistant centers and equidistant edges

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.

To distribute objects:

1 Select the objects and choose Graphics > Distribute.

2 Choose the spacing you want and click Distribute. To distribute objects in only one direction, set the other direction to As Is.

When you specify a large edge gap, objects may move off the page and disappear from sight. If they do, immediately choose Edit > Undo.

About gravity

With Gravity on, an object attracts the pointer as you draw, resize, or reshape a nearby object. Gravity has no effect when you move objects.

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.

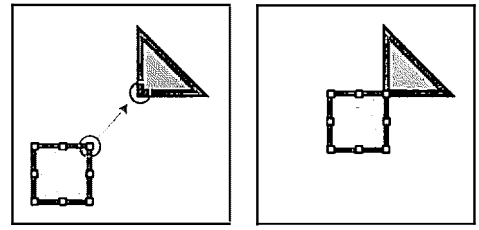
Making objects touch

It's easier to make objects touch when you use "gravity." If Gravity and Snap are both selected in the Graphics menu, gravity takes precedence. For information on the snap grid, see page 192.

To make two objects touch each other:

1 If Gravity isn't already on, choose Graphics > Gravity.

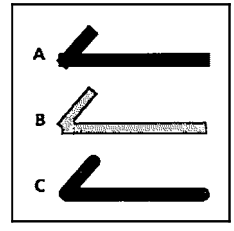
2 Drag a handle of an object, or draw an object, close to the object to which you want to connect. As you drag, the handle jumps so the two objects touch each other.



Gravity ensures perfect alignment.

Making lines intersect cleanly

Depending on their properties and the angle between them, two connected lines may appear not to intersect cleanly. For example, lines intersect cleanly when they are the same thickness, meet at right angles, and use a projecting cap; lines don't intersect cleanly when they use a projecting cap but don't intersect at right angles. Notice the different intersections effected by using the three line cap styles.



A. Projecting B. Butt C. Round

To make lines intersect cleanly:

Do one of the following:

- 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*.

For information on changing the line cap style, see page 201.

Grouping and ungrouping objects

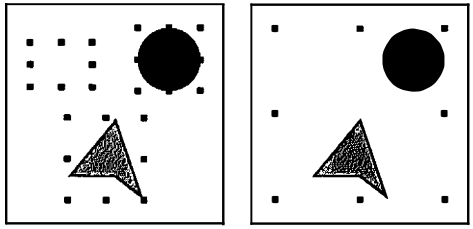
When several objects (except graphic frames) are part of the same graphic, you can group the objects. You can then edit and arrange them as a single object.

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 other objects with it.

For information on joining objects to create a single continuous object, see page 214.

To group objects:

Select them and choose Graphics > Group. One set of handles appears around the group.



Objects selected and then grouped

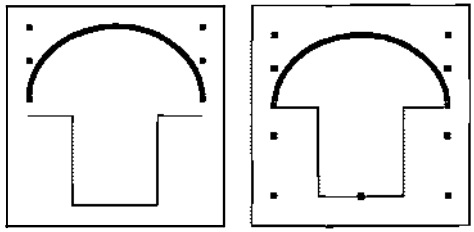
To ungroup objects:

Select the group and choose Graphics > Ungroup. 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.

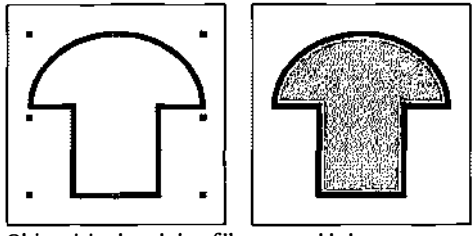
Joining lines and curves

You can create complex outlines by joining individual lines, polylines, arcs, and smoothed polylines that were created with FrameMaker drawing tools. Joining creates a single continuous

curve. You can then change the new curve's properties, such as its line width, pen and fill patterns, and color.



Objects drawn, and then positioned and selected



Objects joined, and then fill pattern added

To join lines and curves:

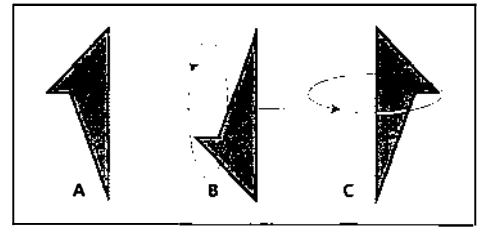
1 Position the objects so that their endpoints touch. The ends of the lines or curves must be within 1 point of each other and the objects cannot be grouped. If necessary, choose Graphics > Gravity and zoom in.

2 Select the objects and choose Graphics > Join. 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 preceding illustration, the last object selected before joining was the arc.)

***Note:** If you join lines or curves by mistake, immediately choose Edit > Undo. Joining creates a single continuous object that cannot be "unjoined" at a later time in the way that grouped objects can be ungrouped.*

Flipping objects

You can create a mirror image of an object by flipping it up and down or left and right.



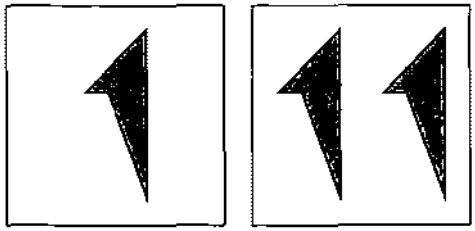
A. Original B. Flipped up/down C. Flipped left/right

To flip an object:

Select the object and choose Graphics > Flip Left/Right or Graphics > Flip Up/Down. If the object contains text, the text isn't flipped. For example, the text in a flipped text line doesn't appear flipped, but the alignment point of the text line is flipped.

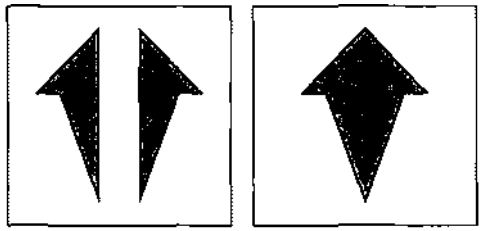
To create a symmetrical object:

1 Draw one half of the object and copy it.



Draw and then make a copy.

2 Flip the copy and move it until it touches the original.



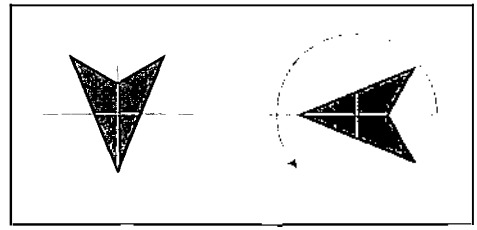
Flip and then move.

Rather than move the duplicate to the original, you can use the Distribute command with an edge gap of zero (see page 212) to ensure exact alignment of the objects.

Rotating objects

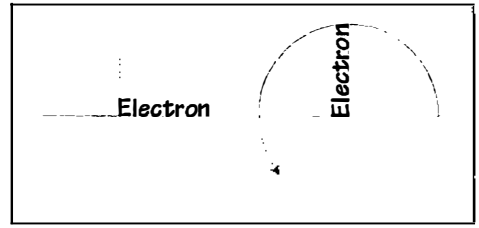
You can rotate all objects (except equations and graphic frames) any number of degrees. You can rotate graphic frames and equations in 90-degree increments.

All objects (except equations and text lines) rotate around their centers.



Rotating objects

Equations and text lines rotate around their alignment points.



Rotating text

You may find it easier to edit objects—for example, to align and distribute them—in their unrotated position. After you edit an object, you can rerotate the object to restore it to its rotated position.

Note: *If you rotate an imported PICT image or a page containing an imported PICT image, the image may print poorly. To improve printing, convert the image to TIFF or EPS and reimport the image.*

To rotate an object by dragging:

1 Select the object.

2 Do one of the following:

- (Windows) Hold down Alt and drag a handle.
- (Macintosh) Hold down Command and drag a handle.
- (UNIX) Hold down Control and drag a handle with the right mouse button.

When the snap grid is on, the object snaps to multiples of the angle specified in the View Options dialog box (see "Using grids" on page 192). To constrain the rotation to 45-degree increments, also hold down Shift while you drag.

To rotate an object precisely from its current position:

1 Select the object and choose Graphics > Rotate.

2 Specify the direction and amount of rotation and click Rotate. If you rotate several ungrouped objects in this way, each object rotates around its center.

To rotate an object precisely from its unrotated position:

1 Select the object and choose Graphics > Object Properties.

2 Enter the angle in the Angle text box and click]Set.

To quickly unrotate or rerotate an object:

Do one of the following:

- To unrotate an object (change it to its unrotated position), press Esc g 0 (zero).
- To rerotate an object (after unrotating it), press Esc g 1 (one).

To reset the rotation of a polygon, polyline, freehand curve, or grouped object to zero:

Select the rotated object and press Esc g 9. The object's rotation doesn't change, but its handles are repositioned around the object so that they are parallel to the window borders.

To rotate an equation or graphic frame:

1 Select the object and choose Graphics > Rotate.

2 Click the rotation angle you want (in 90-degree increments) and click Rotate. You specify the rotation from the equation's or frame's unrotated position.

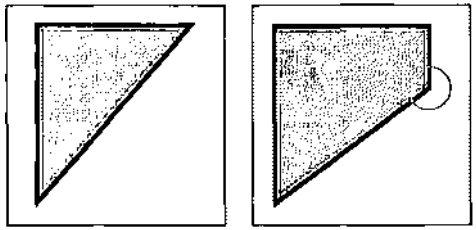
To inspect the rotation angle:

Select the object and choose Graphics > Object Properties. For equations and graphic frames, you can also choose Graphics > Rotate. The rotation angle appears in the dialog box.

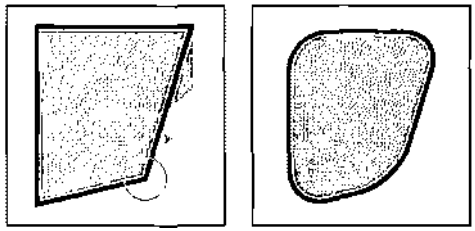
Resizing and reshaping objects

As you refine a graphic, you can change the size and shape of objects. Reshaping possibilities are unlimited. For example, you can add a corner to a

polyline or polygon, move a corner to change its shape, and smooth a polyline to create a freehand curve.



Original polygon and then with corner added



Corner moved and then smoothed

Resizing objects

You can resize all objects, including text lines. When you resize a text line, the font height and width change proportionally.

To resize an object by dragging:

Select the object and do one of the following:

- To change either the width or the height, drag a side handle.
- To change both the width and the height, drag a corner handle.
- To increase or decrease the dimensions proportionally, Shift-drag a corner handle.

The object's dimensions appear in the status bar as you drag.

To resize an object precisely:

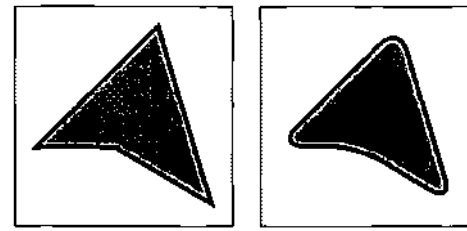
1 Select the object and choose Graphics > Scale.

2 Do one of the following:

- To increase or decrease the height and width proportionally, enter a scale factor and click Scale. The scale factor is always relative to the object's current size (100% means no change).
- To specify the exact dimensions you want, enter the dimensions and click Scale. The dimensions shown when you display the dialog box are the object's current (unrotated) dimensions.

Smoothing and unsmoothing objects

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 and after smoothing

Each time you smooth a rounded rectangle, you increase the curvature of its corners (its corner radius).

To smooth an object:

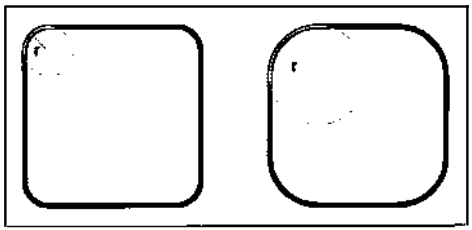
Select the object and choose Graphics > Smooth. After smoothing a polygon or polyline, reshape handles and control points appear so you can reshape the curve (see page 220).

To unsmooth an object:

Select the object and choose Graphics > Unsmooth. If you later smooth the object, its shape may be somewhat different from the original.

Changing 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" and radius (r) = .25"

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.

To change the corner radius of a rounded rectangle:

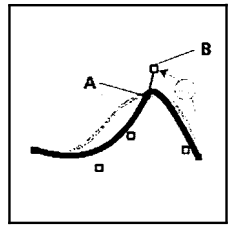
1 Select a rounded rectangle and choose Graphics > Object Properties.

2 Enter 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).

Reshaping objects

You can change the shape of lines, polylines, polygons, curves, and arcs as follows:

- Reshape a line, polyline, or polygon by moving its corners one at a time. You can also add and remove corners.
- Reshape a curve by changing the position of its reshape handles (which define the curve and control its location) and its control points (which adjust the curvature). You can also add and remove reshape handles to change the number of points that define the curve.



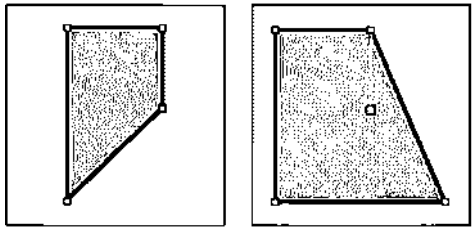
***A.** Reshape handle **B.** Control point*

- You reshape an arc by dragging its endpoints or by changing the percentage of a circle that the arc represents.

To move a corner of a polyline or polygon:

1 Select the object and choose Graphics > Reshape. Reshape handles appear on the object, replacing the selection handles.

2 Drag a handle. To move the handle horizontally or vertically, Shift-drag.



Choose Reshape and then drag.

To add or remove a corner or reshape handle:

1 Select the line, polyline, polygon, or curve, and choose Graphics > Reshape.

2 Do one of the following:

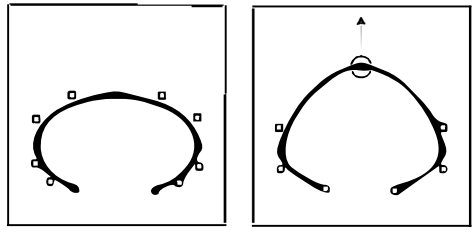
- (Windows) Control-click where you want to add a reshape handle (or corner), or Control-click the handle you want to remove.
- (Macintosh) Command-Option-click where you want to add a reshape handle (or corner), or Command-Option-click the handle you want to remove.
- (UNIX) Middle-click where you want to add a reshape handle (or corner), or middle-click the handle you want to remove.

To reshape a curve:

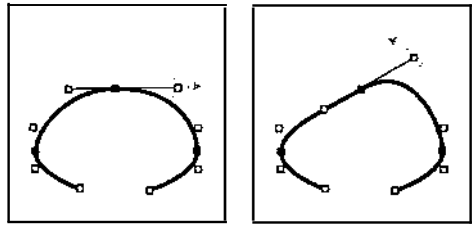
1 Select the curve and choose Graphics > Reshape. Reshape handles appear at the locations that define the curve. Control points also appear around one of the handles.

2 If the control points aren't the ones you want, click the handle where you want to change the curve. Control points appear around the handle that you click—the two control points that correspond to the handle and the next closest one on each side of the handle.

3 Drag a handle to change the position of the curve at the handle, or drag or rotate a control point to change the curvature. When you begin to drag, a lever appears that touches the curve at the handle. You can achieve different effects by dragging along the lever or by rotating it.



Choose Reshape and drag handle.



Drag a 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 handle, so the result is also a smooth curve.

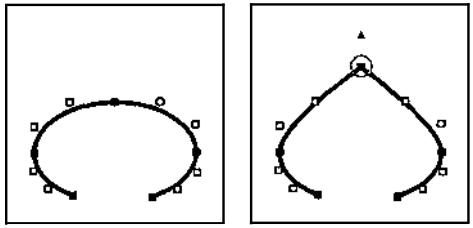
To crimp a curve:

1 Select the curve and choose Graphics > Reshape.

2 If the control points aren't the ones you want, click the reshape handle where you want to change the curve.

3 Do one of the following:

- (Windows) Drag a handle or control point with the right mouse button.
- (Macintosh) Option-drag a handle or control point.
- (UNIX) Control-drag a handle or the control point.

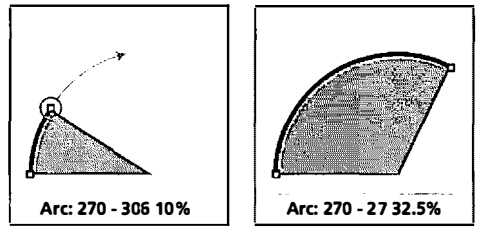


Crimping a curve.

To reshape an arc by dragging:

1 Select the arc and choose Graphics > Reshape. Reshape handles appear on the object, replacing the selection handles.

2 Drag a handle. As you drag, the start and end angle of the arc and the percentage of a circle that the arc represents appear in the status bar.



Drag to reshape an arc.

To reshape an arc precisely:

1 Select the arc and choose Graphics > Object Properties.

2 Enter a new Start Angle and End Angle, and click Set.

Editing imported graphics (Macintosh)

You can edit a graphic imported by reference by starting the originating application from within FrameMaker. You can also edit component objects of a PICT image that was imported by copying. For more information on imported graphics, see Chapter 17, "Importing, Linking, and Exporting."

To edit, on the Macintosh, a graphic that was imported by reference:

1 Option-double-click the graphic to open the application that created the graphic.

2 Edit the graphic in the application window and save the changes. The changed graphic appears in the document.

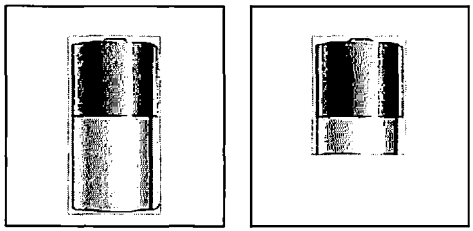
To edit, on the Macintosh, a PICT image that was imported by copying:

1 Select the image and choose Graphics > Ungroup. Some PICT information may be lost. If you want to preserve the information, edit the image outside of FrameMaker and then reimport the image.

2 Edit the component objects by using the drawing tools and graphics commands.

Cropping or masking graphics

When you want to crop the edges of a graphic, place the graphic in an anchored or 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.



Uncropped and cropped graphics in graphic frames

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 non-bordered objects.

To crop the edges of a graphic:

1 Do one of the following to create a graphic frame:

- To create an unanchored frame, click the Graphic Frame tool ( ) on the Tools palette and then drag to draw the frame. To draw a square frame, Shift-drag.
- To create an anchored frame, use Special > Anchored Frame (see page 227).

2 Do one of the following to put the graphic in the frame:

- Drag the graphic into the frame.
- Select the graphic, choose Edit > Copy or Edit > Cut, select the frame border, and then choose Edit > Paste.

3 Resize the frame around the graphic.

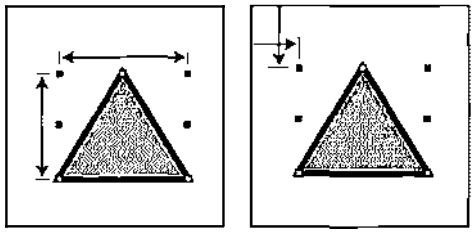
To mask an area within a graphic:

Put graphic objects (such as rectangles and polygons) with a white fill and pen pattern in front of the parts you want to mask.

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 and object position

To measure an object:

Do one of the following:

- Select the object and choose Graphics > Object Properties. The width and height of the object appear in the Size area of the Object Properties dialog box.
- With Snap off, select the object, point on one of its handles, and hold down the mouse button. The dimensions appear in the status bar. If you move the mouse by mistake and resize the object, immediately choose Edit > Undo.

To view the position of an object:

1 Select the object.

2 Choose Graphics > Object Properties. 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. 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.

To view 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.

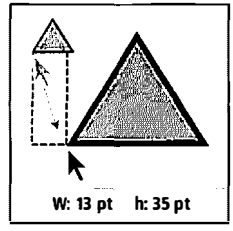
To measure any distance on the page:

1 Point where you want to start measuring.

2 Do one of the following to force a selection border to appear, but don't release the mouse button:

- (Windows and UNIX) Shift-Control-drag.
- (Macintosh) Command-drag.

3 When the selection border encompasses the area you want to measure, look in the status bar for the dimensions.



Dimensions appear in the status bar.

In the example, the important dimension is the height (35 points between the bases of the triangles).


9



Chapter 9: Anchored Frames

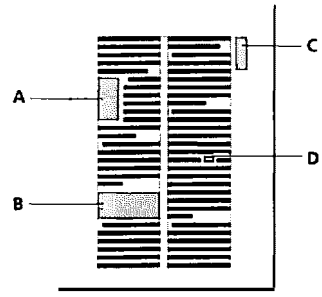
You often need to keep an illustration with particular document text. In FrameMaker, you do this by putting the illustration in a graphic frame anchored to the text—an anchored frame. When you edit the text, the frame and its contents move along with the text automatically.

This chapter shows you how to create and position anchored frames, fill them with text and graphics, and edit them. For instructions on using the drawing tools to create graphics within an anchored frame, see Chapter 8, "Graphics." For instructions on importing graphics into anchored frames, see Chapter 17, "Importing, Linking, and Exporting."

About anchored frames

You can use an anchored frame for an illustration in a column of text—below the line that contains the anchor symbol (⊥), or at the top or bottom of the column. 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 to achieve special effects such as the text sidebar that appears on page 32 of this manual. You can even position an anchored frame in the top corner of a paragraph with the paragraph text running around the graphic.



A. Graphic in the top corner of a paragraph B. Illustration in a column of text C. Margin art D. Small graphic in a line of text

If you want an illustration to stay at a specific place on the page—for example, as a logo on letterhead stationery—don't use an anchored frame. Instead, draw, paste, or import the illustration directly onto a body or master page without placing an insertion point in the text. Then move the illustration to the desired position. (For information on working with master pages, see page 260.)

By default, an anchored frame has no pen or fill pattern, which makes it invisible on the page unless borders are visible.

Creating anchored frames

An anchored frame is 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.

When you create an anchored frame using the Special > Anchored Frame command, you specify the location of the frame and its size and position. 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 placed in a column of text, you can specify its alignment. You can change any of the properties, including the frame's position, at any time. For details, see "Editing anchored frames" on page 235.

To create an anchored frame automatically:

Do one of the following:

- Paste an object into text at the insertion point by cutting or copying the object, clicking in text where you want to insert the anchor symbol, and choosing Edit > Paste.
- Import a graphic into text by clicking in text, choosing File > Import > File, and selecting the graphic file you want to import. You can also import a graphic in other ways, depending on the platform. For details, see Chapter 17, "Importing, Linking, and Exporting."

The pasted or imported object appears in an anchored frame that is centered below the current line. Once the frame is created, you can change its properties. For details, see "Editing anchored frames" on page 235.

To create an anchored frame with specific options:

1 Click in text where you want to place the anchor symbol and choose Special > Anchored Frame. You can create an anchored frame in a text frame or in a table cell, but not in a text line.

2 Choose the frame's anchoring position and specify its properties. The properties that appear in the Anchored Frame dialog box depend on the anchoring position. For details, see the following sections.

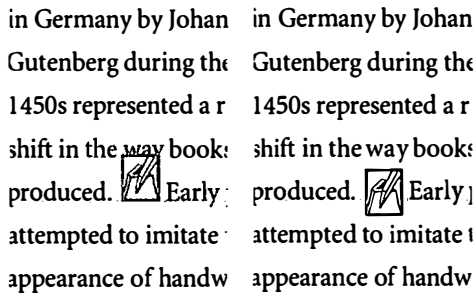
3 Click New Frame. An anchor symbol (⊥) appears at the insertion point when text symbols are visible.

Inline anchored frames

To position an anchored frame in line with paragraph text—for example, to hold a small graphic such as a picture of a keycap—choose the At Insertion Point anchoring position in the Anchored Frame dialog box. 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).

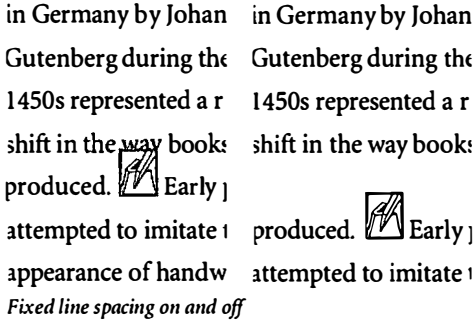
You can adjust the frame's position up or down relative to the baseline of text by dragging the frame or by specifying a value for the Distance above Baseline option in the Anchored Frame dialog box. A value of zero aligns the bottom of the

frame with the baseline of the text. A positive number moves the frame up; a negative number moves it down.



Zero distance and negative distance

If the frame obscures text in the line above or below, turn off fixed line spacing to allow the line height to change with the contents of the line (see "Changing spacing" on page 90).

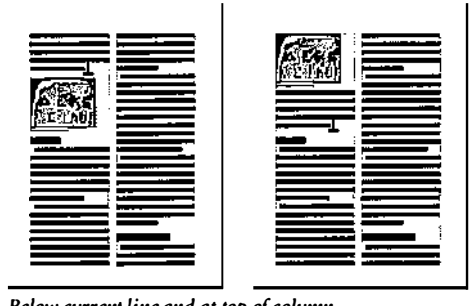


Fixed line spacing on and off

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.

Anchored frames in a column of text

To position an anchored frame in a column of text, choose the Below Current Line, At Top of Column, or At Bottom of Column anchoring position in the Anchored Frame dialog box.



Below current line and at top of column

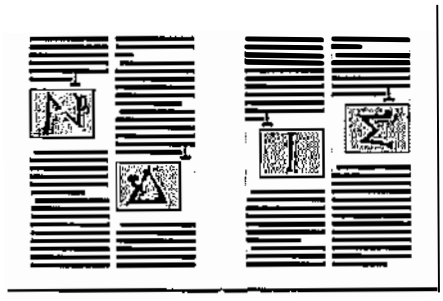
An anchored frame positioned at the top or bottom of the column moves only when its anchor symbol moves to another column.

Important: *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.*

When you choose the Below Current Line, At Top of Column, or At Bottom of Column anchoring position, you can set the following properties.

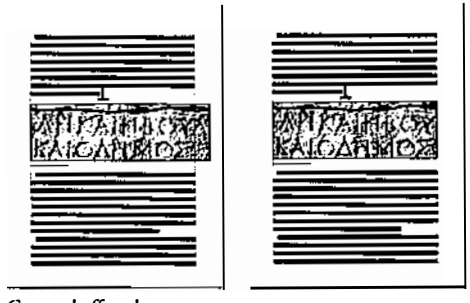
Horizontal alignment Choose the frame's horizontal alignment from the Alignment pop-up menu. You can align the frame at the left, center, or right.

In a double-sided document, you can also align the anchored frame closer to or farther from the binding edge.



Farther from binding

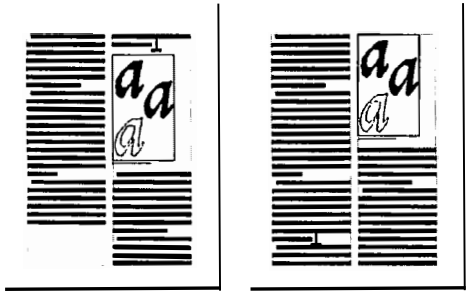
Cropping To prevent a wide frame from extending beyond the edge of the column, use the Cropped option.



Cropped off and on

For information on how cropping works in a multicolumn layout, see the next section.

Floating Use the Floating option to 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.



Floating off and on

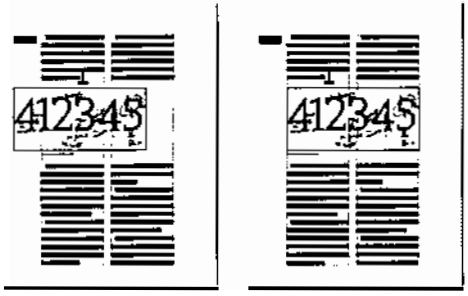
When Floating is off, both the frame and anchor symbol move to the first column that can hold them. White space remains at the bottom of the column. When Floating is on, the anchor symbol doesn't move, but the frame floats to the next column that can hold it. Text from the next column fills the space between the anchor symbol and the frame.

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.

In a straddle paragraph When a frame is anchored in a straddle paragraph, the frame straddles columns just as the paragraph does.

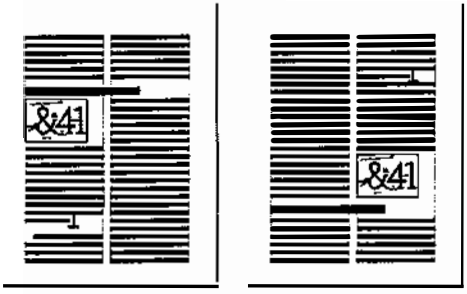
Wider than a column An uncropped anchored frame that extends into a second column of the body area straddles columns in the body area. A frame that extends into the side-head area straddles the side-head area as well.



Straddling side-head area and all columns, and straddling only columns

A cropped anchored frame straddles columns only when it's anchored in a straddle paragraph.

At top or 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 and at bottom

A bottom-of-column anchored frame is positioned similarly when the anchor symbol appears above a straddle paragraph.

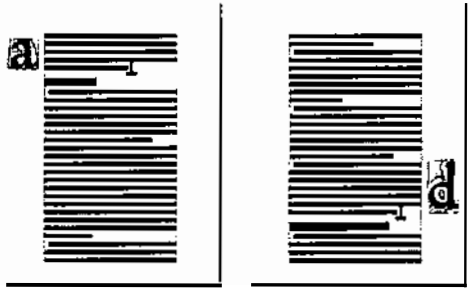
You can force the anchored frame to appear at the top or bottom of the column (above or below a straddle paragraph) by making the frame straddle the columns. To do so, turn off Cropped in the Anchored Frame dialog box and resize the anchored frame until it extends into another column.

Anchored frames outside a column of text

To position an anchored frame outside a column of text, choose the Outside Column anchoring position in the Anchored Frame dialog box. For information on positioning an anchored frame so it always appears in the page margin, even in a multicolumn document, see the next section.

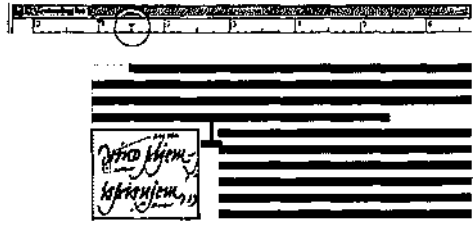
When you choose the Outside Column anchoring position, you can set the following properties.

Side of Column You can position the anchored frame at the left or right side of the column, or along the side that's closer to or farther from the edge of the page.

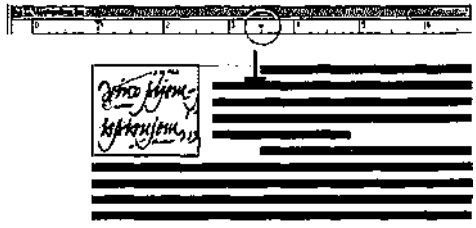


Anchored at left and at right

the right side. When the paragraph has a first-line indent, the anchored frame does not change the position of the indent.



Graphic extending beyond first-line indent



Larger first-line indent

When you want to preserve a first-line indent, make the first-line indent setting for the paragraph larger than the width of the anchored frame (see "Changing indents and alignment" on page 87).

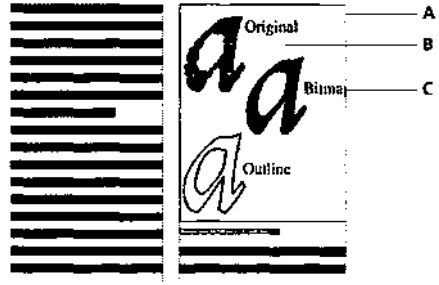
Gap You can specify the gap between the anchored frame and the paragraph text that runs around it.

Filling anchored frames

You can draw graphics in an anchored frame, drag or paste graphics from another part of the document, or import or paste graphics from another document or application. Use these methods to put graphics and text in unanchored graphic frames as well as in anchored frames.

You can position a graphic in an anchored frame and then use a text frame or text line inside the anchored frame for the figure title. But you might 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 information, see "Adding titles to illustrations" on page 206.

An anchored frame's contents are clipped when they extend into or beyond the frame's border.



A. Frame border B. Cropped graphic C. Cropped callout

To select a graphic frame:

Click the frame's border. If the border isn't visible, choose View > Borders.

To put graphics or text in a graphic frame:

Do one of the following:

- To draw a graphic or add text, use one of the tools on the Tools palette. For details, see "Drawing objects" on page 193 and "Using text with graphics" on page 203.

Important: *Be sure to start drawing the object inside the frame. Otherwise, the object will be on the page and not in the frame.*

• To move a graphic into a frame, drag the graphic 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 a graphic into a frame from the Clipboard, select the frame and choose Edit > Paste.

• To import a graphic into a frame, select the frame and choose File > Import > File. You can also import a graphic in other ways, depending on the platform. For details, see Chapter 17, "Importing, Linking, and Exporting."

Note: *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 prevent an anchored frame from clipping its contents:

Do one of the following:

• If there's room outside the anchored frame, make the frame larger.

• If there's room inside the anchored frame, move the object away from the edge of the frame. For details, see "Moving objects" on page 209.

• If 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 (see "Applying and changing drawing properties" on page 198).

• If a frame and its contents are clipped by the edge of a column of text, choose Special > Anchored Frame, turn off Cropped, and then click Edit Frame.

Editing anchored frames

You can change the size of an anchored frame, its anchoring position, and the properties you set when you created the frame.

You can also manipulate anchored frames as you do other objects. For example, you can change a frame's drawing properties (such as pen width), and you can duplicate, delete, move, or resize it.

Note: *Before you can edit the contents of an anchored frame in a rotated text frame, you must first press Esc g 0 (zero) to restore the text frame to its unrotated position.*

To change a frame's anchoring position and related properties:

1 Select the frame and choose Special > Anchored Frame.

2 Change the settings and click Edit Frame.

To resize an anchored frame:

Do one of the following:

• To resize the frame quickly but approximately, select the frame and drag one of its handles. The size appears in the status bar as you drag.

• To resize the frame precisely, select the frame and specify its size with Graphics > Object Properties, Graphics > Scale, or Special > Anchored Frame.

To change the drawing properties of an anchored frame:

Select the frame and use the Tools palette to specify the properties you want. For example, you can change a frame's pen pattern to make the frame's border printable or change its fill pattern to shade the interior of the frame.

To copy or move an anchored frame:

1 Select the frame and choose Edit > Copy or Edit > Cut. You don't need to select the anchor symbol.

2 Click in text where you want to insert the frame and choose Edit > Paste. The anchor symbol appears at the insertion point when text symbols are visible.

In some cases (for example, when a frame is positioned at the top or bottom of a column), the frame does not change position even though the anchor symbol moves.

To delete an anchored frame:

Select the frame and press Delete.

To move a frame's anchor symbol:

1 Select the frame. You don't need to select the anchor symbol.

2 Choose Edit > Cut, click in text where you want to insert the anchor symbol, and choose Edit > Paste. The anchor symbol appears at the insertion point when text symbols are visible.

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.

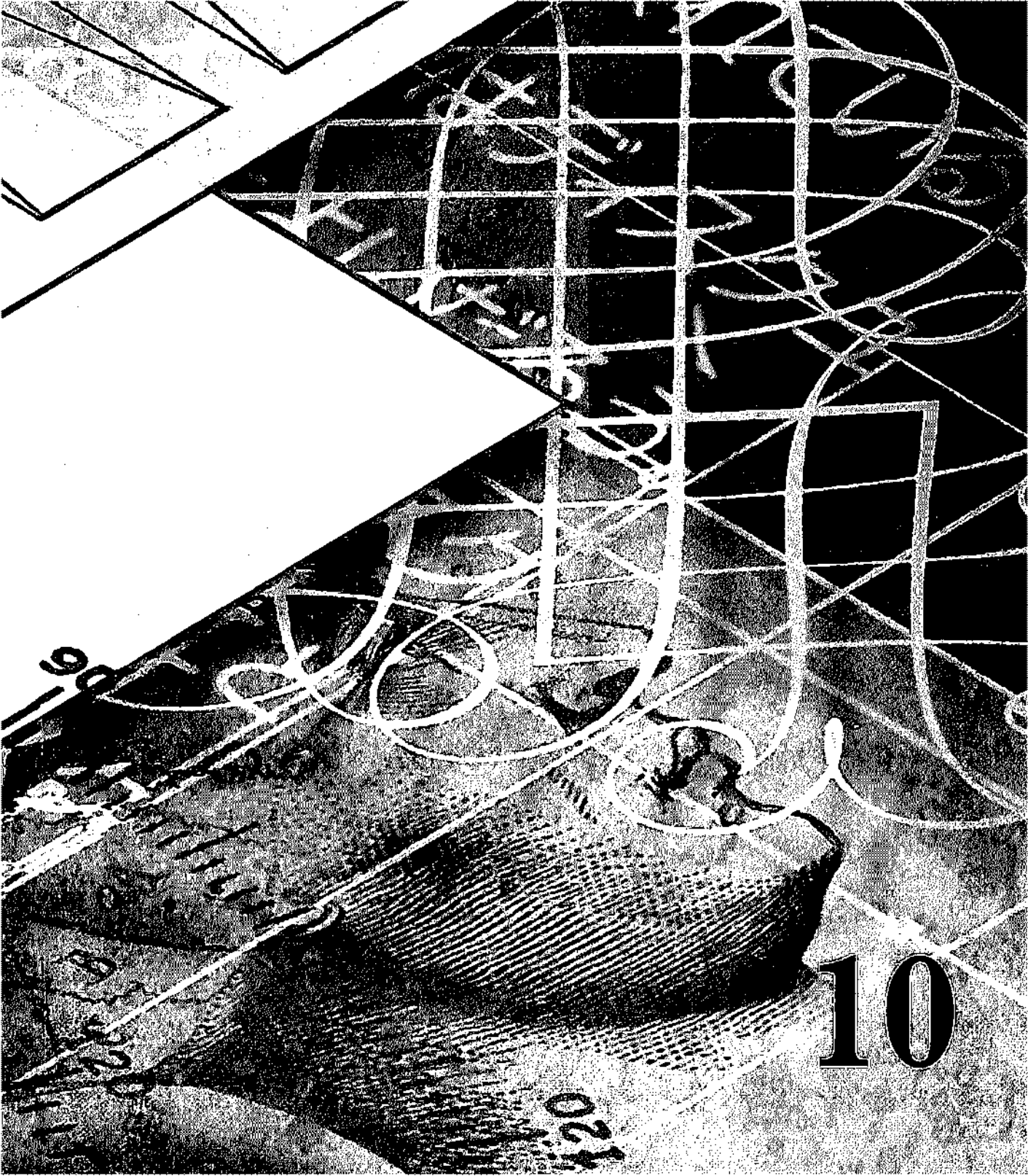
To move an anchored frame without moving its anchor symbol:

Do one of the following:

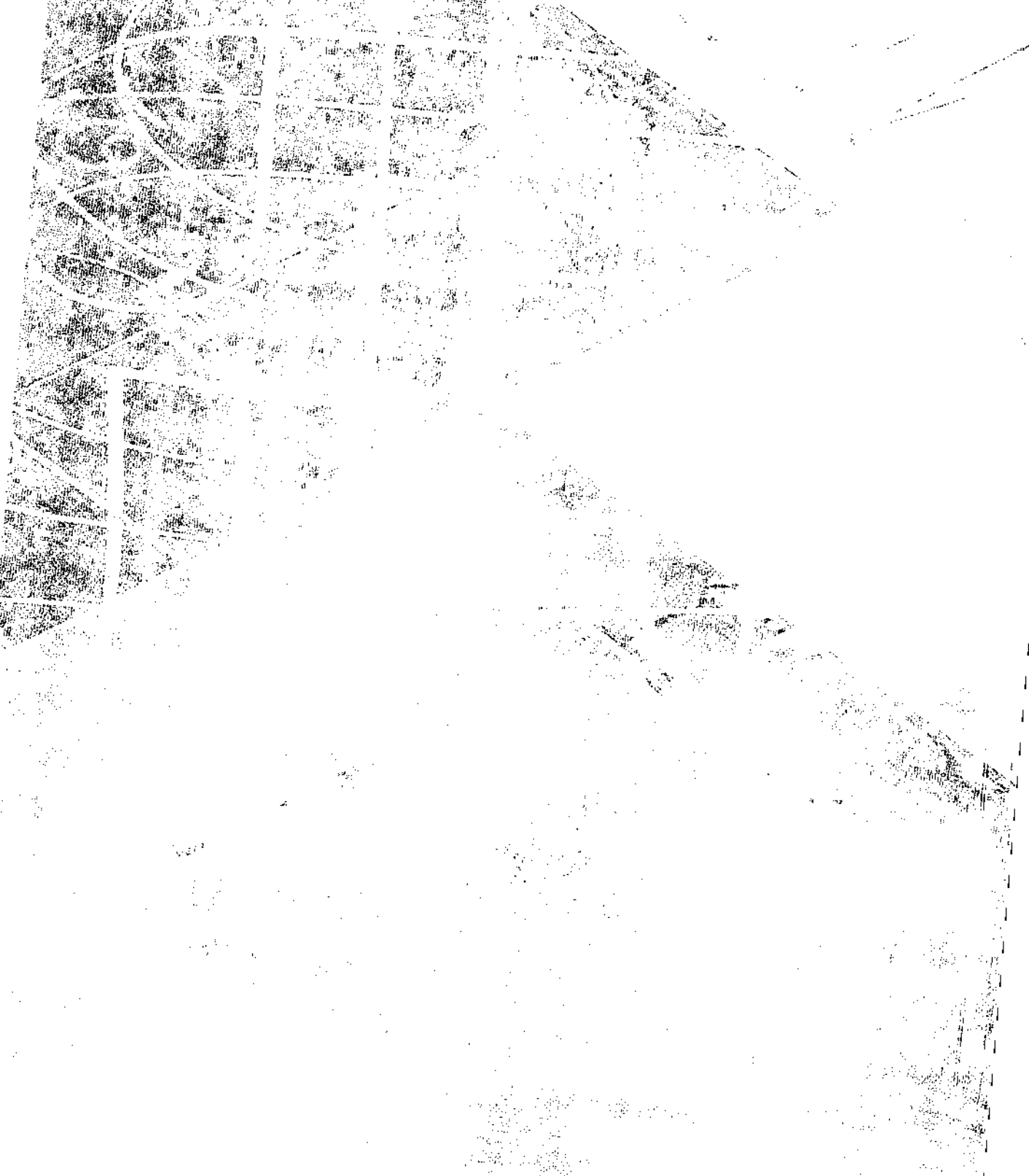
- For quick but approximate repositioning, drag the frame.
- For more precise repositioning, move the frame in small increments with the arrow keys (see "Moving objects" on page 209).
- For greatest precision, specify the location of the frame with the Special > Anchored Frame command.

Some anchored frames cannot be moved without moving their anchor symbols. However, you can move a frame vertically when it's anchored at the insertion point, outside the column of text, or outside the text frame. When a frame is anchored outside the column or text frame, you can't move it above the top or below the bottom of the text frame.

Note: *When you move a frame into a column, the text in the column doesn't adjust to accommodate the frame. Use the Run into Paragraph anchoring position to move the frame completely inside the column and to run the text around the frame automatically. You can also change the paragraph indents to make room for the frame.*



10



Chapter 10: Color

Color adds excitement to any document. With FrameMaker, it's easy to apply color to text and objects. Once color is in place, you can print to a color printer or create color separations for a service bureau or commercial printer. You can also print to a PostScript file and deliver the file to a commercial printer for post-processing in another application.

You can also define your own colors and tints, using any of several color models or libraries.

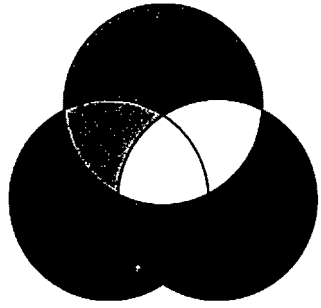
About color models

When you use a *color model* to define colors, you build the color you want by manually adjusting its components, such as the amount of pure red or the amount of saturation.

You can choose from three color models: CMYK, RGB, and HLS.

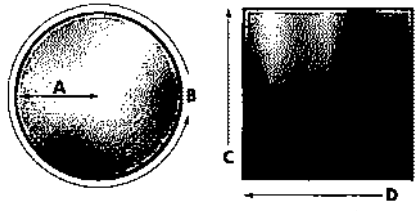
CMYK Use the CMYK model when you plan to create color separations for four-color process printing. Colors are created by combining cyan, magenta, yellow, and black (CMYK) inks. When you color separate your document, each color component is printed on a separate plate, in a different concentration, depending on how much is needed to create the desired color. For information, see "Separating colors" on page 248.

RGB Use the RGB model to create colors that will be seen on a monitor (for example, for online documentation). Colors are created by a combining of red, green, and blue (RGB) light.



RGB model

HLS Use the HLS model if you are familiar with color wheels. This model is most like the one artists use to mix colors and is often used in software color pickers. Colors are created by adjusting hue, lightness, and saturation (HLS). *Hue* controls the amount of red, green, yellow, blue, and so on. *Lightness* controls the lightness or darkness of a color. *Saturation* controls the amount of gray in the color.



HLS model: A. Saturation B. Hue C. Lightness D. All hues

Planning to use color

As you plan to use color, consider these tips.

Identify how the color will be printed or viewed Knowing and understanding the final output of your color document can greatly affect your color decisions:

- For online output, use the RGB or HLS color models. Your guide to correct color is how your documents look on your monitor.
- For desktop printing, use the CMYK model to define your colors and test them on the printer you'll be using. Your guide to correct color is how your documents look on your printer.
- For commercial printing, use colors from a library supported by your commercial printer. But don't rely on on-screen versions of library colors; use a swatch book. (A computer monitor can't show you exactly how a color will look when printed.) Many sections in this chapter apply only to commercial printing, such as the sections on spot colors, overprinting, trapping, and color separating.

Learn the limits of the medium Become familiar with the range of colors available on your monitor or printer. For example, a system set to display 256 colors cannot display tints below 16% accurately in FrameMaker.

Talk to your commercial printer Find out whether your commercial printer has any special requirements or suggestions for efficient color production.

Consult a professional designer The advice of a designer can make the difference between good color and great color results.

Use formats to apply color Using paragraph and character formats to assign colors to text ensures that similar passages are the same color. It also makes it easier to change colors throughout your documents.

Using color libraries

When you use a color matching system—a *color library*—you choose from colors defined by a color vendor. The advantage of using a "premixed" library color is that you're assured that commercial printers can precisely match the formula represented by the vendor's swatch book. For this reason, don't change the definition of a color from a library if you plan on printing commercially.

Every color from a library is defined as either a spot color or a process color. A *spot color* is printed on a printing press with premixed inks by using a single printing plate. A *process color* is printed on a press by overlapping dots of cyan, magenta, yellow, and black (CMYK) on separate plates.

Before choosing a color from a color library, ask your commercial printer for a list of supported libraries. For best results, choose colors from a swatch book, rather than relying on the on-screen representation of the color.

FrameMaker includes the following libraries.

Crayon The Crayon library was developed by Adobe to provide access to common RGB colors using everyday names in alphabetical order. Do not use Crayon colors as spot colors.

DIC The DIC Color Guide provides spot colors; it is used mostly in Japan.

FOCOLTONE The FOCOLTONE Colour System provides 860 process (CMYK) colors.

Greys The Greys library, developed by Adobe, provides both process and spot shades of gray in 1-percent increments.

MUNSELL The Munsell System provides colors defined on the RGB model.

PANTONE Most of the libraries in the PANTONE MATCHING SYSTEM are for spot colors. Only the two PANTONE process libraries are for selecting process colors. Separate PANTONE libraries are available for colors that will be printed on coated and uncoated paper. The PANTONE Pro-Sim Euro library uses color definitions that match the printing systems prevalent in Europe.

TOYO The TOYO Color Finder provides over 1000 colors based on the most common printing inks in Japan.

TRUMATCH The TRUMATCH 4-Color Selector provides over 2000 process colors that cover the CMYK visible color spectrum in even steps.

To find out more information on a color library:

Choose View > Color > Definitions, choose a library from the Color Libraries pop-up menu, and then click About.

To choose a color using a color library:

Follow the steps on page 244.

Note: When you choose a color from a library, its predefined name appears as its Ink Name in the dialog box. If you change the definition of the library color, the Ink Name disappears, indicating that the color no longer matches the formula defined by the vendor. Changing the definition of a library color is not ordinarily recommended. To restore the original definition, choose the color again from the library and click Change.

To add a color library for use in FrameMaker:

1 Place the library file into the following folder:

- (Windows) The Fminit\Color folder
- (Macintosh) The Color folder within the Modules folder
- (UNIX) $FMHOME/fminit/color

2 Restart FrameMaker.

You can add any library file formatted in the ASCII Color Format (.acf), version 2.1 or earlier, or in the Binary Color Format (.bcf), version 2.0. You can't use FrameMaker to save a .bcf library file.

Applying colors and tints

The method you use to apply a color or a lightened version of a color (a *tint*) depends on the current selection. Any entry in a Color pop-up menu can be applied to FrameMaker text or objects. FrameMaker supplies a set of eight standard colors that you can add to (see "Defining and modifying colors and tints," next, for details).

You can apply two types of tints:

- *Color-level tints* are tints you define and name by using View > Color > Definitions (see page 243). These tints appear in the Color pop-up menus in dialog boxes and designers.

• *Object-level tints* are tints you apply to an object whereby the object's original color is lightened by a specified percentage. You apply an object-level tint by using the Tint pop-up menus on the Tools palette or in an object's Object Properties dialog box.

To apply a color or tint to text or an object:

Use a paragraph format, character format, or the Tint and Color pop-up menus to assign a color or a tint.

To apply color or tint to	Use
Paragraphs	A Paragraph Catalog format, or the Color pop-up menu on the Tools palette or in the Paragraph Designer
A selected word or phrase in a paragraph	A Character Catalog format, or the Color pop-up menu on the Tools palette or in the Character Designer
A text line	A Character Catalog format, or the Color pop-up menu on the Tools palette or in the Character Designer
Objects or imported graphics	The Color pop-up menu or the Tint pop-up menu on the Tools palette
A text frame	The Fill pop-up menu on the Tools palette to change the frame's fill pattern from None and then the Color pop-up menu or the Tint pop-up menu to assign a color
Text in a table	A Paragraph Catalog or Character Catalog format, or the Color pop-up menu on the Tools palette or in a designer
Cells in a table	The Color pop-up menu 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
Conditional text	The Color pop-up menu in the Edit Condition Tag dialog box
Equations or math elements in an equation	A Character Catalog format, or the Color pop-up menu on the Tools palette or in the Character Designer

To apply a tint to an object by using a fill pattern:

1 Select the object you want to tint.

2 Choose one of the first eight fill patterns from the Fill pop-up menu on the Tools palette. The fill patterns apply the following percentages to the object's current color.

Fill Pattern	Tint percentage
	100%
	90%
	70%
	50%
	30%
	10%
	3%
	0% (color of paper)

To apply the same color to all drawn objects and text:

Do one of the following:

• (Windows) Hold down Shift+Alt and choose a color from the Color pop-up menu on the Tools palette.

• (Macintosh) Hold down Shift+Option and choose a color from the Color pop-up menu on the Tools palette.

• (UNIX) Hold down Shift+Control and choose a color from the Color pop-up menu on the Tools palette.

Defining and modifying colors and tints

You create or modify colors and tints (percentages of a specified color) by adjusting the color components in the model you're using or by choosing a predefined ink from a color library. New colors and tints appear in all Color pop-up menus and scroll lists.



You can't change the eight standard colors (Black, Blue, Cyan, Green, Magenta, Red, White, and Yellow) except for their overprint and Print As properties. However, you can define your own colors using lowercase versions of these names (black, blue, and so on). Also, the Crayon library has its own versions of these colors, which you can use or redefine under another name.

To define or modify a color or tint:

1 Choose View > Color > Definitions.

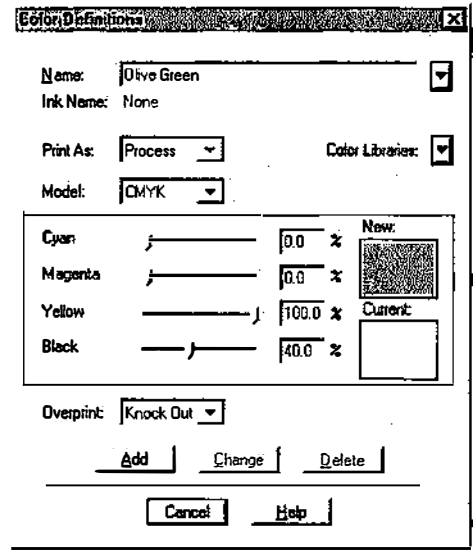
2 Do one of the following:

• To define a new color, enter a new name in the Name text box.

• To modify an existing color (or base color), choose its name from the pop-up menu to the right of the Name text box (or type its name until the color definition appears).

3 Specify how the color will be printed by choosing one of the following options from the Print As pop-up menu:

• To define a tint, choose Tint. A tint is always displayed and printed in the same manner and on the same plate as its base color. The base color also determines the color components.



• To define a spot color, choose Spot.

• To define a color printed with CMYK inks, choose Process. For information, see "Separating colors" on page 248.

• To define a color that is not printed, choose Don't Print.

4 To change the color model, choose from the Model pop-up menu. For details, see "About color models" on page 239 and "Planning to use color" on page 240. (The color model of the tint is determined by the base color.)

5 Adjust the color components by dragging the sliders or entering values. If you're defining a tint, choose a color from the Base Color pop-up menu and set the percentage. To reset any changes you've made, click the Current color box.

Note: *Your monitor may not be able to accurately display the color or tint that you define. For example, a tint value of less than 10% of the base color will probably not be displayed accurately on-screen (or on some printers). Also, UNIX systems that use 8-bit color may have problems displaying colors that are not in their color maps (see the online manual* Customizing FrameMaker Products*).*

6 To make this color print on top of other colors when printing separations, choose Overprint from the Overprint pop-up menu; see "Knocking out and overprinting" on page 246.

7 To create a new color, click Add (or click the New color box); to modify the current color, click Change.

8 Repeat steps 2 through 7, once for each color you want to define or modify, and then click Done.

To define a color from a color library:

1 Choose View > Color > Definitions.

2 Choose a library from the Color Libraries pop-up menu. For information, see "Using color libraries" on page 240.

3 Choose a color from the library of predefined colors. If you know the name, you can quickly scroll to it by starting to type its name.

4 Click Done. The color you choose appears as the Ink Name in the Color Definitions dialog box.

Note: *Colors from color libraries often have a preferred color model and type. When you choose a color, the color model or type may change automatically. Under normal conditions, you should not change these settings. Similarly, you won't ordinarily want to change the color definitions of a library color. If you do, the Ink Name disappears and the color no longer matches the formula defined by the vendor.*

5 To make this color print on top of other colors when printing separations, choose Overprint from the Overprint pop-up menu; see "Knocking out and overprinting" on page 246.

6 Click Add.

7 Repeat steps 2 through 6, once for each color you want to define, and then click Done.


If you want to use the operating system's color picker to define a color, choose Common Color Picker (Windows) or Apple Color Picker (Macintosh) from the Libraries pop-up menu. You use these color pickers just as you do in other applications.

To delete a color or tint:

1 Choose View > Color > Definitions.

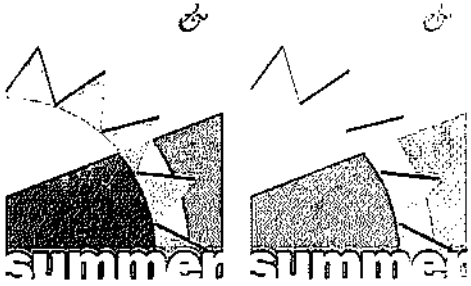
2 Choose a color or tint from the Name pop-up menu. (You can't delete the basic eight colors.)

3 Click Delete. If the color is in use, an alert message asks whether you want to change items that use this color to black. If you delete the base color of a tint, the tint becomes a percentage of black.

4 Repeat the process to delete more colors. When you're finished, click Done.

Viewing colors

A color view specifies which colors are visible. For example, if your document uses black and a spot color, one view could display both colors and another view could display only the spot color.



Both colors visible and only one color visible

For each view you set up, specify which colors you want to display, which to display as cutouts (shown as white when overlapping different colored objects), and which not to display at all.

To set up a view:

1 Choose View > Color > Views.

2 Click a view number and move the color names to the appropriate scroll lists. Tints do not appear in this dialog box; they appear along with the color they were based on.

To move a color, select it and click an arrow, or double-click it. To move all colors, select a color and Shift-click an arrow. To reset any changes you've made, click Get Default.

The name of the color may be clipped in the scroll boxes, but the full name of the selected color appears below the scroll boxes.



Leave View 1 unmodified, with 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 Repeat step 2 for each view you want to set up, and then click Set. The currently selected view is displayed.

To display a color view:

Do one of the following:

- Choose View > Color > Views, select the view you want to display, and click Set.
- Press Esc V *number*, where *number* is the number of the view (1 through 6) you want to display.

Printing color documents

You can print each page of a document as a *composite*. A composite page contains all the colors that are used on the page. You print a composite color document when printing to a desktop color printer.

Alternatively, you can print each page of a document as a series of color *separations*—where color images are split into several pages, each of which contains one component color. A commercial printer uses the separations to make printing plates, one for each color.

You can also print mirror and negative images, which may be required when commercially printing to film.

If color objects overlap in your document, you can *overprint*, which prints an object (most often a dark one) on top of another color object, or you can create a *knockout*, in which the top color is printed but colors behind it are not. You can also use trapping to ensure that there is no gap between objects.

To print composite pages:

1 Choose File > Print.

2 Make sure Print Separations is off.

3 Set the remaining print options as necessary and click Print. For information on the other options, see "Print options" on page 43.

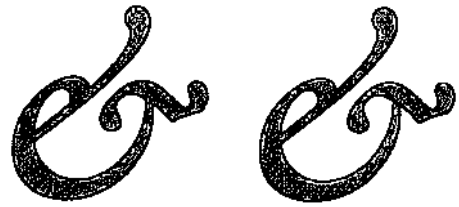
To print colors in black instead of shades of gray on a black-and-white printer:

Do one of the following:

- (Windows) Choose File > Print and then select Spot Color as Black/White.
- (Macintosh) With the Apple LaserWriter 8 printer driver or the Adobe PS Printer driver 8, click Options in the Print dialog box. Then choose Black and White from the Print pop-up menu. With version 7 of the LaserWriter printer driver, select Black and White in the Print dialog box.
- (UNIX) Edit the beginning of the ps_prolog file, located in $FMHOME/fminit. This file contains full instructions for changing print settings. Changes to the file take effect immediately. To make changes without affecting other users, save your changes to ~/fminit/ps_prolog.

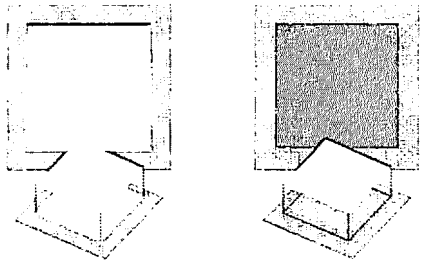
Knocking out and overprinting

When one color object overlaps another, FrameMaker normally knocks out the overlapped portion so that it does not print in a color separation (it appears as the color of the paper). If you're producing color separations and printing commercially, registration errors may occur and you may see small gaps between colors.



Accurate and inaccurate registration

To avoid gaps between colors, you can apply overprinting to the top object so that the overlapped portion is not knocked out.



Knocked out and overprinted

You can also use overprinting to combine two colors for special effects, especially when the underlying object is darker than the overprinting one.



Knockout keeps colors from changing, but overprinting combines them

To control knocking out or overprinting of all objects of a particular color:

1 Set up a color as described in "Defining and modifying colors and tints" on page 243.

2 In step 6 on page 244, do one of the following:

- To have any object that uses this color overprint, choose Overprint.
- To have any object that uses this color knock out, choose Knock Out.

To control knocking out or overprinting of objects:

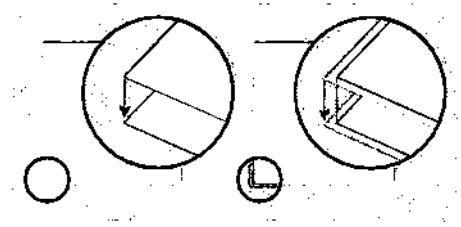
1 Select the object and open the Tools palette or choose Graphics > Object Properties.

2 Do one of the following:

- To have this object overprint objects beneath it, choose Overprint from the Overprint pop-up menu.
- To have this object knock out objects beneath it, choose Knock Out from the Overprint pop-up menu.
- To have this object use the overprint setting defined for the color, choose From Color from the Overprint pop-up menu. This is the recommended setting.

Trapping

In commercial printing, overprinting to compensate for registration errors may produce unacceptable color mixing. If this happens, the object may need to be *trapped* instead of overprinted. A trap is a line bordering the object on top that is just wide enough to fill the color gap and to overprint the other object along the border of its cutout.



Without trapping and with trapping

You can also have your document trapped professionally, after you have completed your work in FrameMaker. You begin the process by printing to a single PostScript file from the Macintosh version of FrameMaker. Then, you deliver the PostScript file to a commercial printer for postprocessing; see "Postprocessing color documents (Macintosh)" on page 251.

Having a commercial printer trap your documents for you saves you the effort of hand-trapping each object individually. Also, manual trapping may have to be undone if you later decide to have a commercial printer do the trapping.

To trap an object:

1 Create a border for the object on top by duplicating the object and setting the duplicate's fill pattern to None (see page 199). Be sure the duplicated object is exactly over the original.

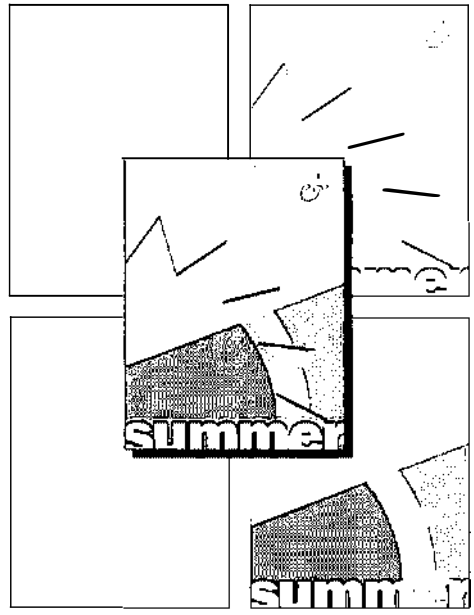
2 Set the line width of the border as appropriate for the size and contour of the object, the type of printing paper, and the accuracy of the printing press. Consult your commercial printer for information on suitable line widths for trapping.

Also, because the stroke of a line is always centered on an object's edge, you will have to double the line width specification that the commercial printer gives you.

3 Select the border and choose Overprint from the Tools palette.

Separating colors

When you print color separations within FrameMaker, 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, with shades of gray indicating the percentages of color saturation. The color name of each separation is printed outside of the registration marks (if registration marks are on and if there's room on the page).



Composite image and four spot color separations

Imported color graphics are separated if they are in CMYK, TIFF, DCS, or EPS line art format. Also, bitmap images in EPS graphics can be separated as long as they can also be separated in Adobe Illustrator. Any EPS file created with the Macintosh

version of FrameMaker can also be separated (see "Printing documents as EPS files (Macintosh)" on page 390).

Note: *On the Macintosh, you must use the Apple LaserWriter 8 printer driver or the Adobe PS Printer driver 8 to print color separations. You must also select a nongeneric PostScript Printer Description (PPD) file for a printer that supports color separations.*

On the Macintosh, you can also separate a document by printing to a single PostScript file and then having a commercial printer separate the file for you. For details, see "Postprocessing color documents (Macintosh)" on page 251.

To create color separations from within FrameMaker:

1 Make sure you have not set colors to print as black and white instead of shades of gray, as described on page 246.

2 Choose File > Print and select Registration Marks.

3 To print all pages for one plate and then all pages for the next plate, turn off Collate. Leave Collate selected to print all plates for one page before printing all plates for the next page, and so on.

4 Select Print Separations and then click Separations Setup.

5 If necessary, move the color names to the appropriate scroll lists and click Set. To move a color, select it and click an arrow, or double-click the color. To move all colors, select a color in the list and Shift-click an arrow.

Tints do not appear in this dialog box; they print on the same plate as the base color.

If your printer can't print process color separations, the dialog box contains only the Print As Spot and Don't Print scroll lists. The scroll list where each color appears by default depends on how the color was defined—on its Print As setting. For information, see "Defining and modifying colors and tints" on page 243.

6 Set the remaining print options as necessary and click Print. For information, see "Setting up halftone screens" on page 250 and "Printing negative and mirror images" on page 250.

Minimizing the number of color separations

Because commercial color printing can be costly, you should consider how to print your documents with the fewest number of separations. For example, if your commercial printer uses a six-stage press, you could print four-color process separations and two spot colors. If your printer uses a four-stage press, you could use four-color process separations to simulate the spot colors.

If a document contains two differently named colors with the same color values, FrameMaker prints two identical separations, one for each color name, and both colors will print on each separation. To avoid this, name colors consistently across documents and applications. If a document contains inconsistently named colors, print duplicate separations and then manually remove one of the duplicates.


You can reduce the cost of printing color separations by not printing blank sheets. Select Skip Blank Pages in the Print dialog box (Windows and Macintosh), or select Skip Blank Separation Pages in the Set Print Separations dialog box (UNIX).

Setting up halftone screens

Process color separations are printed using grids of black dots for each color—the larger the dots, the more 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. For information, consult your printer documentation and your commercial printer.

To change halftone screen settings:

Do one of the following:

- (Windows) Choose File > Print, click Separations Setup, and then click Halftone Screens. Adjust the settings as needed and click Set.
- (Macintosh) Choose File > Print, click Separations Setup, and then choose one of the available settings (or Custom) from the Halftone Screens pop-up menu. If you choose Custom, you can adjust the screen frequency and angle for each plate as well as the dot shape, enter your own PostScript commands to modify the shapes, and select Yellow "Triple Dot" to obtain a more accurate frequency for yellow.
- (UNIX) Edit the beginning of the ps_prolog file, located in $FMHOME/fminit. This file contains full instructions for changing print settings. Changes to the file take effect immediately. To make changes without affecting other users, save your changes to ~/fminit/ps_prolog.

Printing negative and mirror images

If your commercial printer requires you to print files to film, you may be instructed to print negative images, in which all text and objects are inverted. Or you may need to print flipped images that mirror the pages' normal appearance.

Note: The settings in the following instructions may differ depending on the printer driver you're using, and they may not be available with non-PostScript printer drivers.

To print negative and mirror images:

Do one of the following:

- (Windows) Choose File > Print Setup, click Properties, and then click Graphics. Select Print as Negative Image or Print as Mirror Image and click OK.
- (Macintosh) Choose File > Page Setup, click Options, select Invert Image (for negative images) or click Flip Horizontal (for mirror images), and then click OK.
- (UNIX) Follow the steps for printing color separations on page 249, but for step 5 choose Plate Imaging settings before clicking Set in the Set Print Separations dialog box. (Clicking Emulsion Down creates a mirror image.)

Postprocessing color documents (Macintosh)

You can have a document color separated or have all objects in a document trapped by printing to a single PostScript file and then having a commercial printer process the file for you. Creating a PostScript file in this way embeds instructions in the file. These instructions conform to the Adobe Document Structuring Convention (DSC). DSC enhances the performance of postprocessing products that perform trapping and imposition. DSC also lets you take full advantage of products that support Open Prepress Interface (OPI) version 1.3. OPI reduces the hardware overhead for working with high-resolution color images.

Having a commercial printer trap your documents for you saves you the effort of hand-trapping each object individually.

Note: Before beginning, ask your commercial printer for any special instructions for producing PostScript files.

To use OPI to work with high-resolution images on the Macintosh:

1 Ask your service bureau or commercial printer to make high-quality scans of your artwork, keep the high-resolution images, and give you OPI-ready low-resolution EPS or TIFF versions of the images to work with.

2 Import (by reference or by copying) the low-resolution images into your document (see "Using the Import command to import graphics" on page 381).

3 Choose File > Print, click File in the Destination area, and then click Save.

4 Specify a name and location for the PostScript file, and then click Save. The OPI-enhanced PostScript file contains information that the commercial printer's software uses to match the placeholder images with the high-resolution ones at print time.

To prepare a PostScript file for trapping using TrapWise:

1 On the Macintosh, choose File > Print.

2 Choose TrapWise Compatibility, click File in the Destination area, and then click Save.

3 Specify a name and location for the PostScript file, and then click Save.

4 Give this file to your commercial printer for postprocessing in TrapWise®, from Luminous Corporation. TrapWise automatically traps all objects in the file.

To prepare a PostScript file for trapping using Island Trapper:

1 On the Macintosh, choose File > Print, click File in the Destination area, and then click Save.

2 Choose an EPS format from the Format pop-up menu, specify a name and location for the first EPS file, and click Save. Every page of the document or book is saved as a numerically named EPS file.

3 Give the EPS files to your service bureau or commercial printer for postprocessing in Island Trapper.

To prepare a PostScript file for making color separations outside of FrameMaker:

1 On the Macintosh, choose File > Print, click File in the Destination area, and then click Save.

2 Specify a name and location for the PostScript file, and then click Save.

3 Give the PostScript file to your service bureau or commercial printer for postprocessing in a page-imposition or color-separation application.



11



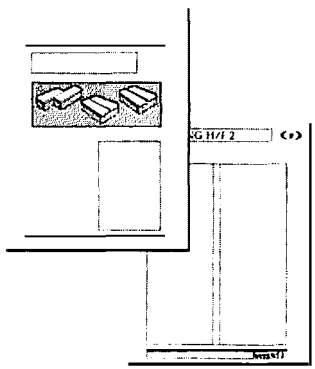
Chapter 11: Page Layout

When you use templates designed for the types of documents you create, the page layout is already set up for you in the templates. You may occasionally need to assign a custom master page to a body page (for example, for a first page), but you usually won't need to make the other page layout changes discussed in this chapter.

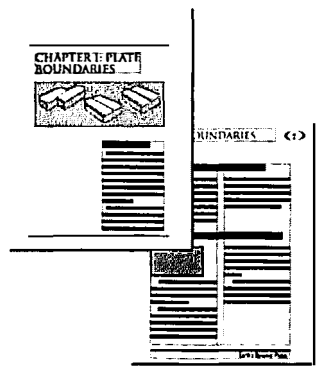
If you need to create a basic layout, you can easily create a custom new document. You can then add page headers and footers throughout the document, or change the column layout for text.

When you design a template, you'll probably do additional page layout. For example, you might create special layouts for the first page of a chapter, a rotated page, or a page with a different-size text frame or a different number of columns. You might also create layouts for documents that contain multiple text flows. And you can use reference pages to store items (such as boilerplate graphics) that you want to use consistently throughout a document.

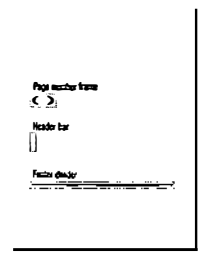
MASTER, BODY, AND REFERENCE PAGES FrameMaker documents contain three types of pages. Master pages specify the page layout and the background text for document pages (for example, page headers and footers). Body pages show the background text and graphics from the corresponding master page and contain a document's content. Reference pages hold boilerplate graphics that you can use throughout a document.



Master pages: First and Right



Body pages: first chapter page and right page



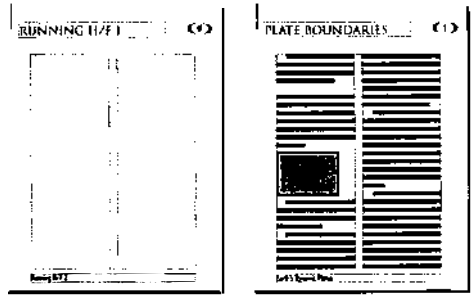
Reference page

About master pages

FrameMaker uses *master pages* to keep track of a document's page layout. A double-sided document contains at least two master pages, one for left pages and one for right pages. A single-sided document uses the right master page only. Documents can also contain custom master pages, which you can use for special types of pages. You can also create layouts directly on *body pages* for one-time-only use.

The basic layout of a document includes its page size and margins, the number of columns on each page, whether the document is single-sided or double-sided, and how pages are numbered. If your document's layout is symmetrical (that is, if facing pages have matching top, bottom, inside, and outside margins), and if it uses no master pages other than the standard left and right pages that FrameMaker provides, you can change the basic layout without displaying the master pages.

If your page layout is more complex, or if you need to create other design components such as page headers and footers, you must work with the components directly on the master pages. You can draw or import graphics—such as lines, boxes, or company logos—anywhere on a master page, as well as type text on them. Graphics and text appear on the corresponding body pages exactly as they appear on the master page, as part of the body page's background.

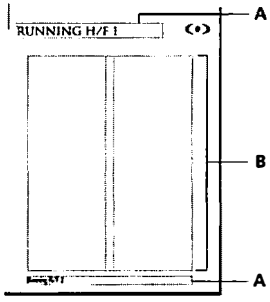


Master page and body page

Master pages can contain the following types of text frames:

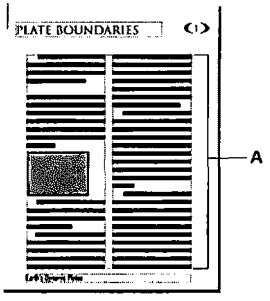
- A *template text frame* contains a tagged text flow—a flow with a name. When you add a body page, the template text frame is copied to the new body page. You then type the document's text in this text frame on the body page. You can type text in a template text frame on a master page, but the text won't appear on body pages.
- A *background text frame* contains an untagged text flow—a flow with no name. Its contents appear on corresponding body pages, but you can

edit them only on the master pages. Background text frames are typically used for page headers and footers.



Masterpage A. Untagged background text frame B. Template text frame

When you add text and illustrations to your document on body pages, FrameMaker adds body pages as necessary and automatically uses the page layout from the left or right master page.

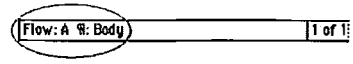


A. On body pages, you type in a text frame copied from the template text frame.

About text flows and flow tags

A text flow is a series of connected text frames through which the text flows in a document. Most documents have a single text flow, from the first page to the last, in which FrameMaker handles the text frame connections automatically. You make the text frame connections yourself only for documents in which you need to weave several text flows together—for example, with a newsletter in which you need to continue a front-page article on the back page, skipping over other articles on the intervening pages (see "About multiflow documents" on page 273).

The current text frame's flow tag appears in the Tag area of the status bar. In new, blank documents, the tag for the text flow is A.



Tag area of status bar

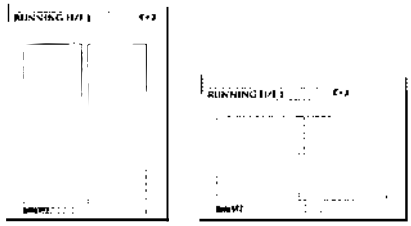
Changing the basic page layout of a document

You can make changes to a document's basic page layout—its page size, column layout, and whether it is single-sided or double-sided—directly from a body page. When you make one of these changes, FrameMaker automatically updates both the left and right master pages, and updates the layout of any body pages that use those master pages. If any of these body pages contain layout overrides (see page 264), you are asked to confirm that you want to make the updates.

If your document uses another master page—for example, for the first page of the document—you must make any layout changes on that master page. For details, see "Changing page layout on specific pages" on page 264, "Creating and editing custom master pages" on page 267, and "Assigning master pages to body pages" on page 269.

Changing the page size and pagination

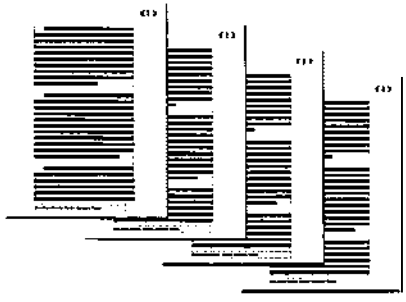
You can change a document's page size by choosing a standard page size or by specifying a custom size. FrameMaker will then resize the text frames on the left and right master pages (but not on any custom master pages) to maintain the current page margins.



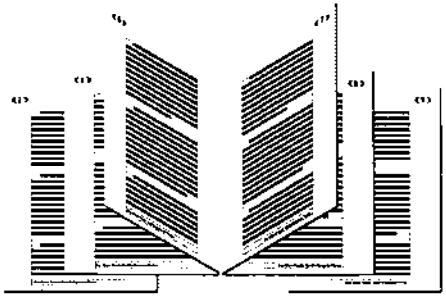
Margins are maintained when you change page size.

If the document contains custom master pages, FrameMaker won't let you change to a page size that can't accommodate the text frames on those master pages.

You can change a single-sided document to double-sided or the reverse. When you set up a double-sided document, you specify whether the first page is a left or a right page.



Single-sided document



Double-sided document

To change the page size:

1 Choose Format > Page Layout > Page Size.

2 Do one of the following:

- Choose a standard size from the Page Size pop-up menu. The correct dimensions appear in the Width and Height text boxes.
- Enter dimensions in the Width and Height text boxes. *Custom* appears in the pop-up menu. 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 centimeters by 548 centimeters).

3 Click Set.

To make a document single- or double-sided:

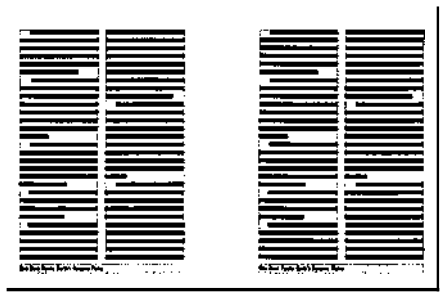
1 Choose Format > Page Layout > Page Size.

2 Click one of the options in the Pagination area. For a double-sided document, also specify whether the first page is a left or right page.

3 Click Set. If the document contains custom master pages or page layout overrides, an alert message asks how you want to proceed.

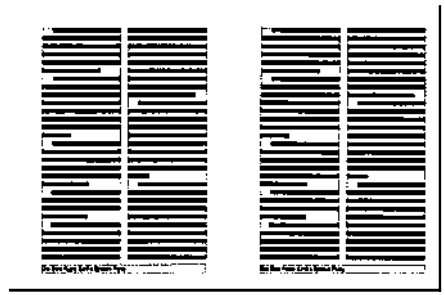
Changing the page margins and number of columns

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.



Symmetrical layout

To set up asymmetrical left and right margins, you change 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 directly with master pages, see "Changing page layout on specific pages" on page 264.



Asymmetrical layout

You can divide a text frame into two or more equally spaced columns of equal widths. To create a multicolumn layout with unequal column widths or gaps, use one text frame for each column of text and position the text frames one by one. Draw the text frames or set up one text frame the way you want it and then duplicate it. For information, see "Adding template text frames on master pages" on page 265 and "Adding text frames on body pages" on page 266.

To change the margins and number of columns:

1 Put the insertion point in the main text flow or click in the page margin.

2 Choose Format > Page Layout > Column Layout.

If the layout is asymmetrical (for example, with a different number of columns or a different inside or outside margin on the left and right master pages), an alert message asks whether you want to proceed. To retain the asymmetry, change the layout directly on the master pages (see "Changing page layout on specific pages" on page 264).

3 To change the margins, enter the values in the Margins area. The margins and the gap (space) between columns determine the individual column width.

4 To change the number of columns or the gap between columns, enter new values in the Columns area.

All columns will be the same width and will be separated by a uniform gap. To create a multicolumn layout that contains columns (or gaps between columns) of differing widths, see "Adding template text frames on master pages" on page 265.

5 Click Update Entire Flow. If the new column width is too narrow to accommodate some anchored frames or tables in the document, an alert message asks whether you want to proceed. If you click OK, you can manually resize the tables and frames.

Displaying master pages

When working with master pages, you move back and forth between them and the body pages. When a master page is visible, its name and the number of master pages in the document appear in the Page Status area of the status bar.



Page Status area of status bar

To display master pages:

Choose View > Master Pages. The master page used by the current body page appears, with the text frame and column borders visible.

To view other master pages when a master page is visible:

Do one of the following:

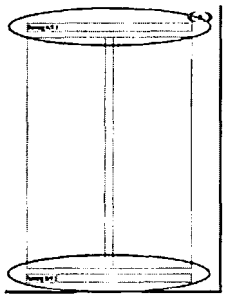
- Click the Next Page (⊡) or Previous Page (⊡) button.
- Press the Page Up or Page Down key.
- Use the scroll bar.

To return to body pages while master pages are visible:

Choose View > Body Pages. The most recently displayed body page appears. If FrameMaker detects any layout overrides on body pages (see page 264), an alert message asks how you want to handle them.

Using headers, footers, and other background text

You set up headers and footers by displaying master pages and typing text in background text frames. The contents of background text frames appear on body pages but are editable only on master pages.

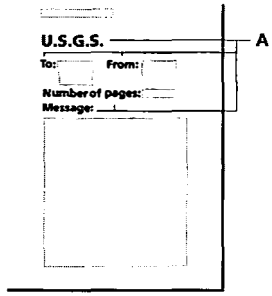


Header and footer text frames on master page

The headers and footers might include the page number, date, chapter number and title, section number and title, author, revision number, and draft release (such as preliminary and final).

You create and edit header and footer text as you do any other paragraph text. You can apply paragraph and character formats, add and move tab stops, and add graphics such as a line above or below the text. In addition, you can add system variables for information such as the page number or the current date, and you can change the size and placement of the header and footer text frames. When you modify these text frames on a master page, FrameMaker automatically updates any body pages that use that master page.

You can also add other background text on master pages. For example, in the FrameMaker fax template, the informational headings are in a background text frame on the master page.



A. Informational headings

Creating and modifying background text frames

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 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. You can draw background text frames for additional header and footer information or for other background text.

Note: *You can create single lines of background text by using the Text Line tool, but you can't apply paragraph formats to the text or insert variables in it. For information on creating text lines, see* *"Using text with graphics" on page 203.*

To add a background text frame on a master page:

1 Draw the text frame by using the Text Frame tool (see "Using text with graphics" on page 203).

2 In the Add New Text Frame dialog box, click Background Text and click Add. The new text frame, like all text frames for background text on master pages, is untagged.

3 Double-click in the text frame to place the insertion point, and then insert the header, footer, or other background text as described in the next section.

To resize or move a background text frame:

1 Select the text frame by doing one of the following:

- (Windows and UNIX) Control-click the text frame.
- (Macintosh) Option-click the text frame.

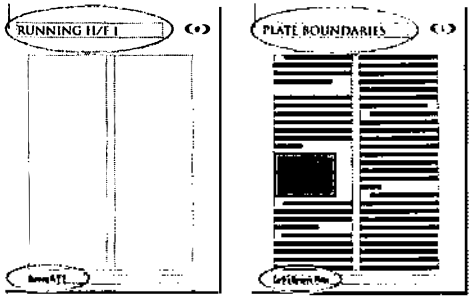
2 Do one of the following:

- To resize the text frame, drag a handle. For other methods, see "Resizing objects" on page 218.
- To move the text frame, drag its border (not a handle). For other methods, see "Moving objects" on page 209.

Entering header or footer information

You can create simple headers and footers by typing text in the header and footer text frames on the master pages. In addition, you can specify items such as the current page number, the document's total page count, and the current date. 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 that uses that master page.

You can also create running headers and footers in which the text changes from page to page. In the following figure, the running header contains the current section heading; the footer contains the page number and some text typed directly into the background text frame.



Running headers and footers

To create running headers and footers, you insert running header/footer variables in background text frames on master pages. For information on setting up these variables, see "Creating running headers and footers" on page 183.

To enter text, page numbers, dates, and other information:

1 On a master page, click in the header or footer where you want to add information.

2 Do one of the following:

- To insert static text, type the text.
- To insert the current page number, choose Format > Headers & Footers > Insert Page #. Type text next to the page number to produce

numbering such as *page 1*. For information on choosing the page numbering style (for example, numeric, Roman, or alphabetic), see the next section.

- To insert the page count, choose Format > Headers & Footers > Insert Page Count. Use the page count with the page number and text you type to produce numbering such as *page 3 of 4*.
- To insert the current date, choose Format > Headers & Footers > Insert Current Date. FrameMaker updates the date whenever it redisplays the page—for example, when you scroll, zoom, or go to the page.
- To insert a different variable, choose Format > Headers & Footers > Other and specify the variable. For more information, see "Inserting variables" on page 177.

Determining how pages are numbered

By default, FrameMaker uses a numeric style (1, 2, 3, ...), starting with page 1. You can start the document with a page number other than 1, or choose a different numbering style (Roman or alphabetic, uppercase or lowercase). If your system supports the typing of Japanese text in documents and dialog boxes, several Japanese numbering styles are also available.

You can specify whether to add or delete empty pages at the end of a document.

Setting up page numbering

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. For example, a preface might use Roman numerals, while the remainder of a book uses Arabic numerals.

To specify page numbers and numbering style:

1 Choose Format > Document > Numbering.

2 Enter a page number in the 1st Page # text box. 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.

Note: *To set up page numbering in a book, specify the starting page number by using File > Set Up File in the book window (see "Controlling pagination and paragraph numbering" on page 340) so FrameMaker numbers the pages correctly each time you update the book. However, you must still specify the page numbering style for each document separately in the Numbering Properties dialog box.*

Adding and deleting empty pages

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, a document may contain unwanted blank pages at the end, left there because you deleted or reworked text. You can tell FrameMaker to 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. (For information on layout overrides, see page 264.) FrameMaker doesn't delete a page if it contains an empty paragraph but is otherwise blank.

Note: *If the document is part of a book, use File > Set Up File in the book window to specify the starting page side of each file. For more information, see "Controlling pagination and paragraph numbering" on page 340.*

To specify whether a blank page should be added or deleted when saving and printing:

1 Choose Format > Document > Numbering.

2 Choose an option from the Before Saving & Printing pop-up menu, and click Set.

Changing page layout on specific pages

The preceding sections in this chapter describe how to change the basic layout of the left and right master pages and all body pages that use them. Those basic techniques apply only to a symmetrical page layout—one in which facing pages have the same number of equal-width columns, and equal top, bottom, inside, and outside margins.

You can create an asymmetrical layout by adding or changing text frames directly on the master pages. For example, you may want the left margin to be wider than the right on both left and right pages, as it is in this manual. Or you may want a single-column layout on the left page and a two-column layout on the right. You can even 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.

About layout overrides

When you make changes on a master page, FrameMaker automatically updates all body pages using that master page. When you make layout changes on a body page (for example, by changing the number of columns, the gap between columns, or the margins), you create an override to its master page's layout. You can then do any of the following:

- Update the master page and all corresponding body pages with your changes (see "Updating body and master page layouts" on page 266).
- Create a new master page based on the body page changes (see "Creating custom master pages" on page 267).
- Do neither of the above, leaving the override as a one-time-only page layout (see "Creating one-time-only page layouts" on page 266).

Changing margins and column layout on specific pages

The following steps always produce either a single-column layout or a multicolumn layout with equal-width columns.

If you want to create a multicolumn layout with unequal column widths or gaps, use one text frame for each column and position the text frames one by one. For information, see the fol-

lowing section, "Adding template text frames on master pages," and "Adding text frames on body pages" on page 266.

To change the margins and column layout on a page:

1 Select the text frame whose margins you want to change by doing one of the following:

- (Windows and UNIX) Control-click the frame.
- (Macintosh) Option-click the frame.

2 Choose Format > Customize Layout > Customize Text Frame.

3 Do the following:

- To change the margins, specify the new size and position in the Unrotated Size and Offset From areas. The Offset from Top and Offset from Left options specify the top and left margins. The bottom and right margins are then determined by the text frame's width and height.
- To change the number of columns or the gap between columns, change the values in the Columns area.

4 Click Set.


Another way to change the margins is to select a text frame and then drag a resize handle. When you resize a multicolumn text frame, the column widths change to fit within the text frame, but the column gap remains the same.

Adding template text frames on master pages

For a master page to contain unequal-width columns of text, or to set up the layout for a newsletter or other document in which the articles don't flow continuously from the first page to the last, you use multiple text frames—one for each column. For example, for a page with two unequal-width columns, you would add a second template text frame. You can add a template text frame by drawing it or by duplicating an existing one.

To add a template text frame on a master page:

1 Do one of the following:

- To draw the text frame, use the Text Frame tool on the Tools palette (see page 204). To draw more than one text frame, draw them in the order you want them connected.
- To copy an existing text frame, select the frame, choose Edit > Copy, and then choose Edit > Paste. FrameMaker copies the text frame, its contents, and its properties (including the flow tag).

2 In the Add New Text Frame dialog box, 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 setting up a text frame for a different flow in a multiflow document.

3 In the Columns area, specify the number of columns in the text frame and (if it's more than 1) the gap between adjacent columns. If you're setting up a layout with unequal-width columns, set the number of columns to 1, because you use a separate text frame for each column.

4 Click Add.

5 Move the text frame as needed.

Adding text frames on body pages

If you follow the first step of the previous procedure on a body page instead of a master page, you are prompted for the number of columns and the gap between them. However, FrameMaker does not assign a flow tag and does not connect the text frame to existing text frames on the page. To use the new text frame as part of the document's text flow, connect it to the flow (see page 277). If the new text frame is the first one in the flow, also select Autoconnect so that new pages will be added automatically as needed (see page 277).

Updating body and master page layouts

You can change template text frames on more than one master page and then update all corresponding body pages in one step. However, if you make column layout changes on a body page, you must update the corresponding master page before you can update the other body pages that use that master page.

Before FrameMaker updates body pages, it checks whether any body pages have column layouts that override their master page (see page 264). If any pages contain layout overrides, you specify whether to keep the overrides.

To update body pages with master page changes:

1 After making layout changes on master pages, display body pages.

2 If FrameMaker displays an alert message, specify whether to keep or remove layout overrides, and then click Continue. If you keep layout overrides, FrameMaker updates those body pages with the master page's background text and graphics but does not update the template text frames.

To update a master page with body page changes:

1 Choose Format > Page Layout > Update Column Layout. A message asks you to confirm the master page and body pages that are to be updated.

2 Click Update.

3 If FrameMaker displays an alert message, specify whether to keep or remove layout overrides on the pages being updated, and then click Continue.

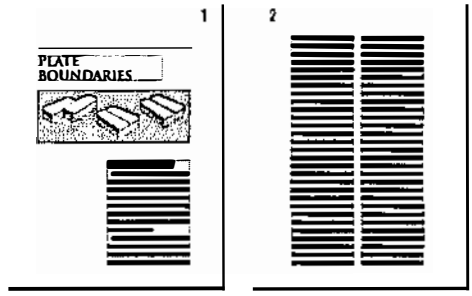
Creating one-time-only page layouts

You may need to change the layout of only one body page in a document. For example, you can make a text frame longer to fit one more line of text on the page, or shrink a text frame to make room for a graphic placed directly on the body page. When you change the column layout of a body page without updating the master page, you create a layout override.

For information on changing the column layout on a body page, see "Changing margins and column layout on specific pages" on page 264. For information on adding a text frame, see "Adding text frames on body pages" on page 266.

Creating and editing custom master pages

Documents may need body pages with layouts that differ from those of the left and right master pages. For example, you can create a different look for the first page of a document, or you can include a landscape page in a portrait document. For such cases, you create custom master pages. (A document can contain up to 100 master pages.)



The first page uses a different layout.

You can also rename master pages and delete master pages that you no longer need.

Creating custom master pages

You create a custom master page by starting out with a blank page or by basing the new page on an existing master page. After you create the custom master page, change its column layout and add background text and graphics (see "Changing page layout on specific pages" on page 264). You then assign the custom master page to one or more body pages (see page 269).

To create a custom master page that is empty or that is based on another master page's layout:

1 Display the master page that you want to use as a basis for the new master page.

2 Choose Special > Add Master Page and enter a name for the new master page in the Name text box.

3 Do one of the following:

- To create a master page with a layout that matches the layout of an existing master page, choose the master page from the Copy from Master Page pop-up menu.
- To create an empty master page, click Empty.

4 Click Add.

To create a custom master page based on a body page's layout:

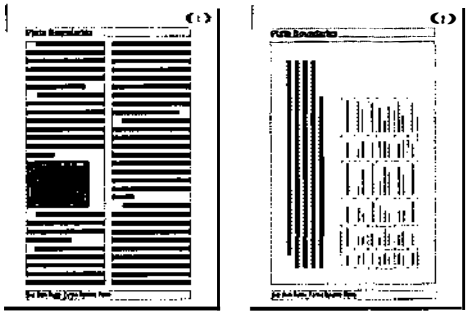
1 Make the column layout changes you want on a body page.

2 With the body page displayed, choose Format > Page Layout > New Master Page.

3 Enter a name for the master page and click Create.

Creating a rotated master page

You can create a custom master page that changes the orientation of a body page. For example, you can create a rotated orientation for a body page with a very wide table.

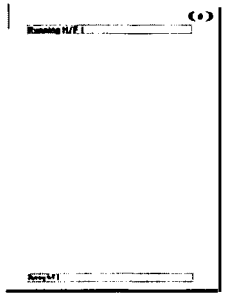


Right page uses a rotated master page.

To create a rotated master page:

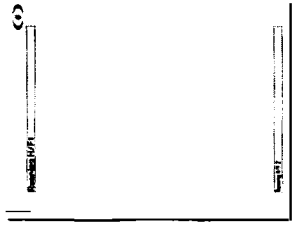
1 Create a custom master page as described in the preceding section.

2 On the master page, set up any text frames and background text and graphics that will have the same orientation (unrotated) as headers and footers on the other master pages.

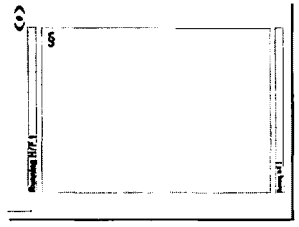


For example, if you want to achieve the effect shown in the illustration at the beginning of this section, you would set up the headers and footers now. If you want them to be rotated, you would add them later. For information on drawing background text frames, see "Creating and modifying background text frames" on page 261.

3 Choose one of the Format > Customize Layout > Rotate Page commands. When FrameMaker rotates the page, part of the page will probably be out of view. You can adjust the window size to see as much of the page as possible.



4 Create the text frames, background text, and background graphics that you want to display rotated. For example, to achieve the effect shown in the illustration at the beginning of this section, you would add the template text frame now.




You can type in rotated text frames, or you can unrotate the page to make typing faster. To unrotate a page, choose Format > Customize Layout > Unrotate Page. When you're finished, you can rotate the page again.

Renaming and deleting custom master pages

You can rename a custom master page—for example, to avoid overwriting a master page when importing master pages from a template that contains a master page with the same name. You can't rename the master pages named Left and Right.

If a document no longer uses a custom master page, you can delete it. You can't delete the left or right master page or any master page currently assigned to a body page.

To rename a custom master page:

1 Display the master page and click the page name in the status bar.

2 Enter the new name and click Set.

To delete a custom master page:

1 Display the master page and choose Special > Delete Page.

2 Click OK.

Assigning master pages to body pages

You can assign a master page to a body page at any time. FrameMaker uses the template text frame from the master page and displays background text and graphics.

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. (If the body page contains a text frame, the text frame is unaffected.) For example, if each chapter in a book must contain an even number of pages, and if the last page of a chapter contains no body text, you may not want that page to use a master page, so that it will be completely blank.

To assign a different master page to body pages:

1 With a body page displayed, choose Format > Page Layout > Master Page Usage.

2 In the Use Master Page area, do one of the following:

- To assign the left or right master page, click Right (in a single-sided document) or Right/Left (in a double-sided document).
- To assign a custom master page, choose the page name from the Custom pop-up menu.
- To assign no master page, choose None from the Custom pop-up menu.

3 In the Apply To area, do one of the following:

- To apply the change to the current body page, click Current.

• To apply the change to a range of pages, enter the starting and ending page numbers in the Pages text boxes.

• To apply the changes only to odd or even pages within a range, select Even or Odd as needed.

• To apply the changes only to pages within a range that currently use a particular master page, choose a page from the pop-up menu in the Apply To area.

4 Click Apply.

Note: *If the master page contains a template text 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.*

Aligning text across columns

You can use the following techniques to align text in the columns of a multicolumn layout so that the text has an even appearance:

• *Balance* text in a flow. FrameMaker distributes text evenly across the columns of a text frame that isn't full of text.

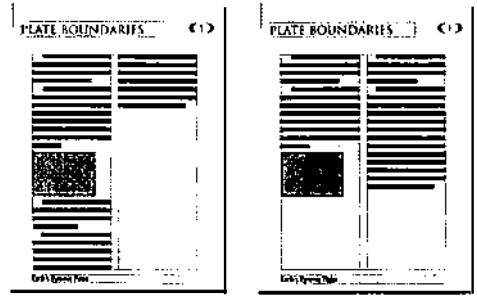
• *Feather* (vertically justify) text in a flow so the last line of text in each column reaches the bottom of the column.

• *Synchronize* (align) text in a flow. The first lines of body paragraphs line up whenever they appear side by side in columns.

If feathering and synchronization are both on for a flow, feathering takes precedence over synchronization. However, the first lines in the columns are synchronized with each other.

Balancing 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 columns on the last page of a document. You can balance text across columns throughout a text flow or in an individual text frame.



Balancing off and on

To balance text across columns throughout a text flow:

1 Put the insertion point in the main text flow or click in the page margin.

2 Choose Format > Page Layout > Column Layout.

3 Select Balance Columns and click Update Entire Flow.

To balance text across columns in a single text frame:

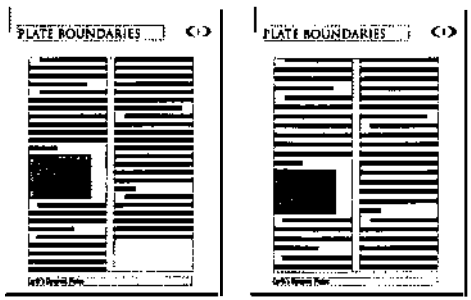
1 Put the insertion point in the text frame.

2 Choose Format > Customize Layout > Customize Text Frame.

3 Select Balance Columns and click Set.

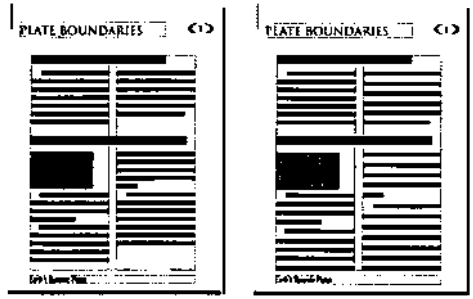
Feathering text to the bottom of text frames

When FrameMaker feathers 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. FrameMaker does not feather the text in a text frame in which text runs around graphics.



Before and after feathering

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.



Before and after feathering

When text is feathered, the display of pages may be slower. For this reason, you may want to feather text only after you finish editing a document.

To feather text in a text flow:

1 Click in the flow and choose Format > Page Layout > Line Layout.

2 Select Feather, and enter the maximum amount of space FrameMaker can add between lines (Interline Padding) and between paragraphs (Inter-¶ Padding).

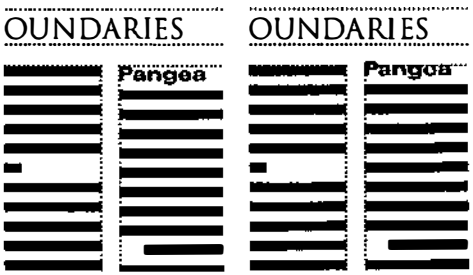
FrameMaker won't exceed the padding limits you set. If it's not possible to feather text in a column without exceeding the limits, FrameMaker does not feather text in that column.

3 Click Update Flow.

Note: *Feathering leaves room for the largest possible descender in the largest font size used in the line, even if no character with such a descender actually appears. If the last line in a column 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 that of the surrounding text.*

Synchronizing baselines across columns

When you synchronize (align) text 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. FrameMaker also aligns the first line after an anchored frame and tries to align the first line in each column.



Before and after synchronizing

Because headings in large fonts often appear at the tops of columns, you can specify a first-line synchronization limit. This 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 in the preceding illustration. FrameMaker won't synchronize font sizes larger than the limit you set.

To synchronize baselines across columns:

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 (see "Changing spacing" on page 90).

2 Click in the flow you want to synchronize and choose Format > Page Layout > Line Layout.

3 Select Baseline Synchronization and turn off Feather.

4 In the Synchronization area, enter the line spacing you want to use for the text frame grid in the Synchronize ¶'s text box. Use the same line spacing as in the paragraphs you want to synchronize. Otherwise, FrameMaker won't synchronize the paragraphs with the text frame grid.

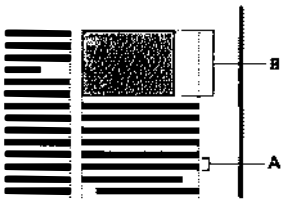
5 In the First-Line Synchronization Limit text box, enter the largest font size to align at the top of a column. For example, suppose the line spacing for body paragraphs is 12 points, the column grid is 12 points, and the headings are 18 points. If you want the headings to be aligned when they appear at the top of a column, specify 18 as the first-line limit.

6 Click Update Flow. Because no descenders appear above the first line in a column, the first grid line is offset from the top of the column a distance equaling two-thirds of the specified line spacing.

Synchronizing baselines in adjacent text frames

In some documents, such as multiflow newsletters, each page may contain several text frames—one for each column of text. When the tops of adjacent text frames start at the same position on the page, their 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.

Line up the grids by resizing 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) from the top of an adjacent text frame.

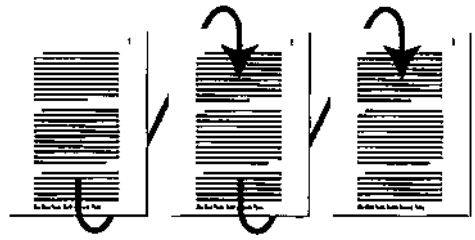


A. Grid spacing B. Distance evenly divisible by the grid

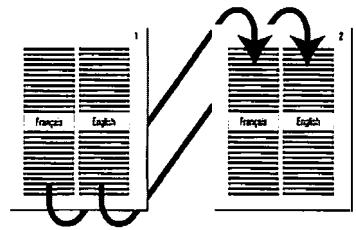
Use the snap grid to correctly position the text frames. To do so, specify a snap grid equal to the text frame grid. Then resize the text frames until their tops snap to the grid. For more information, see "Using grids" on page 192.

About multiflow documents

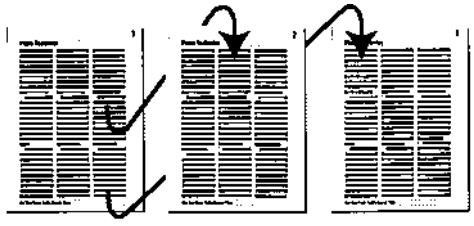
In most documents, the text frame on each page is automatically connected to the text frame on the next to form a single text flow running through the entire document.



However, a document can have separate text flows, each with its own text frame connections. For example, a bilingual document may contain side-by-side translations of the same text.



In a newsletter, on the other hand, each article may have its own text flow. You specify how the text flows by connecting the text frames yourself.



When a text frame fills in a multiflow document, you can tell FrameMaker not to add a new page. That way, you can add pages yourself and control the connections. Because each flow's autonumbering is independent of the numbering in other flows, you can maintain separately numbered lists, headings, and figure titles for each flow.

Setting up multiflow documents

You set up a document with side-by-side text flows by laying out and connecting the text frames on the master pages. Because the text frame connections are the same throughout the document, you usually don't need to make further changes on the body pages.

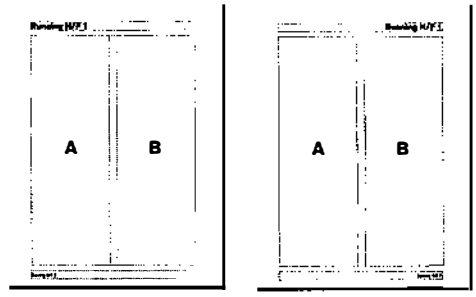
You set up a newsletter or magazine that requires nonparallel, multiple flows by establishing a column layout on the master pages. However, the master pages act only as the basic layout grid. You resize, delete, connect, and disconnect the text frames on the body pages until they look right. This approach gives you the greatest flexibility in determining the way text flows through the document.

This section describes the general steps required to set up multiflow documents. The following sections describe the process in more detail.

Note: *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 techniques described in this section. Instead, you can use a single text flow. You can create special effects by making text run around graphics, and by making paragraphs, tables, and frames straddle columns. For an example of this technique, see the newsletter template provided with FrameMaker.*

To set up side-by-side flows:

1 Set up the flows on one of the master pages (see "Adding template text frames on master pages" on page 265). Use a text frame for each flow and assign a different flow tag to each text frame. 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 (see "Changing flow tags and Autoconnect" on page 277).



Left and right master pages

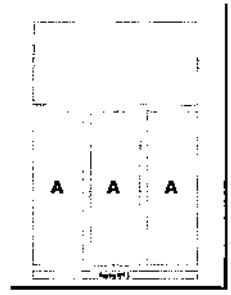
2 Repeat the previous step for the remaining master pages. All master pages should have the same flow tags. Otherwise, FrameMaker won't alternate properly between the left and right master pages when adding body pages.

Note: *In order to create a new body page correctly when text reaches the bottom of a text frame, the appropriate left or right master page must contain all of the flow tags 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.*

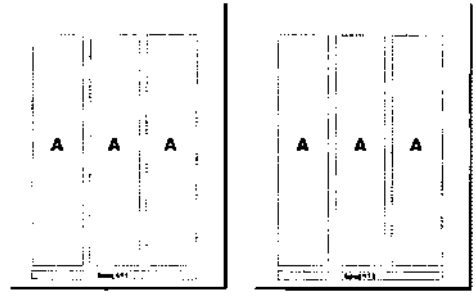
3 Update the body pages with the master page changes by displaying body pages.

To set up flows for a newsletter or magazine:

1 Decide on the number of columns, and put that number of single-column text frames on each master page (see "Adding template text frames on master pages" on page 265). All of the text frames should be in the same flow. You'll use these text frames as the layout grid within which you'll have text flow.



First master page



Left and Right master pages

2 Turn off Autoconnect so that FrameMaker won't automatically add pages (see page 277).

3 Update body pages with the master page changes by displaying body pages.

4 On each body page, resize, disconnect, and connect text frames as necessary. Don't update the master pages as you make changes on the body pages. Instructions for connecting and disconnecting text frames begin with page 277.

5 To synchronize text baselines in the newsletter, make sure the text frames are placed appropriately. If the document contains several text flows, synchronize baselines for each flow. For information, see "Synchronizing baselines across columns" on page 272 and "Synchronizing baselines in adjacent text frames" on page 273.

6 Manually create new disconnected body pages as necessary (see page 277).

7 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. Autoconnect determines whether a new page is automatically generated when the flow's text frames are full. Most documents contain a single autoconnected text flow that you won't need to change. (In a new, blank document, the main flow is tagged A.)

If you need to assign a flow tag (for example, when creating side-by-side text flows), you can do so 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.

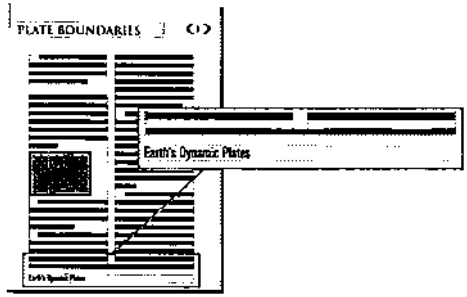
You can control the flow of text by connecting, disconnecting, and splitting text frames in a flow. You can also add and delete disconnected pages.

About the Autoconnect setting

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, you'll usually turn off Autoconnect. This allows you to add a new, disconnected body page wherever you want and to control the connections between it and existing pages.

If Autoconnect is off, and if the flow contains more text than it can hold in its text frames, the text overflows at the end of the last text frame in the flow. The bottom border of an overflowing text frame appears as a solid line when borders are visible.



Overflowing text frame

If you try to type in an overflowing text frame, you'll hear a beep. 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 hidden text reappears in the next text frame.

Changing flow tags and Autoconnect

You normally change flow tags and the Autoconnect setting on master pages. If two text frames are connected, you must disconnect them before you can change one of their flow tags (see page 278).

To change a flow's tag or Autoconnect setting:

1 Click in a text frame in the flow.

2 Choose Format > Customize Layout > Customize Text Frame.

3 Enter a tag for the flow in the Flow Tag text box. You should keep flow tags short 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.

Note: If you want two text frames on a page to have the same flow tag, connect the text frames (see page 277).

4 If you want FrameMaker to add a new page when you fill the last column on a page, select Autoconnect.

5 Click Set.

Adding new, disconnected pages

In documents with one main flow or two parallel flows, you normally don't add disconnected body pages; you let FrameMaker add connected pages automatically when necessary. In a multiflow document in which Autoconnect is off, or in other specialized documents, you can add new, disconnected body pages. When the text reaches the end of a text frame, you add a new page and connect the text frames as necessary.

To add a new, disconnected page:

1 From a body page, choose Special > Add Disconnected Pages.

2 Choose the location and number of pages you want to add.

3 Choose a master page from the Use Master Page pop-up menu and click Add.

Deleting disconnected pages

When you delete disconnected pages in a multiflow document, FrameMaker also deletes the pages' contents.

To delete disconnected pages:

1 Click in a page you want to delete and choose Special > Delete Pages.

2 Specify the first and last disconnected pages you want to delete and click Delete. If you want to delete only one page, enter its page number in both text boxes.

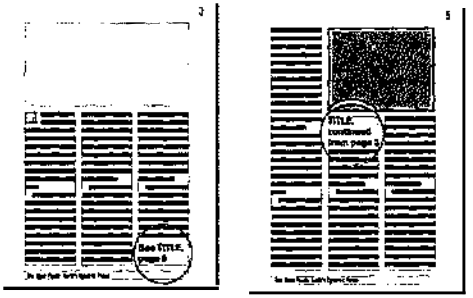
Connecting text frames

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 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 sec-

Cross-referencing text frames

When an article in a newsletter or magazine continues from one page to another, you can use cross-references to tell the reader where to turn to continue reading and to indicate where the end of the article is continued from.



Indicate where the flow continues, and where it is continued from.

To cross-reference a disconnected text frame:

1 Resize the two text frames to make room for the cross-references. Drag the bottom of the first text frame upward and the top of the continuation text frame downward.

2 Draw a small text frame below the text frame on the first page and another above the text frame on the continuation page. Don't connect either text frame to any other text frame.

3 Insert a cross-reference in the empty text frame on the first page, referring to the continuation page of the article. For information on creating cross-reference formats and inserting cross-references, see Chapter 6, "Cross-References and Footnotes."

4 Insert a cross-reference in the empty text frame on the continuation page, referring to the first page of the article.

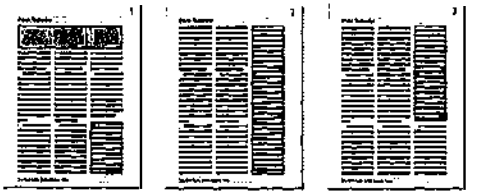
Tracking a text flow

In a document with many flows, it's easy to lose sight of where a flow continues. You can zoom out to see more of a text flow or move from one text frame in a flow to the next.

To see more of a text flow:

1 Zoom out to 25% and adjust the window size to see as many pages as necessary.

2 Click in the flow you want to check and choose Edit > Select All in Flow. The flow is highlighted, showing how it traverses the pages of the document.



To move through a flow's text frames:

Do one of the following:

- To display the next connected text frame, click in the last line of a text frame and press the Down Arrow key.
- To display the preceding connected text frame, click in the first line of a text frame and press the Up Arrow key.

just the graphic inside it—appears on the body page. The height of the frame affects the spacing of text above and below the frame.

5 Use the Text Line tool to type the frame's name above the frame (see "Using text with graphics" on page 203). Typing the name helps you identify the frame when you view the reference page. It does not rename the reference frame.

To rename a reference frame:

1 Select the reference frame and click the frame's name in the status bar.

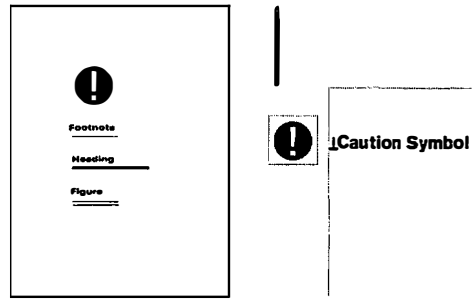
2 Enter the new name and click Set. You should also type the new name in the text line above the reference frame. If you rename a reference frame used in a paragraph format, you need to update the format so that it uses the new frame name (see "Adding graphics to paragraph formats" on page 96).

To change other properties of a reference frame:

Select the frame and use either Graphics > Object Properties or the options on the Tools palette. For details, see "Applying and changing drawing properties" on page 198, "Moving objects" on page 209, and "Resizing and reshaping objects" on page 217.

Setting up boilerplate graphics on reference pages

You can set up boilerplate graphics—for example, margin symbols—in anchored frames on a reference page. Then you can copy the anchored frames to body pages. When you do this, the graphics appear correctly positioned in their anchored frames.



You can copy and paste boilerplate graphics onto body pages.

You can also place graphics directly on reference pages and then copy and paste them anywhere on body pages.

To set up a boilerplate graphic in an anchored frame:

1 Create a reference page with the same column layout as the body page on which you want to display the graphic. 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.

On the reference page, set up the anchored frame exactly as you want it to appear on body pages.

2 Draw the graphic in the anchored frame, or paste or import it into the frame. You may want to add some text outside the anchored frame to identify the graphic. For example, in the illustration at the beginning of this section, *Caution Symbol* identifies the graphic.

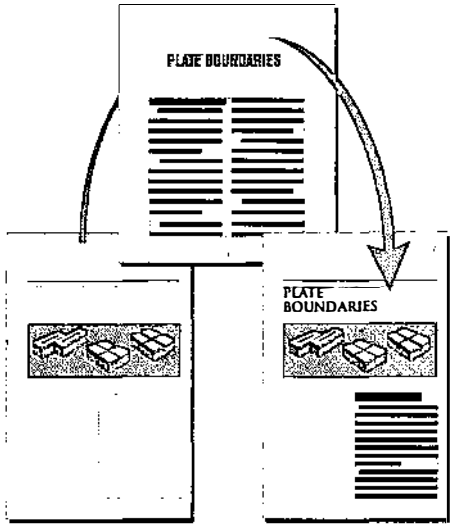


12



Chapter 12: Templates

Templates are FrameMaker documents you use as a foundation for formatting other documents. Templates provide an easy way to ensure that your design is consistent from one document to another. You can create a new document from a template or import formats from a template into an existing document.



You can apply a template to a document to update the document's design.

Much of this chapter addresses the template designer, the person who creates templates for a work group. If you're not designing or editing templates, the only information in this chapter you'll need is "Using templates," next, and "Importing and updating formats in a document" on page 295.

Using templates

Using a template is easy; when you create a document, FrameMaker prompts you for a template to base it on, and you choose one. FrameMaker provides a number of general-purpose templates to choose from. In a workgroup setting there may be other choices, designed for your particular documents. For information on creating a new document based on a predefined template, see page 27.

Planning templates

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. For example, you may want to consider the following issues.

Anticipated template use Try to anticipate the situations in which your template will be used. Define all the formats and other design properties you think users might need. The more complete your template, the less users will need to customize their documents. For information on the formats and design properties you may need, see "Creating templates" on page 289.

Existing templates Before you create your own templates, take a look at existing templates, especially those provided with FrameMaker. You can use the templates as examples of how to set up items such as master pages, paragraph and character formats, headers and footers, cross-reference formats, and autonumbering.

If you find an existing template that's close to what you want, use it as the basis for your template. Modify the template and save it under a different name as a new custom template.

Online viewing If you're designing a document that will be used primarily online (but not in HTML format), make sure that the 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.

If you'll convert documents based on the templates to HTML, be sure to use formats and design elements that have HTML equivalents. For example, background graphics on master pages of your FrameMaker documents won't appear in the HTML files, rotated text will appear unrotated in the HTML files, and footnotes may not look the way you want.

Localization If documents based on 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.

Fonts Decide on the fonts you'll use as early as possible. Fonts affect many other design elements—for example, line height in paragraphs and the height of header and footer columns.

Platforms If documents based on the templates will be edited on several platforms, use fonts that are available on all of them. Also, set up cross-platform naming conventions for your templates, for the documents that will be based on the templates, and for the folders in which the documents will be stored. For details, see the online manual *Working on Multiple Platforms.*

Ease of use Try to make your templates usable as well as attractive. For example, consider the following guidelines:

- Because 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 select Keep with Next or Keep with Previous in the Pagination properties.
- If you're preparing a set of templates for a book, prepare templates for a table of contents and an index as well as for the other files in the book. Also, 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.
- Set up a master page for each page layout needed. For example, a chapter template might contain master pages for a first page, a right page, a left page, and a rotated page—even though only one or two of the chapters will contain pages that need to use the rotated master page.
- Document your template for other people who will use it. If the template contains sample text, you can use that text to describe the parts of the template. For example, a body paragraph might contain the text *This is a body paragraph.* When

you finish the template, prepare a document summarizing its contents and put that document in the same location as the template.

Creating templates

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. This section provides only an overview to the process of creating a template. For detailed instructions, see the other chapters in this book.

Designing the page layout

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. For details, see Chapter 11, "Page Layout."

To design the page layout:

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.



To see how facing pages look as you design the page layout, display them side by side. Choose View > Options, and then choose Facing Pages from the Page Scrolling pop-up menu. Make the document window larger and zoom out, if necessary, to fit both pages in the window.

2 Define the column layout. If you started with a custom document, you have already specified the margins and the number of columns. If you're 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.

If a running header or footer shows the text or an autonumber of a document paragraph such as a chapter or section title, it contains a Running H/F variable that refers to the paragraph. To set this up, decide what the tag for that paragraph will be.

5 Define the custom document properties such as numbering and text options, and specify the view options.

Designing text formats

After designing the page layout, 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. Consider the following guidelines:

- If your document will be opened or printed on computers other than your own, use fonts that are widely available.
- Paragraph formats provide the foundation of text formatting, so set them up before setting up the character formats.

• When creating a character format, set all the options in the Character Designer as As Is, and then specify only the settings you want to change. This way, the format will work with any paragraph format.

• Use tags that express the purpose rather than the appearance of the text. 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*.

• If the template uses more than one series of autonumbers, add a series label to the format for each autonumber. For example, define step autonumbers as *S:<n+>*, where *S:* is the series label.

• In paragraph formats, use either Space Above or Space Below consistently to add space above or below the paragraph. (FrameMaker uses only the larger of the two values to determine the space between paragraphs.)

Standardizing graphics, frames, and tables

If the documents will contain graphics, frames, or tables, follow these guidelines 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, or an anchored frame with a standard height and width. Users can copy and paste these items as needed.

• Create a paragraph format for anchored frames to provide 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. Alternatively, you can use single-cell tables and their titles for graphics and their captions.

• If you'll use text frames for graphic callouts, create a paragraph format for the callouts. If you'll use text lines for callouts, create a character format. (You can't apply a paragraph format to a text line.)

• Choose a color model and redefine colors and color views if necessary.

• Prepare standard table formats. Not all 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 "About tables" on page 117.

Defining special text

A template can include definitions and specifications for handling special text. You may need to do the following to set up special text items:

- Select a footnote numbering style and number format, and other footnote properties.
- Define formats for cross-references. Standardize as much of the cross-reference format as possible. For example, if cross-references should always be introduced by *see*, include that word in the format definition.
- 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.
- Define custom marker types if you'll need to create specialized indexes.
- Define equation sizes and fonts if any documents will have equations.

Setting up HTML options

If documents based on your templates will be converted to HTML, you'll need to set up the mappings and conversion macros that define how documents are converted. In particular, you should do the following:

- Set up the mappings from FrameMaker paragraph formats and character formats to HTML tags.
- Create the conversion macros that convert cross-reference formats to a form suitable for online documents.
- Create any other conversion macros you may need (for example, to place a logo at the top of every new Web page or to define the title of the HTML document).

Setting up Japanese-language options

If your documents will contain Japanese-language text, define the combined fonts you want to use and set the properties of rubi text.

Testing templates

Before making your templates available to other users, test the templates thoroughly. You test a template by creating several sample documents from it and then examining the documents to make sure that everything looks and works the way you want. When testing a template, do the following:

- 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 good 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 to make sure the indicators are clear and achieve the effect you want.

• Test the color definitions to make sure color objects look the way you expect. Remember that colors on your monitor may not look exactly the same as printed colors. If necessary, test some sample output with your commercial printer.

• Create tables using various table formats.

• Create equations to try out equation sizes and fonts and custom math element definitions.

• 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.

• If the documents will be converted to HTML, test the conversion process.

Organizing templates in a folder

A template folder should contain all the related templates as well as a document that describes the templates and how to use them.

To organize templates in a folder:

1 Create a new folder and give it a name that identifies the purpose of the templates. If other users will work with the templates on a network, put the folder where your users have access to it and will be able to find it.



(Windows and UNIX) On UNIX systems, you could also make the templates available to all users by saving them in the Templates folder ($FMHOME/fminit/*language*/Templates, where *language* is the name of the user interface language—for example, usenglish or ukenglish). In Windows, you can change the default template folder (see the online manual *Customizing FrameMaker Products*).

2 Move each template into the folder.

3 Set the file permissions so that template users have only read access to the templates.

Saving templates as stationery (Macintosh)

On the Macintosh, you can store a template as a stationery pad. When a user opens a stationery pad, an untitled copy of the document appears. Changes made to the copy don't affect the original.

To store a template as a stationery pad on the Macintosh:

Do one of the following:

• Choose File > Save As and then choose Stationery from the Format pop-up menu.

• From the Finder, select the document's icon and choose the Finder's File > Get Info command. Then click Stationery Pad and close the Info dialog box.

Creating templates for generated files

When you generate a table of contents, an index, or another kind of generated file, if the folder that contains the source document or book file contains a file whose name matches the generated file-name, FrameMaker uses the formatting of the existing file when generating the new one. In effect, the existing file serves as the new generated file's template, just as if you had imported formats from it. Use this feature to create generated-file templates that contain page layouts, paragraph and character formats, and the formatting information that appears on the reference page.

You can also update the formats in a generated file by importing formats from a template. However, you'll probably need to generate the file again after importing formats to see all the formatting. For information, see "Importing and updating formats in a document" on page 295.

To create a template for a generated file:

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.

3 Format the generated file. This formatted file is your template.

4 Save the generated file. Make sure that this generated-file template is in the folder that contains the document or book file that you will use to create a new generated file.

Creating templates to change conditional text settings

If you often change the view of conditional documents in a book, you may find it helpful to have a template for each view. You can then change the view of all the files in the book at the same time by importing the conditional text 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 to change the document's Show/Hide settings (see page 359).

To create templates that change conditional text settings throughout a book:

1 Set up a basic template for the conditional document with all conditions and condition indicators visible. You'll import conditional text settings from this template before editing a document.

2 Set up a template for each combination of conditions you want to view. Use these templates to view or print one version of the document at a time. You can also use the template to change variable definitions that are unique to a view.

Changing templates for blank paper and text files

When you create a blank paper document by clicking Portrait, Landscape, or Custom in the New dialog box, the document contains many default settings and formats—for example, display units,

paragraph and character formats, table formats, variable definitions, cross-reference formats, and the contents of reference pages.

You can change the custom template for blank paper so that it contains the formats you want. The template can contain the same formats as any other template, except for the page layout. The master page layout, number of columns, and margins are determined when you create the blank paper documents.

You can also change the custom template that FrameMaker uses when you open text files.

Note: *In Windows, you can change the filename that FrameMaker looks for when it creates a blank paper document or opens a text file. For details, see the online manual* Customizing FrameMaker Products.

To change the template for blank paper:

1 Change a document so it contains the formats and settings you want. Leave existing master pages empty and do not create custom master pages.

2 Remove all text frames from both the left and right master pages—even if a document is single-sided. (If the document is single-sided, choose Format > Page Layout > Page Size, click Double-Sided, and click Set. Then select and delete the text frames on the master pages.)

3 Choose Special > Delete Pages and delete all body pages.

4 Save the document, using one of the following filenames and locations:

- (Windows) The Custom file in the FrameMaker fminit folder (When you choose New > Adobe FrameMaker document from the context menu in a folder or on the desktop, the Shellnew.fm file is used.)
- (Macintosh) The Custom New Document file in the FrameMaker Modules folder
- (UNIX) The NewTemplate file in the $FMHOME/fminit/*language*/CustomDocs folder (*language* is the name of your user interface language—for example, usenglish or ukenglish.)

To change the template for text files:

1 Change a document so it contains the formats and settings you want. For example, you can put headers and footers, a Paragraph Catalog, and master page graphics in the template document.

2 Delete all text on the body pages.

3 Click in the empty text frame on page 1 and tag it with the paragraph format you want all text in the document to use. The default template uses the Body paragraph format.

4 Save the document, using one of the following filenames and locations:

- (Windows) The txttmplt file in the FrameMaker fminit folder
- (Macintosh) The Text Document file in the FrameMaker Modules folder
- (UNIX) The ASCIITemplate file in the $FMHOME/fminit/*language*/CustomDocs folder (*language* is the name of your user interface language—for example, usenglish or ukenglish.)

To set up multiple templates for text files on UNIX systems:

Name each template *suffix*Template, where *suffix* is the suffix of the text file being opened. When you open a text file that has a filename suffix, FrameMaker looks for a corresponding *suffix*Template file before it looks for an ASCIITemplate file. If it finds a *suffix*Template file, it uses the file as the template for the text file. For example, when you open a text file that ends with *.c*, FrameMaker looks for a file named cTemplate to use as a template.

Importing and updating formats in a document

You can import paragraph formats, table formats, variable definitions, and other properties from any document. Typically, this other document is a template (though it doesn't need to be). You can also retain or remove any format overrides in the document—for example, changes that were made to a paragraph but not stored in the Paragraph Catalog.

You can also import properties into several (or all) files in a book at the same time (see "Changing the format of files in a book" on page 348).

To import and update formats in a document:

1 Open the document you want to update and the document that contains the formats you want to import.

2 In the document you're updating, choose File > Import > Formats.

3 Do one of the following:

- To import formats from a document, choose the document from the Import from Document pop-up menu. The pop-up menu lists all open, saved documents.
- To reapply formats from the current document, choose Current from the Import from Document pop-up menu.

4 Select 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, also select Character Formats so that the formats are added to the document.

For information on these settings, see the next section.

5 To remove changes that you made to individual formats and didn't save in a catalog, do the following:

- To remove page breaks that are not a part of a Paragraph Catalog format, select Manual Page Breaks.
- To remove paragraph, character, page layout, and table formatting overrides, select Other Format/Layout Overrides (see "About format overrides" on page 82, "Changing the look of tables" on page 126, and "About layout overrides" on page 264).

6 Click Import.

About import and update settings

When you import formatting information from a template, FrameMaker merges the information into the document rather than completely replacing the information. For example, when you import paragraph formats, FrameMaker adds the formats to the document's Paragraph Catalog. If any formats have the same name in both documents, the imported format overwrites the original format. Any formats that are not overwritten remain in the document.

Note: *Format names are case-sensitive, so* Body *is not the same as* body.

Paragraph Formats The template's Paragraph Catalog is merged into the document, and all formats in the catalog are reapplied in the document. The template's Acrobat bookmark settings are also copied into the document.

Character Formats The template's Character Catalog is merged into the document, and all formats in the catalog are reapplied in the document.

Page Layouts The template's master pages are merged into the document, and body pages are updated with the master page changes. 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, the page number style in the Numbering Properties dialog box, all the settings in the Page Size dialog box, and most settings in the View Options dialog box.

Table Formats The template's Table Catalog and ruling styles are merged into the document, and all formats in the catalog are reapplied in the document.

Color Definitions The template's color definitions and views are merged into the document.

Document Properties The template's custom marker types and 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 are merged into the document. The Acrobat Setup settings (other than the bookmark settings) are also merged into the document. On Japanese-language systems, the rubi properties and kumihan rules (Japanese-language typesetting rules) are also merged into the document.

Reference Pages All the template's reference pages (except for FrameMath™ reference pages) are merged 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 FrameMath reference pages, select Math Definitions.

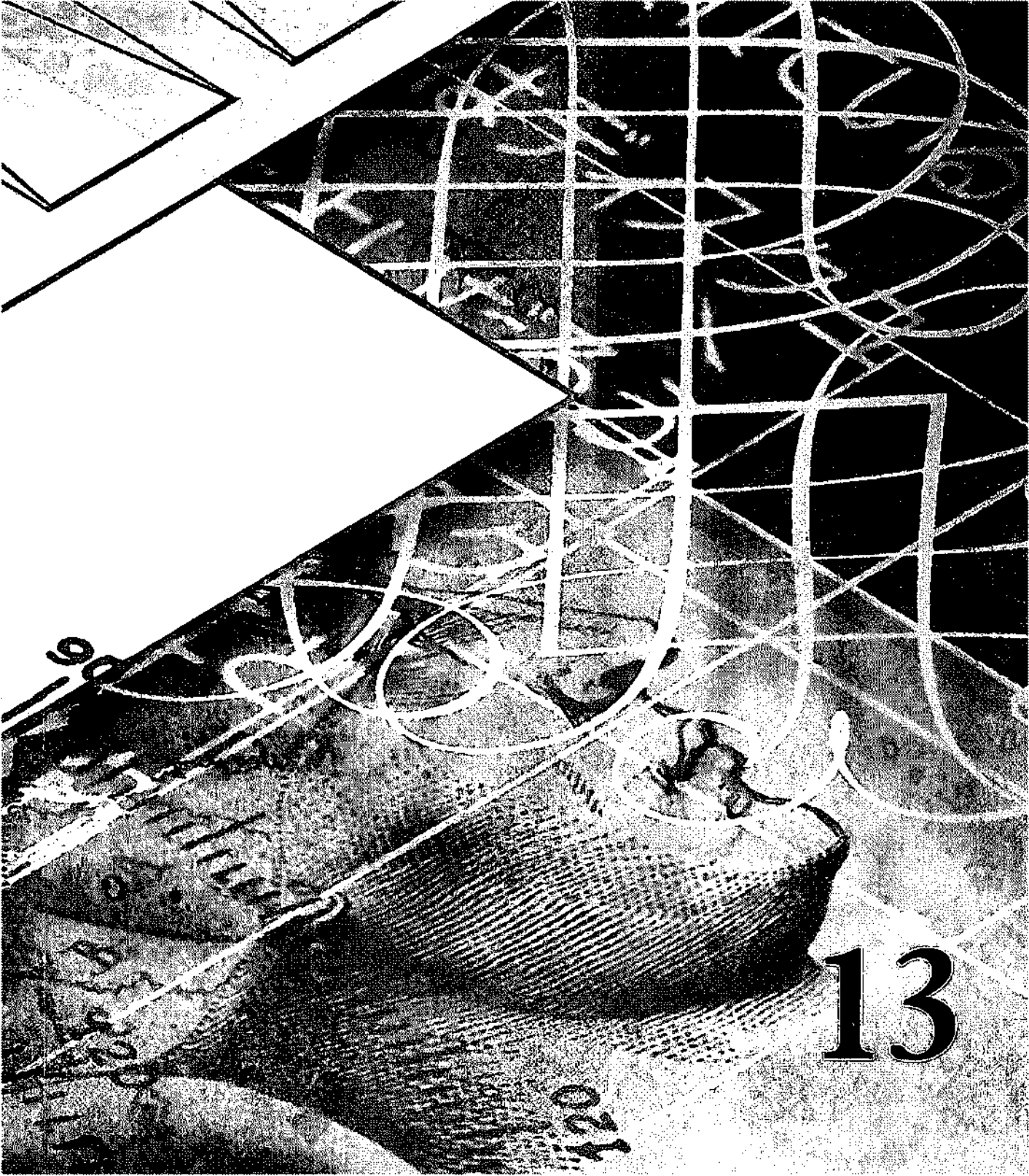
Variable Definitions The template's variable definitions are merged into the document.

Cross-Reference Formats The template's cross-reference formats are merged into the document, and internal cross-references are updated.

Conditional Text Settings The template's condition tags and Show/Hide settings are merged into the document and applied to conditional text.

Math Definitions The template's equation size and font settings, custom math element definitions, and FrameMath reference pages are copied into the document. If a custom math element in the document is deleted when the reference pages are merged, FrameMaker replaces the math element in equations with the name of the element enclosed by question marks.

Combined Fonts On Japanese-language systems, the specifications for combined Japanese and Western fonts are merged into the document and applied to text that uses combined fonts.


13



Chapter 13: Tables of Contents and Indexes

In FrameMaker, tables of contents (TOCs), lists of figures, and other such lists are generated from the text of specified paragraphs in a document. An index is generated from markers you insert in a document. You can easily update both tables of contents and indexes whenever you revise the documents they're based on.

This chapter distinguishes broadly between the various types of lists, such as tables of contents, and indexes. It discusses creating and updating lists, creating and updating indexes, and titling and formatting both lists and indexes.

Generated lists and indexes are based either on a single source document or, when working in a book file, on a set of documents. They are usually separate files, but in special cases may be embedded in a regular document (this chapter ends by discussing how you can embed a table of contents in a document).

About generated files

A *generated file* is a file created by FrameMaker by extracting paragraphs or marker text from a source document or from several documents in a book. Each time the generated file is updated, all the old paragraphs or marker text are discarded and the current text from the source documents replaces them. In this way, FrameMaker keeps generated files such as tables of contents and indexes current and accurate.

You can generate several types of lists and indexes in addition to a table of contents and standard index. For example, you can generate lists and indexes that contain text from paragraphs or from markers that you inserted in the text. The result may be a table of contents based on heading paragraphs, a list of illustrations based on figure titles, or an index based on special author markers.

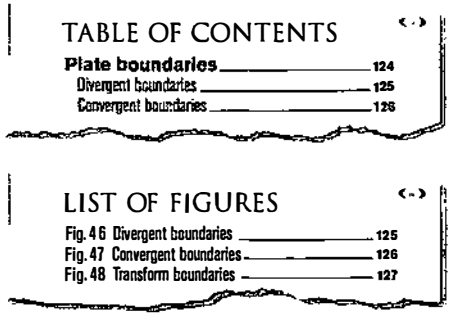
Most lists and indexes fall into three categories: lists of paragraphs, lists of markers, and indexes of markers. A fourth category, lists and indexes of references, is used less often, for special purposes.

Tables of contents and other lists of paragraphs

Lists of paragraphs contain the text of specified paragraphs (those with the tags you specify), with one entry per paragraph. You can generate the following lists of paragraphs:

- Tables of contents, which contain headings of specified levels, listed in the order in which they occur in the source document

• Lists of figures, tables, or paragraphs, which contain figure captions, table titles, or the text of other specified paragraphs, listed in the order they occur in the source document



Lists of paragraphs include TOCs and lists of figures.

• Alphabetical lists of paragraphs, which contain the same information as the other lists but present them in alphabetical order

Lists of markers

Lists of markers contain entries corresponding to the markers inserted on body pages in the source document. The markers are manually inserted on body pages in the source document, and the marker text appears in the generated list. For example, you could create a list of reviewers' comments on a draft by generating a list of markers of type Comment. In a standard list of markers, entries appear in the order that they occur in the source document. You can also generate alphabetical lists of markers.

List of Markers

20305: head1: Tectonics 65
42407: head2: Pangea 65
25668: head.step: rift valley 66
35887: head1: Volcanism 68
25807: head2: Volcanic arc 72
39687: head2: Volcanic pipe 74

A list of Cross-Ref markers

Indexes of markers

Indexes of markers include standard indexes, author and subject indexes, and indexes of other types of markers. The markers are manually inserted on body pages in the source document, and the marker text appears in the index. You can use syntax (building blocks) in the marker text to specify index levels and special page numbering, sorting, and formatting. Entries are sorted alphabetically, and entries with the same text are merged into a single entry with several page references.

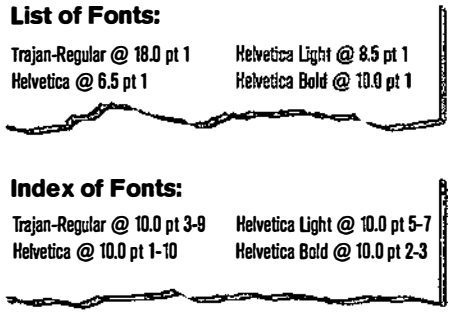
Index of Markers

10279
  head1
    Continental drift 74
10557
  Step
    fossil evidence 66

An index of Cross-Ref markers

Lists and indexes of references

Lists and indexes of references help you track special categories of information. You can generate lists and indexes of condition tags, external cross-references, unresolved cross-references, fonts, text insets, unresolved text insets, imported graphics, and Macintosh publishers.



A list of fonts and an index of fonts

Preparing the sources for TOCs and other generated lists

A table of contents or other generated list is based on the content of its source. The source can be either a single FrameMaker document or a group of documents in a book. (For information on creating generated lists for books, see page 338.)

In most cases, you must prepare the source documents to get the results you want.

Preparing documents for a TOC or other list of paragraphs

When you generate a table of contents or other paragraph list, you choose the tags of the paragraphs you want to include. In the source document, do the following to avoid problems in the generated lists:

- 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).

Note: *You usually generate a list of references—such as a list of fonts or unresolved cross-references—for your own use while working with a document. You do not need to prepare the document before generating such a list.*

Preparing documents for a list of markers

Before you generate a list of markers, the markers must be inserted in the source document.

In some cases, the markers may already have been inserted by FrameMaker into the document for another purpose (for example, Cross-Ref markers or Conditional Text markers). But in other cases, such as a list of reviewers' comments, you insert the markers yourself before generating the list.

To insert a marker in a source document:

1 Click where you want to insert the marker and choose Special > Marker.

2 Choose a marker type from the pop-up menu. You can use any predefined marker type except Conditional Text, Header/Footer $1, Header/Footer $2, or Cross-Ref. You can also define your own marker types (see "Adding custom marker types" on page 319).

3 Enter text that you want to appear as the list entry in the list. You can enter up to 255 characters (127 Japanese double-byte characters). You can type the text or use alternative methods to enter marker text without typing (see page 309).

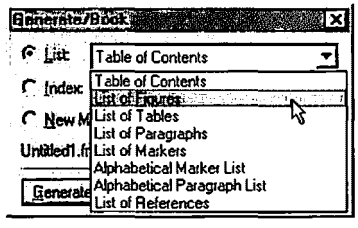
4 Click New Marker. A marker symbol, (T), appears when text symbols are visible.

Generating TOCs and other lists

This section describes how to generate lists of paragraphs, markers, or references from a single document. For information on creating lists from books, see "Controlling pagination and paragraph numbering" on page 340 and "Generating and updating books" on page 345.

To generate a list from a single document:

1 Choose File > Generate/Book and then choose a type of list from the List pop-up menu.



2 Click Generate. The items you see in the dialog box depend on the type of list you're generating.

3 Enter a filename suffix or keep the default one. The suffix indicates the type of generated file. For example, TOC is the usual suffix for a table of contents.

Note: The suffix is not the same as the filename's extension. Typically, the suffix comes between the filename and its extension—for example, Chapter1TOC.fm.

4 Move paragraph tags, marker types, or reference 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.

5 To have each entry in the generated list be linked to its source, select Create Hypertext Links.

6 Click Generate. FrameMaker generates the list and displays it in a separate document.

7 Save the generated list.

The first time you generate a list (if you don't use a template as described on page 320), it uses the page layout (master pages) of the source document, and all entries look the same. For information on changing the format of a list—changes that won't be lost when you regenerate the list—see "Formatting lists and indexes" on page 320.

Note: If the list already exists in the source document's folder when you save it, save it in the same folder and don't change the filename. That way, the list's formatting is used when you generate the list again. Otherwise, formatting changes won't be retained when you update the list.

Updating and editing lists

A generated list (such as a table of contents) can quickly become outdated. You can update a table of contents to include revised headings and up-to-date page numbers, or change which paragraphs are included.

You edit entries in a list by editing their corresponding paragraphs or markers in the *source* document and then regenerating the list. If you revise entries by typing directly in the list, your changes will disappear the next time you generate it.

For example, if you fix a typing error directly in a table of contents, that error will reemerge the next time you generate because it still exists in the source paragraph. To permanently fix an error, you must correct it by changing the paragraph or marker text in the source document and then regenerating the list or index.

This section describes updating and editing generated lists of paragraphs, not lists of markers. For information on updating and editing indexes or lists of markers, see "Updating and editing indexes" on page 315.

To update a list:

1 Make changes to the source document as needed.

2 In the source document (not in the generated list), repeat the steps on page 304 to regenerate the list.

Finding the source of list entries

When you need to revise an entry, you must trace the entry back to its source—the corresponding paragraph in the source document—to revise the entry.

The quickest way to find the source of a list entry is to use the hypertext link on the entry in the generated file. This hypertext link can display and select the corresponding information in the source document. You can also find and select an entry in the source document by using the Find/Change command.

To find the source of a list entry by using a link:

1 If you did not select Create Hypertext Links when you generated the list or index, select it now and regenerate the list.

2 In the generated list, do one of the following:

- (Windows) Alt-Control-click an entry in a list.
- (Macintosh) Control-Option-click an entry in a list.
- (UNIX) Control-right-click an entry in a list.

FrameMaker opens the source document to the page that contains the corresponding paragraph and selects it.

To find and select a paragraph by using Find/Change:

1 In the source document (not in the generated list), choose Edit > Find/Change.

- Choose Paragraph Tag from the Find pop-up menu and enter the tag you want.

2 Click Find.

Editing and deleting entries

You revise the contents of entries by changing their corresponding paragraphs in the source document.

To edit a list entry:

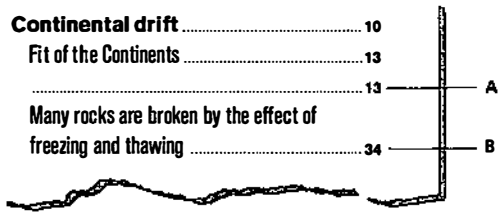
In the source document, edit the paragraph text.

To delete a list entry:

In the source document, delete the paragraph text.

Troubleshooting TOCs and lists

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.



A. An extra line appears here. B. This entry doesn't belong in the list.

Extra entries or lines Incorrect formatting in the source document can cause extra paragraphs to appear in a list such as a table of contents. To correct this, do the following:

- If the list contains an entry that doesn't belong there, check the corresponding paragraph tag or marker type in the source document and either 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.

Missing entries To include entries that appear in the source document, but not in the list, do one of the following:

- 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.
- 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, the information won't be included in the list.

Split entries A multiline heading in the source document can be a problem if the line breaks were created by pressing Return so that each line is a separate paragraph. The list will contain an entry for each paragraph in the heading. Fixing the list requires using only one paragraph for the heading in the source document.

The heading should not contain forced returns. Instead, 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. You can also use nonbreaking spaces to force a heading to break acceptably.

Bad line breaks Bad line breaks in the list or its source document may separate information that belongs together in the list. To correct this, do one of the following:

- Change the characters after which FrameMaker allows line breaks. For example, FrameMaker normally allows a line break after an en dash (–). To disallow breaks after an en dash, use Format > Document > Text Options. See "Changing hyphenation and line breaks" on page 94.
- In the special text flow on the reference page, use nonbreaking spaces between the text and page number for each entry so that a page number does not appear on a line by itself. See "Editing special text flows for lists and indexes" on page 321 and "Changing hyphenation and line breaks" on page 94.
- Change the prefix or suffix for the source document's page numbers when you generate the list for a book (see "Controlling pagination and paragraph numbering" on page 340). For example, if the book's pages use a prefix that includes a hyphen, such as page *3-2*, the hyphen should be nonbreaking.

Disappearing titles A title you entered may disappear the next time you generate the list unless you follow the steps in "Adding titles and other static text to lists and indexes" on page 319.

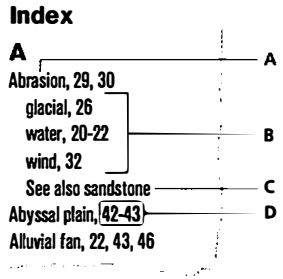
Disappearing formatting If your formatting changes (see "Formatting lists and indexes" on page 320) aren't retained when you regenerate, do the following:

- If you changed the filename or location of the list, change the name and location back. FrameMaker won't find any formatting changes unless you save the list in the same folder as the source document and use the filename that FrameMaker assigns.
- To retain paragraph and character format changes, store them in the list's Paragraph Catalog or Character Catalog, making them available the next time you generate the list. For details, see "Redefining (updating) formats" on page 109.
- To retain other changes, make them in the special text flow, as described in "Editing special text flows for lists and indexes" on page 321.

About indexes

In a typical index, entries are generated from markers and are sorted alphabetically. Entries with the same text are merged into a single entry with several page references. You can add special build-

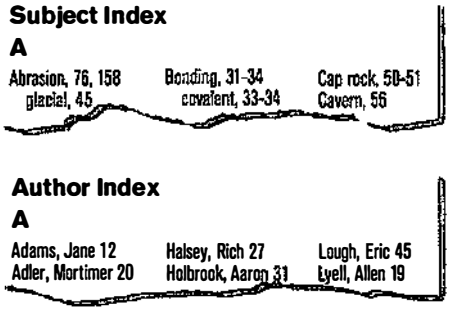
ing blocks to marker text to control the form of the index entry—for example, to specify that it's a subentry or a cross-reference to another entry.



A. Main entry B. Subentries C. Cross-reference to another entry D. Page range

Most of the time, you'll use the Index marker type to create the standard index you find in the back of most books.

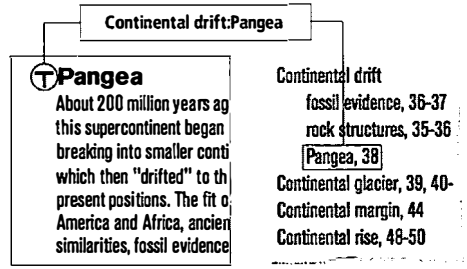
You can also create specialized indexes by using predefined marker types such as Subject or Author, or by using other marker types that you create (see page 319).



Specialized indexes generated from different marker types

Adding index markers

Before generating an index for a document, you insert the markers for the index entries.



Index marker placed in the source document and the formatted entry appearing in the index

To insert an index marker:

1 Click where you want to insert the marker and choose Special > Marker. You can insert markers only in text frames.

2 Choose a marker type from the pop-up menu. Typically, you'll use the Index marker type. To create several indexes for a document—for example, a subject index and an author index—use a different marker type for each.

3 Enter the text of the index entry in the Marker dialog box. You can enter up to 255 characters (127 Japanese double-byte characters). You can also use any of the following building blocks in marker text to control the form of the index entry and its location in the index.

Building block	Meaning
: (colon)	Separates levels in an entry
; (semicolon)	Separates entries in a marker

Building block	Meaning
[ ] (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

If you're working in Japanese fonts, enter all these building blocks except the brackets ([and]) using single-byte characters.

For information on using these building blocks, see the procedure on this page for putting several entries in one marker and the sections that follow.

Note: *To enter a backslash or any of the special characters used in these building blocks—colon, semicolon, bracket, or angle bracket—as regular characters, precede them with a backslash (\).*

4 Click New Marker. A marker symbol (T) appears when text symbols are visible.

To insert an index marker without typing:

To reduce or eliminate typing when creating index markers, do one of the following:

- Insert an empty marker (a marker with no text in it) at the beginning of the word you want to index. When you generate the index, the text to the right of the marker, up to the first space, becomes the text of an entry.
- To use text that appears in the document as the marker text, simply select the text in the document. As long as the selected word or phrase doesn't contain a marker, it automatically appears in the Marker Text box.

To put several entries in one marker:

Type several entries in the marker, using a semicolon (;) between entries, as in the following examples.

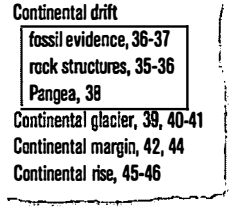
Marker text	Result in index
Abrasion; Water erosion	Abrasion 10 Water erosion 10
<$nopage>Erosion. See Abrasion;<$singlepage>Abrasion	Abrasion 10 Erosion. See Abrasion

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.

You can type any number of spaces after the semicolon to improve readability. Initial spaces are ignored when compiling the index unless they're special ones such as nonbreaking or em spaces. (If you're working in Japanese fonts, only single-byte space characters are ignored.)

Using subentries in index entries

You can group several entries under one entry for a larger category of information by marking them as subentries. You can also create subentries to subentries.



Subentries

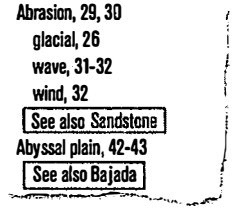
To create a subentry:

Separate the entry from the subentry with a colon (:). For example, to create the first subentry in the illustration, enter **Continental drift:fossil evidence**

A subentry is always preceded by the entry to which it is subordinate. If you need two subentry levels, place a colon between the subentry and the sub-subentry. For example, enter **Continental drift:fossil evidence:dating of**

Using cross-references in index entries

Indexes often contain cross-reference entries to direct readers to related terms. This makes it unnecessary to duplicate the entries and page numbers for related terms that already appear in the index.



Cross-references

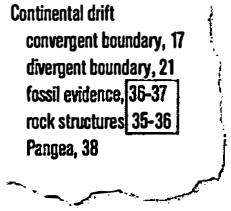
Cross-references can also appear as subentries (usually preceded with *See also*, as in the illustration). For information on sorting cross-reference subentries so that they appear at the top or bottom of the list of subentries for the same main entry, see "Specifying sort orders in indexes" on page 312.

To create a cross-reference in an index entry:

Insert a marker and use <$nopage> at the beginning of the marker text to prevent a page number from appearing with this entry. For example, to create the first cross-reference in the illustration, enter **<$nopage>Abrasion. See also Sandstone**

Using page ranges in index entries

You can use a page range such as 36–37 to mark information that spans several pages.



Page ranges

You can create a page range in an entry by manually inserting two markers to indicate the range, one at the beginning of the range and the other at the end. You can also have FrameMaker create page ranges for you automatically whenever the same marker text occurs on consecutive pages of a document. For example, instead of 3, 4, 5, the entry would automatically appear as a page range (3–5).

To manually create a page range for an index entry:

1 Insert an index marker at the beginning of the information, with <$startrange> at the beginning of the marker text. For example, to create the first page number in a range, enter **<$startrange>Continental drift:fossil evidence**

2 Add an index marker at the end of the information, identical to the first except that you enter <$endrange> rather than <$startrange> at the beginning of the marker text. For example, to create the second page number in a range, enter **<$endrange>Continental drift:fossil evidence**

If both markers appear on the same page, the page range collapses to a single page number.

To automatically create page ranges in an index:

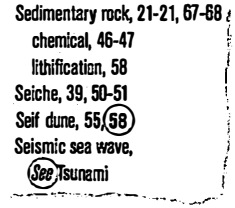
1 Display the reference page that contains the special text flow for indexes, as described in "Editing special text flows for lists and indexes" on page 321.

2 Type the <$autorange> building block at the beginning of the paragraph whose tag begins with the marker type.

For example, to collapse the entries generated from markers of type Index into page ranges when possible, edit the paragraph tagged IndexIX to contain the following building blocks: **<$autorange><$pagenum>**

Using character formats in index entries

You can change the character format of specified text or of the page number in an entry. For example, you may want a book title to appear in italics or you may want a particular page number to appear in bold. The character format must be stored in the Character Catalog of the index.



Character formatting

For information on specifying paragraph formats for entries in an index, see "Changing paragraph and character formats of entries" on page 322.

To use a character format in an index entry:

1 Enter an index entry, as described in "Adding index markers" on page 308.

2 To format part of the entry in a character format, do one of the following:

- To format specific text in an entry, type the character tag between angle brackets (< and >) before the text and type **<Default Para Font>** after it. For example, to create the entry "Tidal Waves *See* Tsunami," you might enter this marker text: **Tidal Waves <Emphasis>See<Default Para Font> Tsunami**
- To format only the page number, type the character tag between angle brackets at the end of the marker text. For example, to create the entry "Erosion **24**," you might enter this marker text: **Erosion<Bold>**


If you're using a special character format for many—but not all—page numbers in an index (for example, to use bold for principal entries), you may want to create a custom marker type with that formatting. See "Adding custom marker types" on page 319.

Specifying sort orders in indexes

You can change where an entry appears in the index by specifying a sort order. For example, even though 486 would normally appear with other numbers in the index, you may want it to appear under *F* (as if it were spelled out as *four eighty-six*).

Similarly, if you're using a *See also* cross-reference in a subentry, you can ensure that it is the last one under the main entry.

If you're working in Japanese, kanji characters always need a special sort order defined. (For information on Japanese sort order, see page 329.)

To specify a sort order for an index entry:

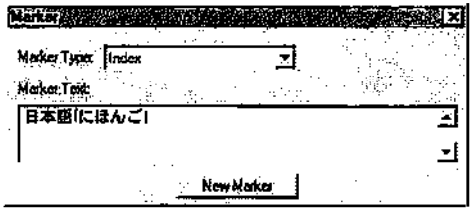
Add text between brackets ([and]) at the end of the marker text, indicating exactly how you want the entry sorted.

Index marker text	Result in index	Explanation
1950s[Nineteen fifties]	Neap tides 47 *1950s 10* North America 21	Sorts under *N* (for *Nineteen fifties*)
Erosion:of soil [Erosion:soil]	Erosion rate 32 of soil 10	Ignores the word *of*
<$nopage>Erosion: see also Wind [Erosion:aaa]	*Erosion* *see also Wind* rate 16	Sorts as the first entry under *Erosion*
<$nopage>Erosion: see also Wind [Erosion:zzz]	*Erosion* rate 16 *see also Wind*	Sorts as the last entry under *Erosion*

***Note:** The sorting information, in brackets, must be the last item in the marker text.*

To specify the sort order for a kanji index entry:

Enter its pronunciation (yomi-kana) in brackets in the marker text. (Double-byte bracket characters may be used.)



Generating indexes

After you insert index markers in your source document, you can generate a standard index or any other index of markers. When you revise your source document, you can generate the index again to update it.

You ordinarily use predefined marker types. However, you can create your own marker types for special effects in indexes, such as displaying principal entries in bold or adding custom text to some page entries but not to others. The custom text might be the word *note* to follow some page numbers and *figure* to follow others. Scholarly indexes might use abbreviations such as *ff* and *passim* after page numbers.

You can also generate a special-use index of references such as an index of fonts used in a document. This type of index is not generated from markers.

Standard Index

A

Abrasion, 15, 17
  glacial, 14
  river, 10-12
  wave, 17-18

Standard index

Index of References

Trajan-Regular @ 18.0 pt 1-10
Helvetica Light @ 8.5 pt 1, 9
Helvetica @ 6.5 pt 1
Helvetica Bold @ 10.0 pt 1, 2
Trajan-Regular @ 18.0 pt 2-10

Index of references (fonts)

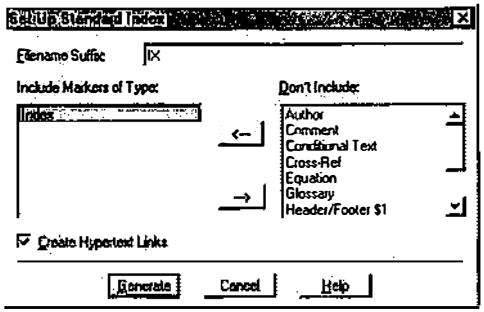
This section describes how to generate an index for a single document. For information on working with book indexes, see "Controlling pagination and paragraph numbering" on page 340 and "Generating and updating books" on page 345.

To generate an index for a document:

1 Open the source document and choose File > Generate/Book.

2 Choose a type of index and click Generate. Choose Standard Index unless you are creating a specialized index.

3 Move the marker types 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. To move all items from one scroll list to the other, Shift-click an arrow.

4 Enter a filename suffix or keep the default one. The suffix indicates the type of generated file. For example, IX is the usual suffix for a standard index.

Note: *The suffix is not the same as the filename's extension. Typically, the suffix comes between the filename and its extension, such as Chapter11X.fm.*

5 To link each entry in the generated index to its source, select Create Hypertext Links.

6 Click Generate. FrameMaker generates the index and displays it in a separate document.

7 Save the index.

The first time you generate an index, it uses the page layout of the source document, and all entries look the same. (You can avoid this unformatted look by using a template; see page 320.) For information on making changes to the format of an index—changes that won't be lost when you regenerate it—see "Formatting lists and indexes" on page 320.

To generate a standard index that displays page numbers in a variety of ways:

1 Create one or more custom marker types (see "Adding custom marker types" on page 319) and name them in a way that indicates their intended use. For example, if you want to distinguish index entries that refer to footnotes, you might create a marker type called IndexNote.

2 Index your source document, using the Index marker type for regular entries and your custom marker types for the others.

3 Follow the steps on page 313 to generate an index, and in step 3, select the Index marker type along with the custom ones.

In the index, edit the special text flow on the reference page for the custom marker (the reference page would be called IX) to add text after the page number or to change character format. For example, you might change the text for IndexNoteIX as follows to have *[note]* appear after the page number: **<$pagenum> [note]**

For details, see "Manually adding text to entries" on page 325, and for adding a character format, see page 323.

4 Generate the index again for your edits to take effect.

To generate an index of references:

Follow the steps on page 313, but in step 2, choose Index of References instead of Standard Index. Then, select the reference items you want to index.

Updating and editing indexes

An index can quickly become outdated. With an index, you typically need to make some changes after you review the index for the first time. For example, you may see that some entries do not use parallel phrasing, or you may decide to change the organization of some entries.

You edit entries in an index by editing their corresponding paragraphs or markers in the *source* document and then regenerating the index. If you revise entries by typing directly in the index, your changes will disappear the next time you generate it.

For example, if you fix a typing error directly in an index, that error will reemerge the next time you generate because it still exists in the source marker. To permanently fix an error, you must correct it by changing the marker text in the source document and then regenerating the index.

This section describes updating and editing generated indexes (or lists of markers), not lists of paragraphs such as tables of contents. For information on updating and editing lists of paragraphs, see "Updating and editing lists" on page 305.

To update an index:

1 Make changes to the source document as needed.

2 In the source document (not in the index), repeat the steps on page 313 to regenerate the index.

Finding the source of index entries

When you need to revise an entry, you must trace the entry back to its source—the corresponding marker in the source document—to revise the entry.

The quickest way to find the source of an index entry is to use the hypertext link on the entry in the generated file. This hypertext link can display and select the corresponding information in the source document. You can also find and select a marker in the source document by using the Find/Change command.

Important: *If you're generating extremely large indexes (indexes of more than 50,000 markers), don't use Create Hypertext Links. Generating indexes of this size with Create Hypertext Links selected will take a very long time or might not succeed.*

To find the source of an index entry by using a link:

1 If you did not select Create Hypertext Links when you generated the index, select this option and regenerate.

2 Choose Special > Marker.

3 In the generated index, do one of the following:

- (Windows) Alt-Control-click a page reference in an index.
- (Macintosh) Control-Option-click a page reference in an index.

• (UNIX) Control-right-click a page reference in an index.

FrameMaker opens the source document to the page that contains the corresponding marker and selects it. The marker text appears in the Marker dialog box.

To select a marker by using Find/Change:

1 In the source document (not in the generated list), choose Edit > Find/Change.

• Choose Any Marker, Marker of Type, or Marker Text from the Find pop-up menu. Enter the marker type or marker text as needed.

2 Click Find.

Note: When a marker is selected, the marker text appears in the Marker dialog box. Don't click Change in the Find/Change dialog box to change the marker text. If you do, FrameMaker replaces the marker itself. Instead, change the text in the Marker dialog box and then click Edit Marker.

To select a marker in the source document:

Drag through it. As long as the selected text contains only one marker, its text appears in the Marker dialog box. If more than one marker is selected, the text of the first marker appears.

Editing and deleting entries

You revise the contents of entries by changing their corresponding markers in the source document.

To edit a marker:

Select the marker, change the text in the Marker dialog box, and click Edit Marker.

To delete a marker:

Select the marker in the source document and press Delete.

Troubleshooting indexes

If you type marker text incorrectly, the index will reflect it. The first time you generate an index, problems often appear.

Missing entries If an entry is missing entirely from the generated index, do the following:

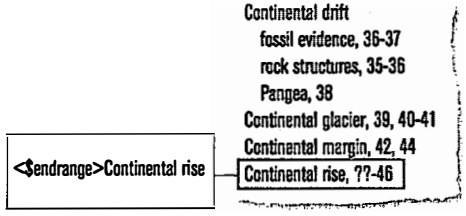
• Check whether the corresponding marker is an incorrect marker type. You can do this by generating a list of markers that includes all marker types and then searching the list for the entry you want. For details, see "Generating TOCs and other lists" on page 304.

• Check whether the corresponding marker is in hidden conditional text by using Special > Conditional Text to show all conditional text, and then generating the index again.

• Check whether the marker was deleted accidentally.

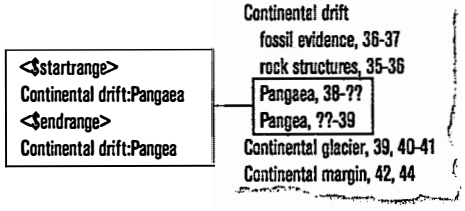
Entries containing double question marks Double question marks (??) in a page range indicate that FrameMaker can find only one of the two markers that define the range. If you see double question marks, do the following:

• Check that neither marker is missing.



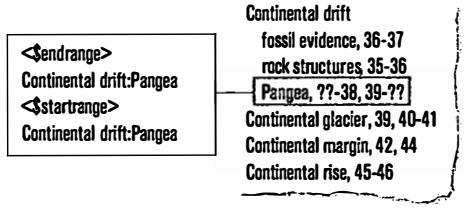
Missing <$startrange> and the resulting page range

• Check that the spelling, punctuation, and capitalization of the marker text match exactly.



Inconsistent spelling and the resulting page range

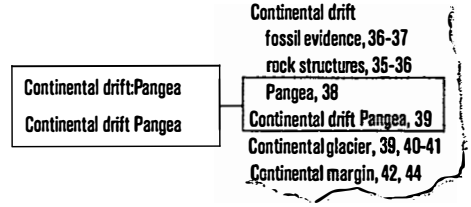
• Check that <$startrange> appears in the first marker and that <$endrange> appears in the second marker.



<$endrange> comes first and the resulting page range

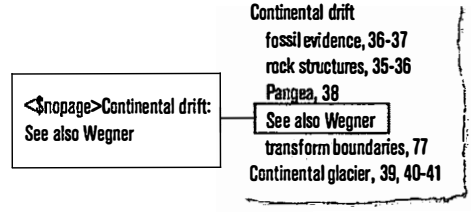
Missorted entries Most sorting problems are the result of incorrect marker text. If you see missorted entries, do the following:

• Check that the colons and semicolons are used correctly. If a semicolon appears where a colon belongs, two main entries appear rather than one subentry. If a colon is missing, a subentry appears incorrectly as a main entry.



Missing colon and the resulting missorted entry

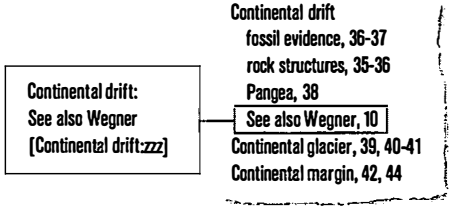
• Check that sorting information is present and correct and appears between brackets ([and]) at the very end of the marker text (see "Specifying sort orders in indexes" on page 312). For example, if you want to sort a cross-reference as the last subentry, the sorting information in the marker text for it should end with *:zzz*.



Missing :zzz and the resulting missorted entry

• 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—check that the sorting information in the special text flow on the reference page is correct. For details, see "Changing the sort order of indexes" on page 327.

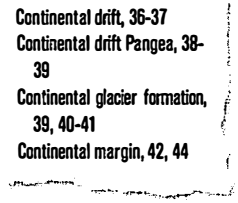
Page numbers with *See* or *See also* cross-references A cross-reference index entry may incorrectly contain a page number. Make sure that <$nopage> appears at the beginning of the marker text for the cross-reference entry.



Missing <$nopage> and the page number wrongly appears

Bad line breaks If entries break between numbers in a page range or between the end of the entry and the first page number, do the following:

- Change the characters after which FrameMaker allows line breaks. To disallow line breaks after certain characters, such as an en dash (–), use Format > Document > Text Options (see "Changing hyphenation and line breaks" on page 94).
- To force the end of an entry to appear on the same line as the page number, use a nonbreaking space, an en space, or an em space as the separator between them.
- If you specified in the special text flow on the reference page that spaces or hyphens appear between page numbers in a range, make sure they are nonbreaking (see "Editing special text flows for lists and indexes" on page 321 and "Changing hyphenation and line breaks" on page 94).
- Change the prefix or suffix for the source document's page numbers when you generate the index for a book (see "Controlling pagination and paragraph numbering" on page 340). 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. See "Changing hyphenation and line breaks" on page 94.



Bad line breaks

Disappearing titles A title you entered may disappear the next time you generate the index unless you follow the steps in "Adding titles and other static text to lists and indexes" on page 319.

Disappearing formatting If your formatting changes (see "Formatting lists and indexes" on page 320) aren't retained when you regenerate, do the following:

- If you changed the filename or location of the index, change the name and location back. FrameMaker won't find any formatting changes unless you save the index in the same folder as the source document and use the filename that FrameMaker assigns.

• To retain paragraph and character format changes, store them in the index's Paragraph or Character Catalog, making them available the next time you generate the index. For details, see "Redefining (updating) formats" on page 109.

• To retain other changes, make them in the special text flow, as described in "Editing special text flows for lists and indexes" on page 321.

Adding custom marker types

You can create your own marker types and then use them in lists or indexes just as you would any other type of marker. Once a new marker type has been created, it can be shared with other documents and books.

For an example of using custom marker types with indexes, see the steps on page 314.

To add or delete a custom marker type:

1 Choose Special > Marker and choose Edit from the Marker Type pop-up menu.

2 Do one of the following:

• Type a new name and click Add.

• Choose a name from the pop-up menu and click Delete.

3 Click Done.

To copy a marker type from one document to another:

Do one of the following:

• Copy a marker or text containing a marker and paste it in another document.

• Choose File > Import > Formats and import Document Properties.

To rename a marker type:

1 Choose Special > Marker and choose Edit from the Marker Type pop-up menu.

2 Choose the marker type you want to rename from the pop-up menu and click Change.

3 Do one of the following:

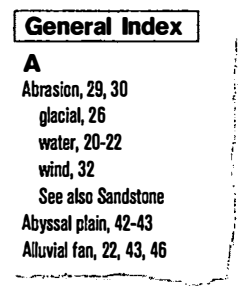
• To rename the specified markers with a new name, enter the new name in the To text box.

• To rename the specified markers with the name of another marker type, choose the new marker type from the To pop-up menu.

4 Click OK, and then click Done.

Adding titles and other static text to lists and indexes

If you want to add a title or other unchanging text in your list or index, add it after you generate the list or index the first time.



Static text as a title in a generated file

You can also add static text to a template and then use the template to format a list or index (see "Formatting lists and indexes using templates" on page 320).

To create a title for a list or index:

1 Type the title before the first entry on a body page.

2 Create a new paragraph format for the title. The new paragraph tag must not end with the filename suffix, such as IX for a standard index or TOC for a table of contents. When you generate the index again, FrameMaker replaces only the paragraphs that have tags ending with the suffix.

Formatting lists and indexes

The first time you generate a list or index (if you don't use a template as described in "Formatting lists and indexes using templates" on page 320), it uses the page layout of the source document, and all entries look the same. You can change the page design and the formats in the list or index after you generate it just as you do in any other document. When you generate the file again, your changes are 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 use a tab and tab leader dots before the page numbers in entries or include the autonumber of a paragraph in an entry.

You can also control the formatting of generated lists or indexes by changing the contents of the special text flow on the reference page of the generated file. The special text flow is created when the list or index is first generated.

For information on changing page design, see Chapter 11, "Page Layout." For information on changing paragraph and character formats, see "Redefining (updating) formats" on page 109.

Formatting lists and indexes using templates

You can use a template for a list or index rather than generating the list or index and then making format changes one by one. For information on creating a template for a list or index, see "Creating templates for generated files" on page 293 and most of the remaining sections of this chapter.

To have FrameMaker use a template for a generated file:

1 Copy the template to the source document's folder using the same filename as the list or index.

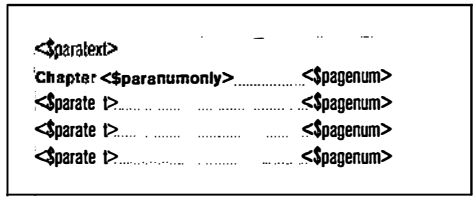
2 Generate the list or index.


You can also use File > Import > Formats to import a template's formats. Then generate the list or index again so any changes in the special text flow are reflected in the generated file.

About special text flows

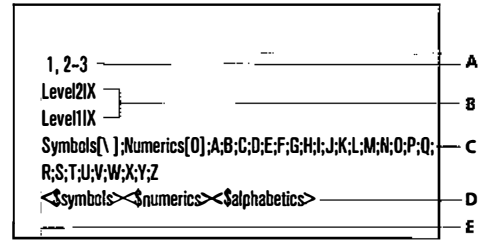
Many formatting aspects of a list or index are controlled by a special text flow on a reference page in the generated file. The name of the reference page matches the default filename suffix, such as TOC for a table of contents or IX for a standard index.

For generated lists, each paragraph in the flow corresponds to a paragraph tag or marker type you included in the list. These paragraphs have tags that end with the default filename suffix. For example, a paragraph tagged Heading1 TOC in the text flow for a table of contents corresponds to the entries for first-level headings (tagged Heading1 in the source document).



Special text flow on reference page for a table of contents

For indexes, the paragraphs in the flow correspond to the marker types you included in the index, the levels of entries and subentries, the sort order, the separator text used, and several other index properties.



Special text flow for an index ***A.*** *Separators placeholder* ***B.*** *Levels of entries* ***C.*** *Group titles placeholder* ***D.*** *Sort order* ***E.*** *Ignore characters placeholder*

If the list or index was created with hypertext links, the special text flow also contains a paragraph that specifies the form of the hypertext commands in the generated file. The paragraph's tag begins with the word *Active*.

Special text flows for lists and indexes have special paragraphs with placeholder text. This placeholder text lets you specify how your entries will look when you regenerate the file.

Editing special text flows for lists and indexes

Building blocks such as <$pagenum> and <$paratext> in each paragraph of the special text flow determine the information that appears in the

list or index and the order in which the information appears. You can use the following building blocks in the special text flow.

Building block	Meaning
<$autorange>	Automatically creates index page ranges (see "Using page ranges in index entries" on page 311)
<$numerics> <$alphabetics> <$symbols> <$kana>	Specifies the overall sort order in an index (see "Changing the sort order of indexes" on page 327)
<$pagenum>	Displays the page number on which the source paragraph or marker appears
<$paratext>	Displays the text of the paragraph, excluding any autonumber
<$paranum>	Displays the paragraph's entire autonumber, excluding spaces and tabs at the end of the autonumber (for example, *Section 2.1.1*)
<$paranumonly>	Displays the paragraph's autonumber counters and the characters between them (for example, *2.1.1*)
<$paratag>	Displays the source paragraph's tag

To edit the special text flow for a list or an index:

1 In the list or index, choose View > Reference Pages.

2 Display the reference page that contains the text flow you want. (The reference page name matches the default filename suffix, such as TOC for table of contents or IX for a standard index.)

3 Edit the appropriate paragraphs in the text flow. For specific editing instructions, see the following sections.

4 Choose View > Body Pages.

5 Generate the index again to see the effect of your changes.

Note: *Make sure you generate the list or index from the source document, not from the generated file.*

Changing paragraph and character formats of entries

You can change the look of entries in a generated list and index by modifying their paragraph formats.

You can also change the character format of any text appearing in a list and of all index page numbers created with the same marker type. For example, you could make all page numbers italic.

Note: *If you create a new character format in the source document after you generate the list or index, you may have to use File > Import > Formats to import the character format into the generated list. This is necessary only if you use the new character format in a paragraph or marker that's part of the list or index. If you created the character format before first generating the list or index, FrameMaker imports it for you into the generated file.*

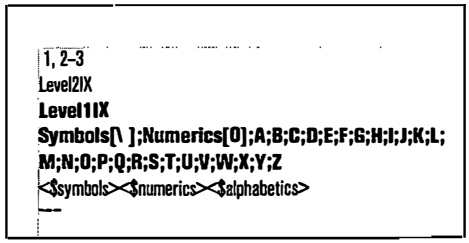
To change the paragraph format of entries:

1 In the list or index, display the reference page that contains the special text flow. Usually this is TOC for a table of contents and IX for a standard index.

2 Locate the placeholder paragraphs that have paragraph formats corresponding to the list or index entries. (For example, Level1IX is the format

for the placeholder text for the first-level index entry, and Head1TOC is the format for a Head1 entry in a table of contents.)

3 Change the properties of the paragraph formats, such as indents and font size, and update the paragraph formats, so that they are available the next time you generate the file. For details on modifying formats, see "Redefining (updating) formats" on page 109. The placeholder paragraphs show you how the entries will look.



Formatted placeholder paragraphs

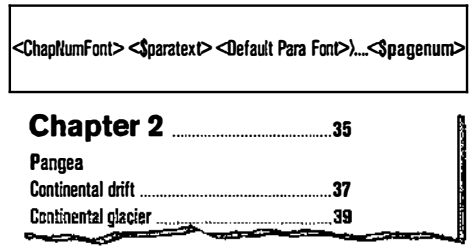
To change the character format of entries:

1 In the list or index, create a new character format and store it in the Character Catalog (see "Creating new formats" on page 112).

2 Choose View > Reference Pages and display the reference page that contains the special text flow.

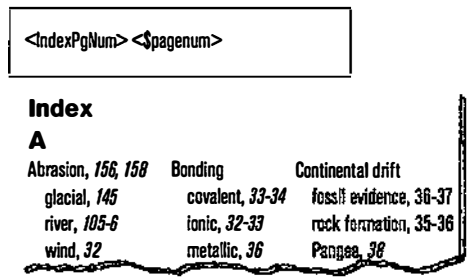
3 In the paragraph whose tag corresponds to the entries you want to change, do the following:

• In a list, enter the character tag between angle brackets (< >) before the text you want to change. To change back to the paragraph's default font, enter **<Default Para Font>**. For example, you could define a format tagged ChapNumFont and then use it to format chapter numbers in a larger font in a table of contents.



Reference page and the result in the TOC

• In an index, enter the character tag, between angle brackets (< >), to the left of <$pagenum>. For example, if IndexPgNum is a character format defined for italic page numbers in a standard index, you could use it to format just the page numbers in the paragraphs tagged IndexIX.

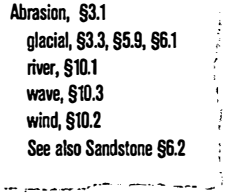


Reference page and the result in the index

You can also change the character format of text that appears in a list or index by applying a character format directly to the building block rather than preceding the building block with a character tag enclosed in angle brackets. Be careful not to apply the character format to the paragraph symbol.

Including paragraph autonumbers

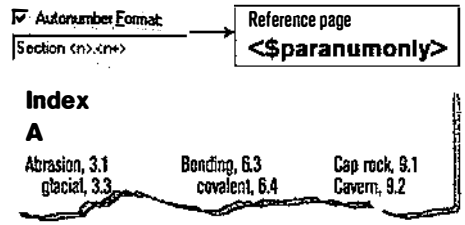
In a generated list, you can include autonumbers—text and numbers inserted automatically as part of a paragraph format—in addition to (or instead of) page numbers in entries. In an index, you can use autonumbers instead of page numbers if all paragraphs that contain index markers are also autonumbered.



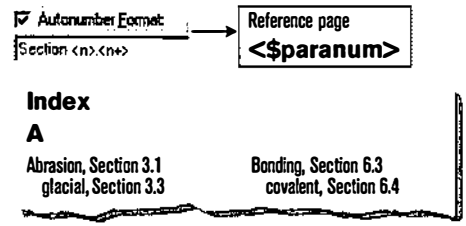
An index using section symbols and section numbers instead of page numbers

You can use the following building blocks to add autonumbers:

- <$paranumonly>, which includes the counters and the characters between them (for example, *2.2* for a paragraph whose autonumber is *Section 2.2*)



- <$paranum>, which includes the counters and all text in the autonumber (except for spaces or tab characters at the end)



To include paragraph autonumbers:

1 Choose View > Reference Pages and display the reference page that contains the special text flow.

2 Do one of the following:

- In a list, insert the <$paranumonly> or the <$paranum> building block where you want to insert the autonumber.
- In an index, replace the <$pagenum> building block with <$paranum> or <$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

entries generated from markers of type Index, replace the <$pagenum> building block in the paragraph tagged IndexIX.

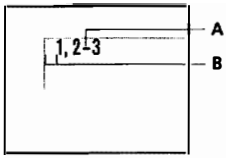
Changing page number separators

A typical index entry such as *Erosion 1, 2–3* includes a space after the entry text, a comma and a space between page numbers, an en dash to show a page range, and nothing after the last number. You can change the en dash to the word *to* or change this separator text in any other way. For example, you could change the separator text so that a comma appears after the entry, such as *Erosion, 1*.

To change page number separators:

1 Choose View > Reference Pages and display the reference page that contains the special text flow.

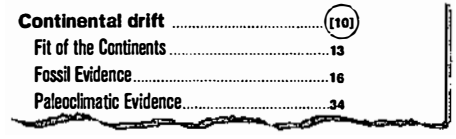
2 Edit the Separators paragraph. (Look for the paragraph containing *1, 2–3*.) You can change any separator, but you must use the placeholder numbers 1, 2, and 3.



A custom Separators paragraph on the IX reference page
A. En dash B. Em space

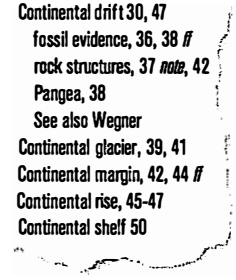
Manually adding text to entries

You can add text to all entries generated from paragraphs with a particular tag or markers of a particular type. For example, you can enclose page numbers in brackets.



Brackets added in a TOC

You can also use custom marker types with added text to display page numbers in a variety of ways in an index. For example, suppose you want to generate the following scholarly index.



To do this, you need two custom markers: one for page numbers followed by *ff*, and one for page numbers followed by *note*. You might call these markers Indexff and IndexNote.

When generating the index, you include all three marker types (Index plus the two new ones). After generating the index for the first time, you can edit the special text flow for the marker types on the reference page.

Marker type	Edit to the reference page	Result
Indexff	<$pagenum> *ff*	15 *ff*
IndexNote	<$pagenum> *note*	15 *note*

The next time you generate the index, the changes appear in the generated index.

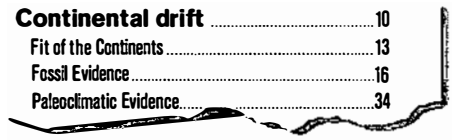
To manually add text in an entry:

1 Choose View > Reference Pages and display the reference page that contains the special text flow for the list or index.

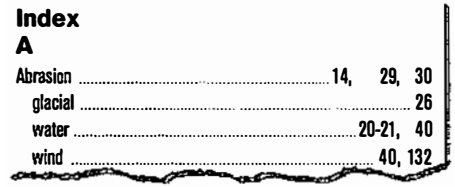
2 Enter the text where you want it to appear. For example, to enclose all page numbers in brackets, enter brackets around the page number building blocks: **<$paratext> [<$pagenum>]**

Using tabs and tab leaders

You can use tabs to align page numbers in a list or index. You can also use tabs to add tab leaders, such as a row of dots, between entry text and page numbers.



Right-aligned tab stop with leader dots in a TOC



Tab stops make index page numbers line up in columns.

To use tabs and tab leaders in a list:

1 Choose View > Reference Pages and display the reference page that contains the special text flow for the table of contents or list.

2 Select the space between the <$paratext> and <$pagenum> building blocks in the paragraph whose tag matches the entries you want to change, and then press Tab.

3 Change the paragraph format of the entries by adding a tab stop where you want to align the page numbers (see "Changing tab stops" on page 88). Define the format to include leader dots, if you want. Then update the paragraph formats so the changes are available the next time you generate the list. For details, see "Redefining (updating) formats" on page 109.

To use tabs and tab leaders in an index:

1 Choose View > Reference Pages and display the reference page that contains the special text flow for the index.

2 Select the space before the number 1 in the Separators paragraph, and then 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 (see "Changing tab stops" on page 88). Define the formats to include leader dots, if you want. Then update the paragraph formats of all entries at each level of the index, so the changes are available the next time you generate the index. For details, see "Redefining (updating) formats" on page 109.

Rearranging information in list entries

You can specify the order in which the parts of a list entry appear. For example, you can specify that the page number appear first, followed by the paragraph text.

To rearrange information in list entries:

1 Choose View > Reference Pages and display the reference page that contains the special text flow for the table of contents or list.

2 Rearrange the building blocks. For example, to put the page number first, followed by the paragraph text, rearrange the building blocks: <$pagenum> <$paratext>.

Changing the sort order of indexes

Indexes are sorted so that special symbols appear first, numbers appear second, and alphabetic characters appear last. By default, a few punctuation characters are ignored in sorting and 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 can also change whether the index sorts entries letter by letter or word by word.

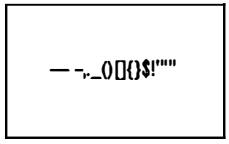
Sorted letter by letter	Sorted word by word
Seabed	Sea level
Sea level	Sea walls
Seasonal change	Seabed
Sea walls	Seasonal change

You change the sort order by editing the contents of the IgnoreChars and the SortOrder paragraphs in the special text flow of the reference page for the index. For information, see "Editing special text flows for lists and indexes" on page 321 and the following sections.

Specifying characters to ignore

By default, FrameMaker ignores hyphens, nonbreaking hyphens, en dashes, and em dashes when sorting index entries. You can specify other char-

acters to be ignored—for example, underscore characters, periods, brackets, braces, and quotation marks.



An IgnoreChars paragraph with added characters

To specify the characters to ignore when sorting an index:

1 Choose View > Reference Pages and display the reference page that contains the special text flow for the index.

2 Edit the IgnoreChars paragraph.

***Note:** If you're working with Japanese fonts, you may want to include the Chouon character (ー) in the IgnoreChars paragraph. The Chouon character is normally used in Japanese to lengthen the vowel sound that it follows, but you probably won't want it to affect the sort order.*

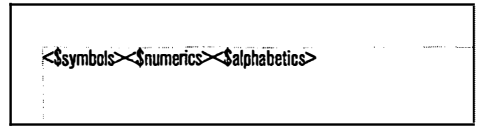
To sort letter by letter instead of word by word:

1 Choose View > Reference Pages and display the reference page that contains the special text flow for the index.

2 Add a space at the beginning of the IgnoreChars paragraph in the special text flow of the index. (The space cannot be at the end of the paragraph.)

Specifying sort order

The SortOrder paragraph in the special text flow contains building blocks that control how characters are sorted in an index.



SortOrder paragraph

Each sort order building block represents several characters in a particular order. The following table shows the order for US English. The alphabetic sort order differs slightly for other languages.

Building block	Characters, in this order
<$numerics>	0 1 2 3 4 5 6 7 8 9
<$alphabetics>	AÁÀÂÄÃÅaáàâäãåª Bb CÇcç Dd EÉÈÊËeéèêë Ff ƒ Gg Hh IÍÌÎÏiıíìîï Jj Kk Ll Mm NÑnñ OÓÒÔÖÕØoóòôöõøº Pp Qq Rr Ss Tt UÚÙÛÜuúùûü Vv Ww Xx YŸyÿ Zz
<$symbols>	All other characters in ASCII order

To sort symbols, numbers, or other characters in another location in an index:

1 Choose View > Reference Pages and display the reference page that contains the special text flow for the index.

2 Rearrange the building blocks in the SortOrder paragraph in the special text flow. For example, to put symbols at the end of an English-language index instead of at the start, arrange the building blocks as follows:
<$numerics><$alphabetics><$symbols>

To specify your own sort order:

1 Choose View > Reference Pages and display the reference page that contains the special text flow for the index.

2 Replace a building block in the SortOrder paragraph with the specific characters in the order you want them sorted. Follow these rules when entering a new sort order:

- If you replace <$alphabetics> with individual characters, separate the letter groups with a space. (*Letter groups*—for example, F f*f*—are characters that are sorted as if they were the same character, unless they are the only characters that differ in the sorted text. In that case, the first character in the string appears first.)
- If you replace <$symbols> with individual characters, use a backslash before the angle bracket symbols (< and >).
- Don't press Return at the end of a line. Let FrameMaker wrap the characters automatically from line to line.
- To indicate that a letter pair should be sorted as a single character, specify the letter pair between angle brackets (< >)—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.

About Japanese sort order

A document that uses Japanese fonts includes the <$kana> building block, which controls sorting of Japanese kana (hiragana and katakana).

Building block	Characters, in this order
<$kana>	Symbols[\], Numerics [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、あ、い、う、え、お、か、き、く、け、こ、さ、し、す、せ、そ、た、ち、つ、て、と、な、に、ぬ、ね、の、は、ひ、ふ、へ、ほ、ま、み、む、め、も、や、ゆ、よ、ら、り、る、れ、ろ、わ、を、ん

Single-byte (half-width) katakana are converted to double-byte katakana in the generated file when sorted. The sort order of kanji is determined by its kana pronunciation (yomi-kana), as illustrated on page 313. Because of this, the <$kana> building block also controls how most kanji sort.

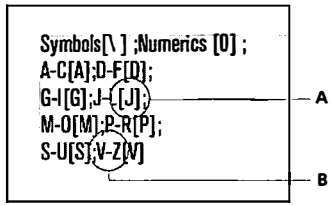
The sort order of kanji without yomi-kana and of Japanese symbols (double-byte numerics and Roman alphabetics) is not included by default in the <$kana> building block. Instead, kanji is sorted by code value and appended after characters sorted by <$kana>.

If you want to sort kanji without yomi-kana and Japanese symbols differently, add these characters to the <$numerics>, <$alphabetics>, or <$kana> building blocks. For example, double-byte Japanese characters could be added to the <$symbols> building block.

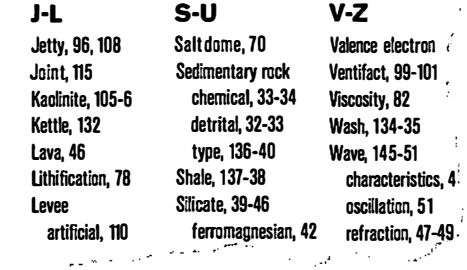
Working with group titles in indexes

Index entries are initially 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. In a small index or when only a few entries appear under some letters such as *X, Y,* and *Z,* you may want to group letters differently and change the group 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.



An edited GroupTitles paragraph on the IX reference page
***A.** Sorting information* ***B.** Group title*



J-L
Jetty, 96, 108
Joint, 115
Kaolinite, 105-6
Kettle, 132
Lava, 46
Lithification, 78
Levee
  artificial, 110

S-U
Salt dome, 70
Sedimentary rock
  chemical, 33-34
  detrital, 32-33
  type, 136-40
Shale, 137-38
Silicate, 39-46
  ferromagnesian, 42

V-Z
Valence electron
Ventifact, 99-101
Viscosity, 82
Wash, 134-35
Wave, 145-51
  characteristics, 4
  oscillation, 51
  refraction, 47-49

The result in the index

To change the groupings and group titles:

1 Choose View > Reference Pages and display the reference page that contains the special text flow for the index.

2 Edit the GroupTitles paragraph in the special text flow. For example, edit the group titles (the characters between semicolons, excluding bracketed text), or delete group titles you don't want. Type text between brackets ([and]) to specify where you want the group titles sorted.

For example, to collapse all entries that start with *V* through *Z* into a single group whose title sorts under *V,* edit the GroupTitles paragraph so that its last entry is **V–Z[V]**.

***Note:** The first two entries in the GroupTitles paragraph define what group titles to use for symbols and numbers and where to place these titles. You can change the titles, but changing the sort information of these two groups might give unexpected results.*

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]
```

To create an index with neither a group title nor a space between entry groupings:

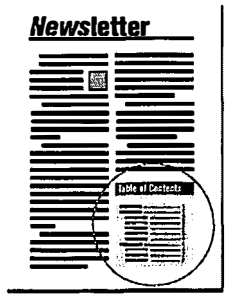
Delete all the text in the GroupTitles paragraph in the special text flow, but don't delete the paragraph symbol.

To create quick access to group titles in a hypertext document:

Generate clickable thumbtabs to the group titles to make navigating through the index easier. For information, see "Adding hypertext links to generated files" on page 416.

Embedding tables of contents in a document

A typical table of contents is a separate file whose contents are mostly automatically generated by FrameMaker. However, if you want a small table of contents embedded at the start of a document instead of being a separate file, you can create such a table of contents with cross-references.



A TOC embedded at the start of a document

FrameMaker does not automatically maintain this type of table of contents. If you change the order of references or delete a heading while editing the document, you'll need to rearrange the entries or delete an entry in the table of contents yourself.

Another approach is to generate a separate table of contents and then import the generated file by reference. The resulting text inset in the document is automatically updated when the table of contents changes. For information, see "Importing formatted text" on page 376.

To embed a TOC in a document by using cross-references:

1 Create a cross-reference format that formats text the way you want the table of contents entries to look. Typically, this format would contain the <$paratext> and <$pagenum> building blocks. For details, see "Creating cross-reference formats" on page 159.

2 At the start of the document, set up a cross-reference to each paragraph you want to appear in the table of contents (see "Inserting cross-references" on page 156). Use the cross-reference format you created in the previous step.

To maintain a TOC embedded in a document:

Do the following:

- If you change the order of paragraphs while editing the document, rearrange the cross-references to be in the same order as the references. Then update the cross-references to update the table of contents (see "Maintaining cross-references" on page 163).
- If you delete a paragraph that's included in the table of contents, delete the cross-reference to it. Otherwise, the table of contents entry will be an unresolved cross-reference.

To embed a TOC in a document as a text inset:

1 Generate a table of contents in the usual way (see page 304).

2 Import the table of contents into a document (see "Using the Import command to import text" on page 376).



14



Chapter 14: Books

You can group separate documents into one FrameMaker book. This grouping lets you generate a single table of contents or index for the documents, and it greatly simplifies printing, numbering, cross-referencing, and formatting.

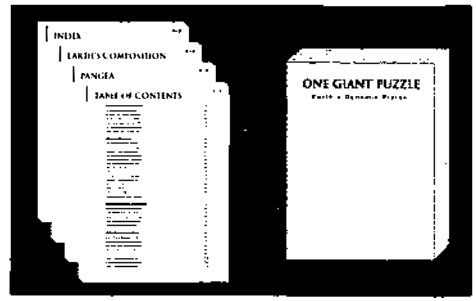
This chapter shows you how to set up the files in a book, specify page and paragraph numbering, generate and update the files, work with files from the book window, and compare two versions of a book. For more detailed information on generated files, such as tables of contents and indexes, see Chapter 13, "Tables of Contents and Indexes."

About book files

A *book file* is a special FrameMaker file that ties several files together so you can work with them as a unit. For example, you can number pages and paragraphs continuously from one file to the next, and update cross-references across the files all at once.

A book file contains the filenames of the documents that make up a book—including documents such as chapters and appendixes and generated files such as a table of contents and an index. The book file also contains pagination and numbering settings for each file in the book.

Each file in a book can have its own numbering system. For example, you might start page numbering at *i* on the title page, at *1* in the first chapter, and then number continuously through subsequent chapters. You can also add a prefix to page numbers—for example, the prefix *2-* in the page number *2-1*.



A book ties chapters and generated files together.

When you update the book, FrameMaker creates or updates generated files and updates page and paragraph numbering throughout the files. FrameMaker also updates cross-references to match the new page and paragraph numbers.

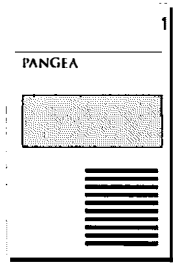
Building books

When you're ready to assemble a book, you create the book file that will contain a list of all the files in the book, in order.

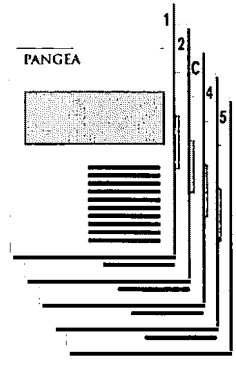


Keep your book organized by putting all the component files into one folder and making each chapter a separate FrameMaker document. (To improve performance, you may want to break up very long chapters into separate files.)

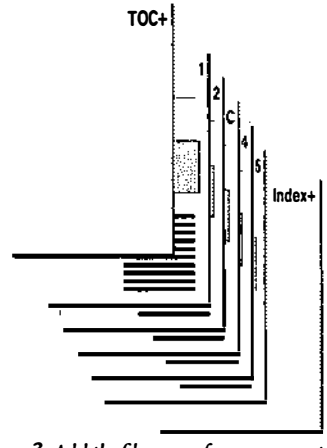
OVERVIEW OF BOOK BUILDING *Book building* refers to the process of assembling a book from its components. Most components—such as the preface, chapters, and appendixes—exist as separate files before you add them to a book. Several components—for example, the table of contents and index—are generated as part of the book building process.



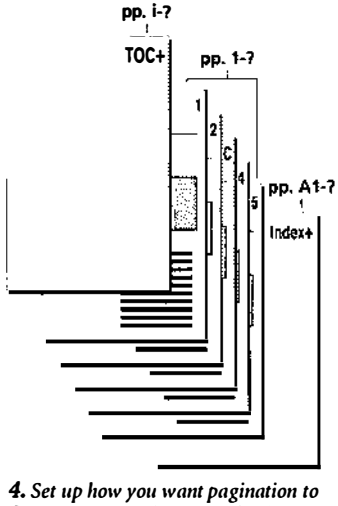
1. You base a new book file on any one document that will be in the book (see "Creating book files" on page 337).



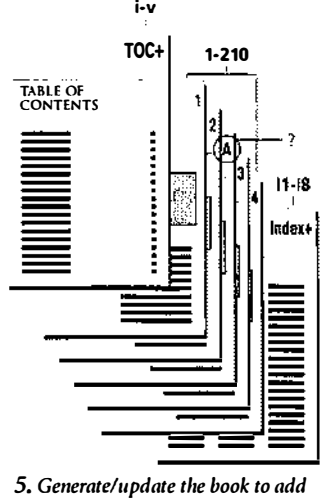
2. Add all the other documents needed in the book (see "Adding files to books" on page 337).



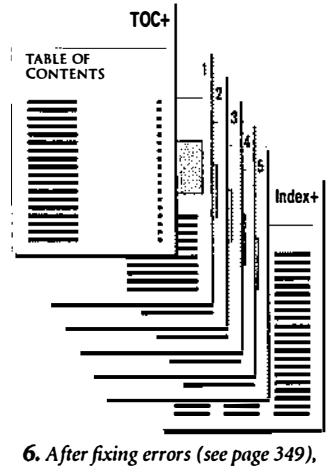
3. Add the filenames for any generated file you'll want for the book, such as a TOC or index (see page 338).



4. Set up how you want pagination to flow through the files in the book (see page 340).



5. Generate/update the book to add content to the TOC and index and to fix numbering across the book. Any errors or unresolved cross-references will now be obvious (see page 345).



6. After fixing errors (see page 349), generate and update again.

Creating book files

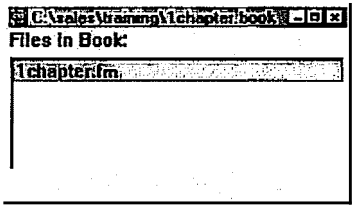
You can create the book file from any document that will be in the book. Once a book file is created, FrameMaker provides special menu commands for working with it.

To create a book file:

1 Open one of the documents you plan to include in the book.

2 Choose File > Generate/Book.

3 Choose New Multifile Book and click Generate. A new book window appears showing the contents of the book.



Note: Typically, the contents at this point are just the document you started with. However, if there are any files generated from this document in the same folder—such as a table of contents or index, they also appear in the book window. If this occurs, delete the generated files (see page 340). You can add book-wide generated files later (page 338).

4 Use File > Save As to save the book file, using a name that's more general than its current name, which is based on only one document in the book. For example, UserGuide.book is a better name than 1Chapter.book. In Windows, the .book extension is added to the filename automatically when you save it.

Adding files to books

You can add both FrameMaker documents and generated files to a book. When you add a file to a book, only the file's name and location are added to the book file. FrameMaker can then find the document or generated file when you use commands in the book window that apply to it.

Usually, a generated file doesn't yet exist when you add it to the book file; it is created when you generate it. Because the name of a generated file is based on the book's filename, make sure the book file has the name you want before adding the generated file.

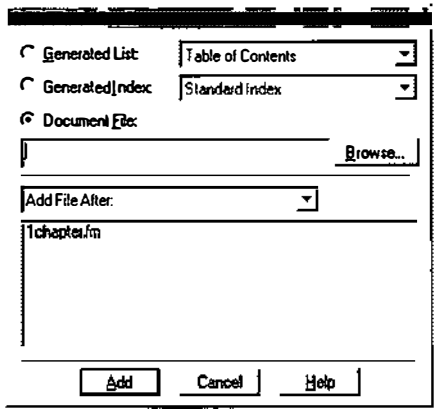
For information on generated files, see Chapter 13, "Tables of Contents and Indexes."

To add document files to a book:

1 In the book window, choose File > Add File.

2 Specify the document files you want to add to the book by doing one of the following:

• (Windows) Enter the filenames, separated by spaces, or click Browse to locate the document files you want. In the file browser, select one or more document files.



• (Macintosh and UNIX) Select a file you want to add, or click Add All Listed Files to Book to add all the files in the scroll list that are saved in Document format. On UNIX systems, you can also enter a filename.

3 Specify where the document files should go in the book by choosing either Add File Before or Add File After from the pop-up menu and then selecting a filename in the scroll list.

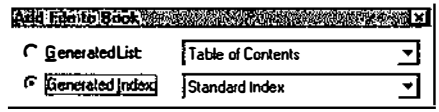
4 Click Add.

5 If this is the only file or the last file you're adding, click Done. To add more files, repeat steps 2 through 4 before clicking Done.

To add a generated file to a book:

1 In the book window, choose File > Add File.

2 Specify the type of generated list or index you want to add to the book. (For a summary of the types of generated files, see "About generated files" on page 301.)



Note: *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.*

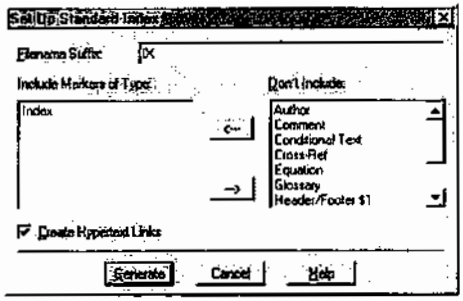
3 Specify where the generated file should go in the book by choosing either Add File Before or Add File After from the pop-up menu and then selecting a filename in the scroll list.

4 Click Add.

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 example, when you're adding a table of contents, the

paragraph tags used in the book's documents appear. For a standard index, the marker types appear.

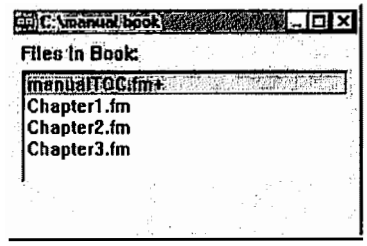


To move an item between scroll lists, select the item and click an arrow, or double-click the item. To move all items from one scroll list to the other, Shift-click an arrow.

6 To include automatically generated hypertext links in the generated file, select Create Hypertext Links (see page 416). These links let you jump to the source of an entry by clicking on the entry (see page 414).

7 Specify pagination and autonumbering for the generated file in the bottom part of the dialog box. The settings are the same as those for a document file (see "Controlling pagination and paragraph numbering" on page 340).

8 Click Set. The generated file's name, followed by a plus sign (+), appears in the book window.



A plus sign indicates a generated file.

Note: *Adding the file to the book doesn't automatically create the file. You'll generate it when you update all the files in the book (see "Generating and updating books" on page 345).*

9 If this is the only file or the last file you're adding, click Done. To add more generated files, repeat steps 2 through 8 for each generated file you want to add before clicking Done.



To use a template or an existing generated file in a new book file, add it to the book as a generated file. Then put the existing file in the folder that contains the book file, using the name that appears in the book window.

Renaming files in books

When you add a generated file to a book, the file is assigned a name based on the book's filename. In general, you shouldn't change the name of the generated file without also changing the name of the book file. A book file isn't updated automatically to reflect filename changes you make elsewhere, so

if you rename only the generated file, FrameMaker won't be able to find it when you try to generate, update, or open it from the book window.

Note: Renaming a book file outside of FrameMaker is not recommended. If you must rename a book file outside of FrameMaker, delete all generated files from the book and add them again to give the file a name based on the book's current filename.

To change the name of a document in a book:

1 Use File > Save As to save the document with the new filename.

2 Delete the old filename from the book file and add the new one. See "Rearranging and deleting files" on page 340 and "Adding files to books" on page 337.

To change the name of a book file within FrameMaker:

1 In the book window, use File > Save As to save the book file using a different filename.

The names of any generated files in the book automatically change in the book window to reflect the new book name.

2 Manually rename any generated files on the disk to match the name in the book window.

Rearranging and deleting files

You can change the order of files in a book file and delete files from a book. When you delete files, the filenames are removed from the book window, but the files remain on the disk.

To rearrange or delete files in a book:

1 In the book window, choose File > Rearrange Files.

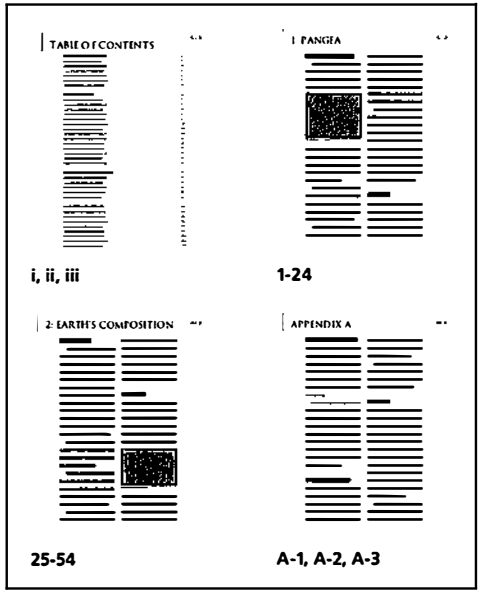
2 Select a file and click Move Up, Move Down, or Delete. You can rearrange and delete as many files as you want.

3 Click Done.

Controlling pagination and paragraph numbering

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, at *1* in the

first chapter, number continuously through subsequent chapters, and then start over again at *A-1* for the first appendix (Appendix A).



Page numbers can restart in some files but be continuous in others.

Some aspects of page and paragraph numbering can be 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 file in the book, and whether page references in generated files have a prefix or suffix.

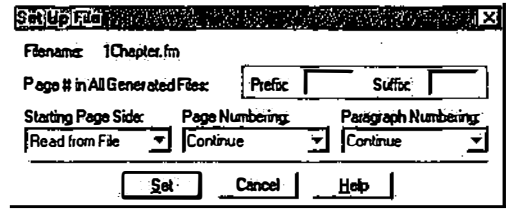
Other aspects, however, are set in the documents themselves—the numbering style (for example, Arabic or Roman) and the prefix or suffix used in page footers or in cross-references.

Similarly, whether pages are automatically added or removed from the end of a file can be specified in the document itself, or it can be controlled from the book file.

To specify the numbering properties of a file in a book window:

1 Select the filename and choose File > Set Up File.

2 Do the following:



• To add a prefix or suffix to the document's page numbers that appear in generated files, fill in the Prefix or Suffix text box. For example, if the document is the first chapter in a book, you can include the prefix *1-* before the Chapter 1 page numbers listed in a table of contents.



If the prefix or suffix contains a hyphen, use a nonbreaking hyphen to prevent lines from breaking at the hyphen (see "Changing hyphenation and line breaks" on page 94).

• To specify the document's first page side (left or right) when the book is updated, choose a setting from the Starting Page Side pop-up menu. You can set the first page side to always be left or right, or to use the next available side based on the previous file's ending page side. To use the page side speci-

fied in the file, choose Read from File. A blank page may be added to the previous file so that the document can start on the page you specified.

- To specify the file's pagination, choose a setting from the Page Numbering pop-up menu. For example, you might choose Restart at 1 for the first chapter and Continue for later chapter files. If you don't want the document's page numbering to change, choose Read from File.
- To specify the file's autonumbering, choose a setting from the Paragraph Numbering pop-up menu. For example, to make sure that chapter numbers increment sequentially, all chapter files should be set to Continue.

3 Click Set.

Adding or deleting empty pages

Every FrameMaker document has a setting that specifies whether to add or delete empty pages at the end of the document before saving or printing it. (See "Adding and deleting empty pages" on page 263.) If this setting is appropriate, the book file can simply use the document's setting.

However, it is sometimes necessary to change this document setting so that all documents start on the appropriate side when the book is generated. You can make sure the book pagination is correct by changing a document's setup from the book window.

To add or delete empty pages:

1 In the book window, select a filename.

2 Choose File > Set Up File.

3 Choose a setting in the Starting Page Side pop-up menu. See "Controlling pagination and paragraph numbering" on page 340.

4 Repeat the process for each file and then save the book file.

Including chapter numbers in headers or footers

Some books have pages numbered by chapter, such as *2-3* for page 3 of Chapter 2 or *A-2* for page 2 of Appendix A. To number pages by chapter, you can either use a running header/footer variable for the chapter numbers or type the chapter number directly in the header or footer of each chapter. 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.

To include a chapter number in a header or footer:

1 Display the master page that contains the header or footer.

2 Edit a running header/footer variable (Running H/F) 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 brackets. The definition might look like this:
<$paranum[ChapTitle]>

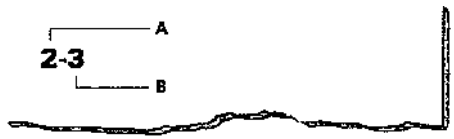
For details on editing variables, see "Changing variable definitions" on page 181.

3 Put the insertion point in the header or footer where you want to add the chapter number and insert the running header/footer variable. For details, see "Creating running headers and footers" on page 183.

4 Type a hyphen.

5 Choose Format > Headers & Footers > Insert Page #.

The header or footer should look like this on a body page:



A. Running header/footer variable for the chapter
B. Current Page # variable

Including 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*.

To include chapter numbers in cross-references:

Create a cross-reference format that includes the chapter number, using the same paragraph tag in the cross-reference format that you used in the running header/footer variable (see the previous section). The cross-reference format might look like this:
See page <$paranum[ChapTitle]>-<$pagenum>.

For details, see "Creating cross-reference formats" on page 159.

To keep the chapter number on the same line as the page number, use a nonbreaking hyphen in the cross-reference format.

Inserting chapter numbers in multifile chapters

If you have split a long chapter into several files, the chapter number probably appears only in the first file. The other files that make up the "multifile" chapter—the ones that don't have a chapter number in them—would not show the correct chapter number in headers and footers. Also, cross-references to those other files would not be able to refer to the correct chapter number.

You can fix this by inserting a specially formatted, nonincrementing chapter number at the top of the problem files. Headers, footers, and cross-references can then correctly refer to the chapter number in each of the files that make up the multifile chapter.

To insert a chapter number in each part of a multifile chapter after the first one:

1 Enter a paragraph at the top of the first page of each file except the first one. This paragraph will be the source that running headers and footers will point to in this chapter.

If you don't want this paragraph to be displayed in the document, draw a text frame and connect it to the beginning of the main text flow (see "Adding text frames on body pages" on page 266 and "Connecting text frames" on page 277). Make the text

frame small enough that it contains only the paragraph with the chapter number. Then set the paragraph's color to White.

Note: *If you should later paste the contents of the later files into the first file, make sure you delete this extra text and text frame.*

2 Apply a paragraph format that uses the same autonumber series as the chapter number paragraph format but has a nonincrementing counter (see "Using counters in autonumber formats" on page 104). For example, if the original autonumber format was C:Chapter <n+>, you might override the format to be C:Chapter <n>.

Including the total page count of a book

You may want a header or footer to show the total number of pages of a book—for example, *4 of 200* on page 4 of a 200-page book.

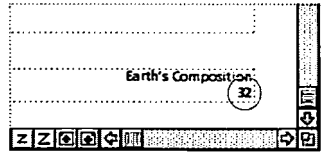
When you insert the page count in a file's header or footer with the Page Count variable, the header or footer shows the number of pages in that *file*, not in the entire book. To show the number of pages in a *book*, you can use a cross-reference to a special paragraph you create.

To show the total page count of a book in a header or footer:

1 Set up the files in the book for continuous page numbering (see "Controlling pagination and paragraph numbering" on page 340).

2 Display the master page for the last page of the last file in the book, and put the insertion point in an otherwise empty paragraph of the header or footer.

3 Insert the Page Count variable by choosing Format > Headers & Footers > Insert Page Count.



Page Count variable in a separate paragraph

4 Create a new paragraph format for the paragraph with the page count and store it in the Paragraph Catalog. See "Creating new formats" on page 112. (Having a unique format for this paragraph makes it easier to cross-reference it later.)

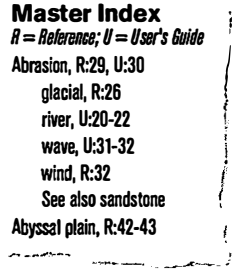
5 If you don't want the page count to appear where you put it, either resize the text frame so the page count is hidden or set the paragraph's color to White.

6 In the other files in the book, insert cross-references to the paragraph with the page count on each master page of each document (see "Inserting cross-references" on page 156). The cross-reference format should use the <$paratext> building block.

7 Put the cross-references in the header or footer in each master page of each file in the book, including the last one.

Creating a master TOC or index for several books

When you produce several related books, you may want to create a master table of contents (TOC) or index for the books.



To set up a book file to create a master TOC or index:

1 Create a new book file that contains the files in all the books in order (see "Creating book files" on page 337).

If you're adding files that were generated in the original books, add them to the new book as *document* files (see "Adding files to books" on page 337). If you need to update those generated files, do so from their original book file, not from the master book file.

2 Add a table of contents, an index, or other generated file to the new book file. This generated file will be the master file (see page 338).

3 In the Set Up File dialog box, specify how page numbers for each document should appear in the master generated file. Make sure you set the Starting Page Side and Page Numbering options to Read from File. The Paragraph Numbering option should be set the same as it is in the original book file. For details, see "Controlling pagination and paragraph numbering" on page 340.

You can use a different prefix or suffix for each component 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 Roman numerals for volume numbers.

4 Generate the file (see "Generating and updating books," next).

Generating and updating books

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.

Even though you generate and update in one step, the two processes are different:

- *Generating* creates the table of contents, other generated lists, and indexes in the book file. Their filenames appear with a plus sign (+) in the book window. The first time you generate a list or index (if you don't use a template as described on page 320), it uses the page layout (master pages) and reference pages of the first non-generated document in the book file,
- *Updating* corrects the page and paragraph numbering in all files in the book, reimports text insets, and revises cross-references so they are

correct based on the new page and paragraph numbers. Empty pages are added or deleted where required.

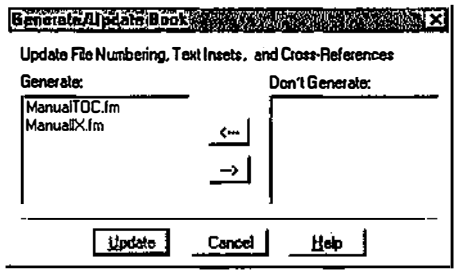
Be sure to generate and update a book whenever you make any of the following changes to a document or a book file:

- Editing that affects pagination
- Editing that affects the wording of a generated file (such as changes to a chapter title)
- Adding a new color (so that color separations will be accurate)
- Changing conditional text settings or indicators
- Adding a generated list
- Changing the setup of documents or generated files
- Changing formatting information in the special text flow on a reference page of a generated file (see "Editing special text flows for lists and indexes" on page 321)
- Rearranging, adding, or removing files in a book

To generate and update the files in a book:

1 In the book window, choose File > Generate/Update.

2 Move the names of the files you want to generate to the Generate 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.

Note: *Only generated files appear in the list. If no files are present, the book has no generated files. If no files appear in the lists—or if you move all the files to the Don't Generate list—you should still continue to the next step to update the book's pagination, auto-numbering, text insets, and cross-references.*

3 Click Update. For information on messages you may see in the book window's status bar or in an alert, see "Troubleshooting books" on page 349.

4 Save the open files. Open files are updated only in your computer's memory and not on the disk. If a file isn't open, the changes are made on the disk—even if the file is in View Only format.

Working with files in a book window

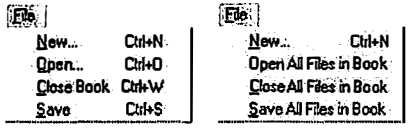
You can use a book window to open, save, print, and close individual files in a book. You can also open, save, and close all the files in a book and print and update the format of several files or all files.

To open files from a book window:

Do one of the following:

- To open one file, double-click its filename in the book window or select its filename and press Return.
- To open all files in the book, hold down Shift and choose File > Open All Files in Book.

Note: *Using Open All Files in Book can be a time-consuming procedure if there many cross-references or text insets to update in the files. You can suspend this automatic updating by choosing Edit > Suppress Automatic Reference Updating, selecting the appropriate check box, and then clicking Set. When you open an individual document that has settings for automatic update, cross-references and text insets are still updated.*



When you hold down Shift, some commands in the File menu change.

To close or save all files from a book window:

Do one of the following:

- Hold down Shift and choose File > Close All Files in Book.
- Hold down Shift and choose File > Save All Files in Book.

To print files from a book window:

1 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.

2 In the book window, choose File > Print.

3 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.

4 Click Print.

5 Specify printing options and click Print. All normal printing options are available except print range and (on UNIX systems) thumbnails.


You can create a PostScript file for the whole book or for each file in the book. For information, see "Printing to a file" on page 45.

To stop printing:

Do one of the following:

- (Windows) Press Esc.
- (Macintosh) Press Command+period.
- (UNIX) Press Control+c.

Changing the format of files in a book

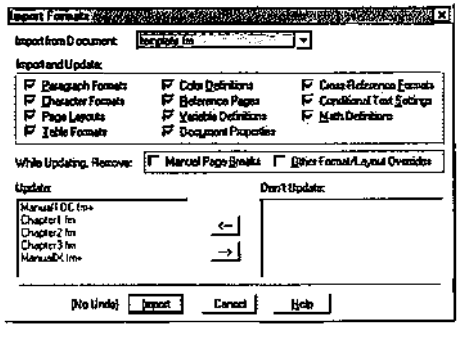
To change the page design, paragraph formats, or other formats of files in a book, you can make the changes in one file and then update all the files in the book at once.

To change the format of files in a book:

1 Open or create the file that contains the formats you want to use. The file must be named and saved.

2 In the book window, choose File > Import > Formats.

3 Specify the file with the formats you want to import and the files you want to change.



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 Choose the settings you want to import and update (see "Importing and updating formats in a document" on page 295).

5 Click Import. If a file isn't open, it's updated on the disk. If a file is open, it's updated only in your computer's memory and not on the disk. You must save the file to keep the changes.

Comparing books

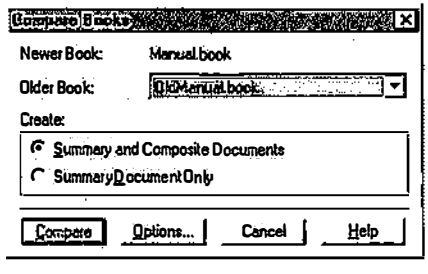
FrameMaker can compare two versions of a book to show you what has changed. It looks not only at the text in the two versions, but also at footnotes, markers, anchored frames, text insets, variables, and cross-references. For details, see "Items compared" on page 370.

To compare two versions of a book:

1 Open both versions of the book file.

2 In the book window of the newer version, choose File > Utilities > Compare Books.

3 Specify the older version and the documents you want to create.



The summary document lists differences in setup information and gives a report of differences in the files. Composite documents (which have a CMP suffix) show the differences in the files side by side.

4 To set up the comparison options, click Options (see "Comparing document versions" on page 367).

5 Click Compare. When the comparison is complete, only the summary document appears.

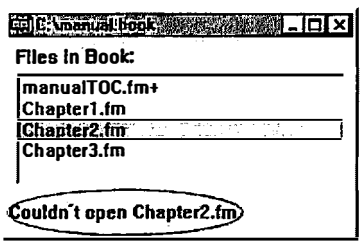
6 Click a page number in the list of changes to open the composite document or to jump to the spot where that change occurs in either the newer or older document.

Troubleshooting books

This section explains the error messages you might see when generating and updating and describes solutions for some common problems that may occur with books.

Interpreting error messages

Error messages appear either in the status bar of the book window or in an alert.



The status bar of the book window displays error messages.

Some messages halt the generating and updating process (such as the Couldn't Open File message) and therefore must be corrected before proceeding.

Unresolved Cross-Refs The indicated file is the first file that contains unresolved cross-references (see "Resolving cross-references" on page 164).

Inconsistent Show/Hide Settings, Inconsistent Use Condition Indicators, or Inconsistent Condition Indicator The indicated file contains conditional text settings that differ from those in the previous file in the book. You can make the settings in each file the same (by using Special > Conditional Text) or you can update the settings throughout the book at once. To do this, use File > Import > Formats (see "Changing the format of files in a book" on page 348).

Inconsistent Color Settings The indicated file contains color separation settings or color definitions that differ from those in the previous file in the book (see "Separating colors" on page 248 and "Defining and modifying colors and tints" on page 243).

Couldn't Open File The file may be in an older format, it may use unavailable fonts, or it may no longer exist. For more information on the problem, open the file to see the alert message that appears.

Book Not Self-Consistent The contents of generated files, the page count, or cross-references continued to change while generating and updating files in the book. 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.

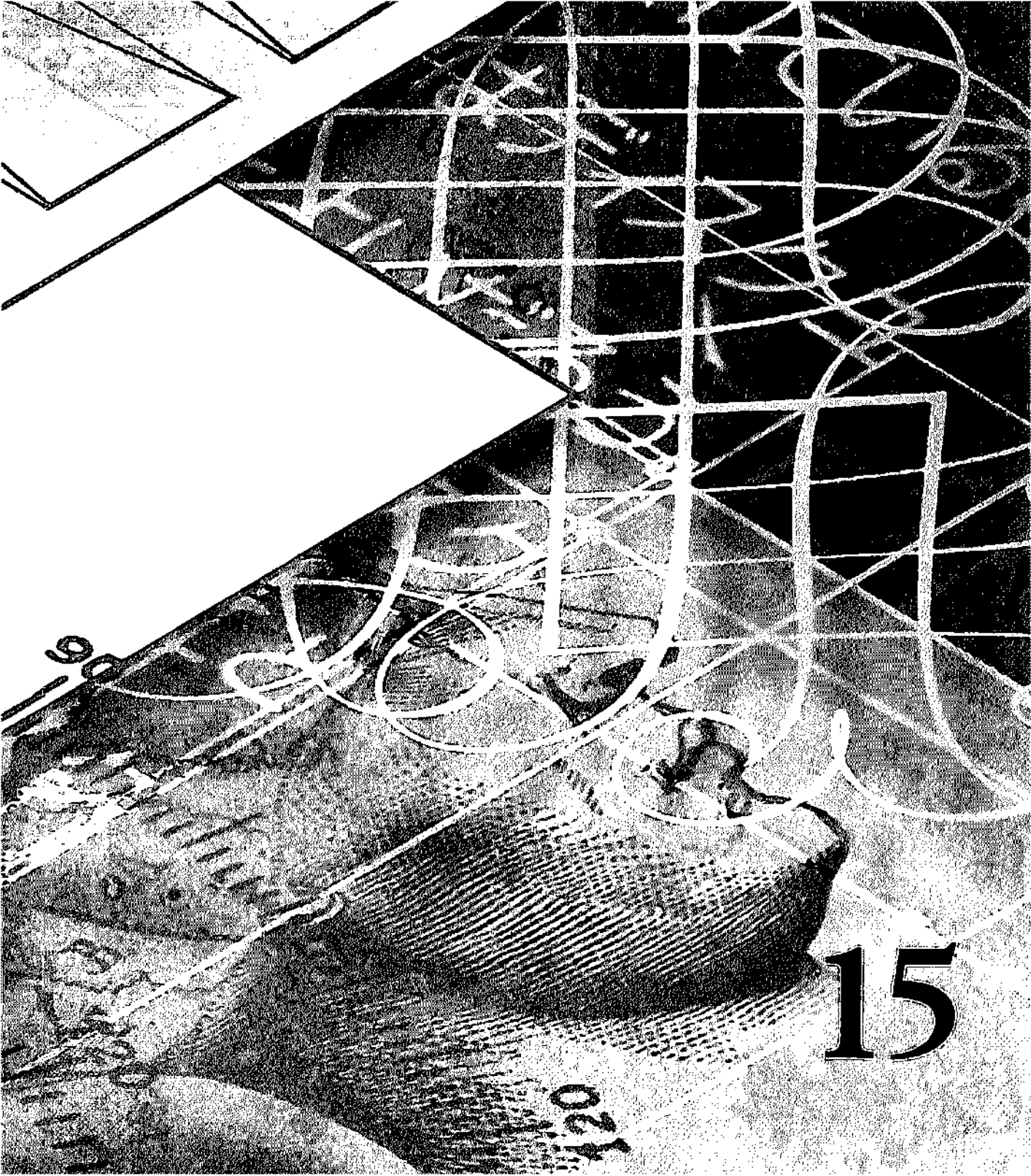
Understanding common problems

Even though you can update and generate a book without error messages, the book may still have some problems that need correcting.

Generated file is empty Make sure the name of the generated file is followed by a plus sign (+) in the book window. If it isn't, the file was added as a document to the book file rather than as a generated file (see "Adding files to books" on page 337). When a file is added as a document file, FrameMaker won't generate it. Also check that the setup of the generated file is correct.

Slow performance To improve performance, open as many files in the book as possible before you use File > Generate/Update or File > Import > Formats in a book window. After using the command, save all the files in the book.

Chapter starts on wrong side You need to correct your documents' pagination. See "Adding or deleting empty pages" on page 342.



15

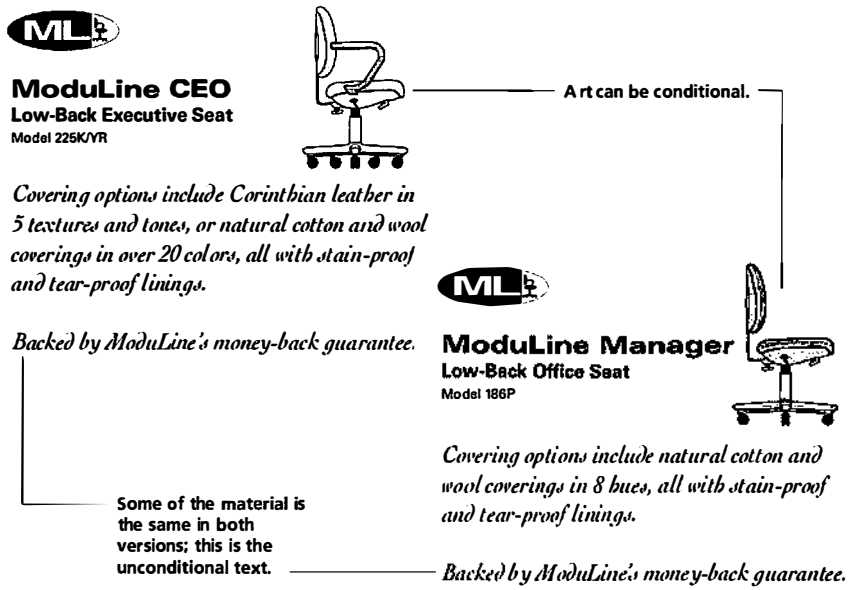


Chapter 15: Conditional Text

If you're preparing several versions of a document, each with minor differences, you can use one FrameMaker document for all the versions. The one document contains conditional text and conditional graphics.

You can also use conditional text to include comments to yourself or to your reviewers. You can hide the comments before you print the final copy.

TWO VERSIONS OF A DATA SHEET Conditional text can be used to create two data sheets in one document. The text and graphics common to both data sheets are unconditional. The text and graphics that appear in only one data sheet are assigned a condition tag that identifies the data sheet.

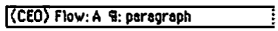


About conditional text

Conditional text differs from one version of a document to another. Unconditional text is common to all versions.

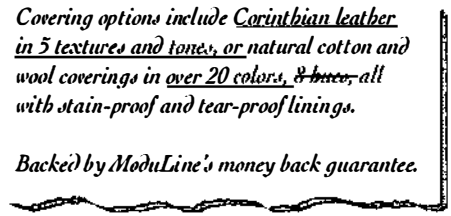
You can make any unit of text conditional, from one character to entire sections. Anchored graphics, tables, cross-references, footnotes, markers, and table rows can be conditional. You make an item conditional by applying *condition tags.*

The condition tags of the current selection (or at the insertion point) appear in parentheses in the Tag area of the status bar.



Tag area of status bar

You can change the appearance of conditional text so that it's easy to identify by using *condition indicators*—style and color changes.



Condition indicators (strikethrough and underline) identify two conditions.

You can view and print conditional text in several ways. For example, you can view all versions of the document or hide selected versions, or you can show or hide condition indicators. Whatever you display appears in the printed document.

Planning conditional documents

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 several 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.

Use the following guidelines when planning a conditional text project.

Number of versions Define how many versions your finished project will contain. For example, if you're creating a manual that describes a program that runs on both Windows and UNIX platforms, you might want to be able to produce at least two versions: a Windows version and a UNIX version. If you want to produce these versions with editorial comments sprinkled in the text during the review process, you'll want even more versions: UNIX with comments, UNIX without comments, Windows with comments, and Windows without comments.

Number of condition tags required Decide how many condition tags you need to produce the desired versions. A version of a document is defined by a unique set of condition tags. For example, a version of a finished Windows manual might be defined by having a Windows condition tag showing, a UNIX condition tag hidden, and a Comments condition tag hidden. In this example, you would need to decide whether to use one condition tag for Windows comments and another for

UNIX comments, or whether to use a single condition tag for both Windows and UNIX comments.

Organization of content 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 that conditional text is limited to a few documents. Or you might choose to keep versions of a particular chapter in separate files rather than in conditional text, and then use a different book file for each version of the book.

Graphics If a document will contain graphics imported by reference into a conditional anchored frame, create separate folders 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.

Variables Words and phrases that are used repeatedly in a document—for example, product and company names—are easier to work with as variables than as conditional text.

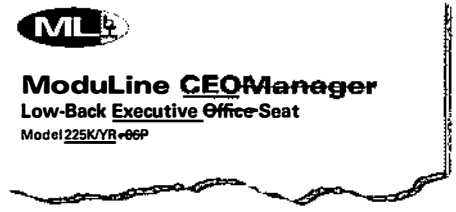
Decide whether your conditional documents will need different variable definitions for each version. For example, the data sheet illustrated on page 353 may use a variable with the product's name, but the conditional document describes two products. You can create a template for each version of the document. Each template should have only one version visible and should define the variables for that version. You can then use File > Import > Formats to switch the variable definitions from one version to another.

Tagging strategy Determine the smallest unit of conditional text. For example, if a conditional document will be translated to another language, 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).

Decide the order in which conditional text will appear and use this order throughout the document. The order can help subsequent authors maintain the document.



Text in the CEO condition always appears first.

Multiple authors If a conditional document will have several authors, follow these guidelines:

• Plan document organization and work flow. For example, you may want to break a document into 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 helpful comments and apply the predefined Comment condition tag to them.

Creating, changing, and deleting condition tags

When you create condition tags, 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 more than two versions, use color indicators.


If another document contains the conditional text settings that you want to use in your current document, import them by choosing File > Import > Formats. For information, see "Importing and updating formats in a document" on page 295 and "Changing the format of files in a book" on page 348.

To create or change a condition tag:

1 Choose Special > Conditional Text.

2 If you're changing a condition tag's indicators, select the condition tag in one of the scroll lists.

3 Click Edit Condition Tag.

4 If you're creating a condition tag, enter a name in the Tag text box. Try to use meaningful names that begin with a unique first letter for quick tagging from the keyboard.

5 Specify style and color condition indicators and click Set.

Note: *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.*

To delete a condition tag from a document:

1 In the Conditional Text dialog box, select the tag you want to delete and click Edit Condition Tag.

2 Click Delete. FrameMaker removes the condition tag from any text that uses it and deletes the tag from the Conditional Text dialog box. If any text is tagged with only the condition tag you're deleting, a dialog box appears, in which you choose either to make the text unconditional or to delete it.


If you want to delete condition tags that aren't used in a document but you're not sure which condition tags are used, use File > Generate/Book to generate a list of references that includes condition tags (see "Generating TOCs and other lists" on page 304).

Applying and removing condition tags

To make text conditional, you apply tags by using the Conditional Text dialog box or the keyboard, or by copying and pasting condition tag settings.

You can also use the Find/Change command to paste condition tag settings. For details, see "Searching for conditional text" on page 60 and "Changing items you find" on page 61.


You can merge two versions of a document into one conditional document. When you merge two versions, FrameMaker compares them and creates a composite conditional document. For information on comparing and merging documents, see page 367.

To apply a condition tag to an item:

1 Select the item you want to make conditional, as described in the following table.

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 or variable	Cross-reference or variable text
Footnote	Footnote reference (the number in the main text)
Marker	Marker symbol

To make the text you're about to type conditional, click where you want the text to begin.

***Note:** You can make text in text frames conditional, but not text in text lines.*

2 Choose Special > Conditional Text. The Conditional Text dialog box shows the condition tags of the selected text.

3 Move the condition tags to the appropriate scroll lists by doing the following:

- 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, move the condition tag to the In scroll list. To exclude text from a condition, move the condition tag to the Not In scroll list. Condition tags in the As Is scroll list will not be applied or removed.

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's also tagged with a condition that is showing. For information on viewing hidden text, see page 359.

To apply a condition tag by using the keyboard:

1 Select the item to which you want to apply a condition tag and press Control+4.

2 At the status bar prompt, 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 letters to search backward. You can also use the Up Arrow and Down Arrow keys to scroll through the tags.

3 Press Return to apply the condition tag. If you decide to cancel the operation, click in the document without pressing Return.

To copy and paste condition tag settings:

1 Put the insertion point in text that uses the condition tag settings you want to copy.

2 Choose Edit > Copy Special > Conditional Text Settings.

3 Make a selection or click to place the insertion point.

4 Choose Edit > Paste. If you paste the settings into a different document, the pasted tags appear in that document's Conditional Text dialog box so you can use them again.

Avoiding unresolved cross-references

If you insert a cross-reference to a paragraph (such as a heading), and if the first word in the paragraph is conditional, the Cross-Ref marker that FrameMaker inserts will also be conditional (with the first word's condition tag settings). This means the marker will be hidden when you hide the first word's conditions. As a result, the cross-reference may be unresolved if condition tag settings of the cross-reference and of the cross-reference marker differ.

To avoid this, 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.

Removing condition tags from an item

Removing a condition tag from an item is different from deleting a tag from a document. When you remove a tag from an item, the tag remains in the document so it can be applied again later. When you delete a tag from the document (see page 356), FrameMaker removes the condition tag from any text that uses it and deletes the tag from the Conditional Text dialog box.

To remove a condition tag from an item:

1 Select the item with the tag you want to remove and choose Special > Conditional Text. For instructions on what to select, see the table on page 357.

2 Do one of the following:

- To remove some condition tags but leave the text conditional, move the condition tags you want to remove 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 and make the text unconditional, click Unconditional.

3 Click Apply.

To remove a condition tag from an item using the keyboard:

1 Select the item from which you want to remove condition tags and press Control+5.

2 At the status bar prompt, 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 letters to search backward. You can also use the Up Arrow and Down Arrow keys to scroll through the tags.

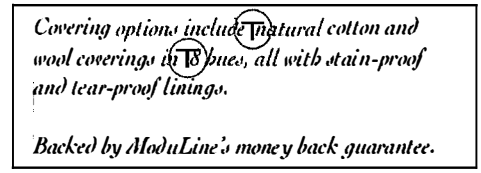
3 Press Return to remove the condition tag from the item. If you decide to cancel the operation, click in the document without pressing Return. If the selection contains only the condition tag you're removing, a dialog box appears in which you choose either to make the text unconditional or to delete it.

To remove all condition tags using the keyboard:

Select the item from which you want to remove all condition tags (thus making the item unconditional) and press Control+6.

Working in conditional documents

You can view or print all unconditional and conditional text simultaneously, or you can hide the conditional text of one or more versions. FrameMaker ignores hidden conditional text when formatting a document. When text symbols are visible, hidden conditional text is represented on-screen by a conditional text marker (T).



Markers show where conditional text is hidden.

Changing the view of conditional documents

A conditional document can display any number of conditions at a time and can have any of its condition indicators on or off. For example, you can change the view to display the condition tags for one particular version, for several versions, or for all versions. If you're displaying more than one version, or if you're showing one version and want to see which part is conditional, you may want the condition indicators on.

To change the view of a conditional document:

1 Choose Special > Conditional Text.

2 Click Show/Hide.

3 Specify the condition tags of the text you want to show by doing one of the following:

- 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 Indicate whether you want to display condition indicators and 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.


To switch the view of a document quickly from one version to another, create a template for each version. Each template should have the appropriate Show/Hide settings for a version. You can then use File > Import > Formats to change the view of a conditional document from the template (see "Importing and updating formats in a document" on page 295 and "Changing the format of files in a book" on page 348).

Viewing imported conditional text

When you import text containing passages of conditional text, 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 text is imported by reference and appears in a text inset, you can change the view of conditional text in the inset.

Whether a passage of conditional text is initially shown or hidden when you import it is determined by the following:

- When Show All is on in the destination document, all conditional text is initially shown.
- Otherwise, when condition tags match, conditional text is initially shown or hidden according to the settings in the destination document. When condition tags don't match, conditional text is initially shown or hidden according to the settings in the source document.

Editing conditional text

When you work in a conditional document, hidden text is generally ignored. This means, for example, that the Find/Change and Spelling Checker commands check only displayed text. However, you can cut, copy, and paste hidden text by selecting the conditional text marker and by using the commands on the Edit menu.

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.

To edit conditional text:

Use the Edit menu commands as usual.

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. When you try to move or delete hidden conditional text, FrameMaker displays an alert message that lets you proceed and delete the text or cancel the command.

To apply format changes to hidden text:

Use Format > Paragraphs > Designer and Format > Characters > 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 para-

graphs or characters, including hidden conditional text, click Update All in the designer or choose Update All from the Paragraph Format pop-up menu on the formatting bar.

Applying format changes with Import > Formats also updates hidden conditional text.

To spell-check or search through all text:

Show all conditional text (see page 359) before using Edit > Spelling Checker or Edit > Find/Change.

Finding conditional text

You can search for items tagged with a visible condition tag. FrameMaker will find conditional text in text frames, graphic frames, and table cells, but will not find conditional table rows. For details, see page 60.

Finalizing conditional documents

Before you produce a finished version of a conditional 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 and punctuation problems caused by incorrectly tagged conditional text.
- Update cross-references. If the document contains unresolved cross-references, they may refer to Cross-Ref markers in hidden conditional text. Show the version and update the cross-references again. For information on resolving cross-references, see page 164. Also see "Avoiding unresolved cross-references" on page 358.
- Create 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 indicators for the same tag, or if some condition tags are displayed in one document but are hidden in another, FrameMaker displays an alert message. If this occurs, click Cancel to stop generating and correct your documents' conditional text settings.
- After generating an index, check it for double question marks (??), which indicate missing or incorrect index markers. For information, see "Troubleshooting indexes" on page 316.



16



Chapter 16: Revision Management

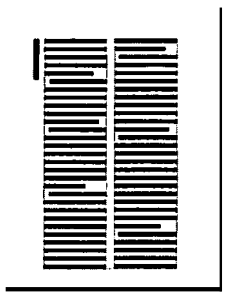
When you revise a document, you can use the following methods to keep track of the revisions:

- You can add change bars that identify new or changed material.
- If you receive a revised document with changes that have not been flagged by change bars, or if you want more specific information on the changes, you can compare the new version to an older version.

Also, you can use conditional text to include revision comments and comments to reviewers (see Chapter 15, "Conditional Text").

About change bars

A *change bar* is a vertical line (usually in the margin) that visually identifies new or revised text. If you want all changes marked, you can have change bars appear automatically whenever you insert, change, or delete text.



Change bars identify new or revised 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 reviewers to focus on substantive changes. In these situations, you can select specific text to mark with change bars rather than add the change bars automatically.

Later you may want to remove the change bars from text. For example, between drafts of a manual you'll want to remove the old change bars before adding new ones.

You can insert change bars in the newer of two versions of a document by comparing the versions. For information on adding change bars this way, see page 367.

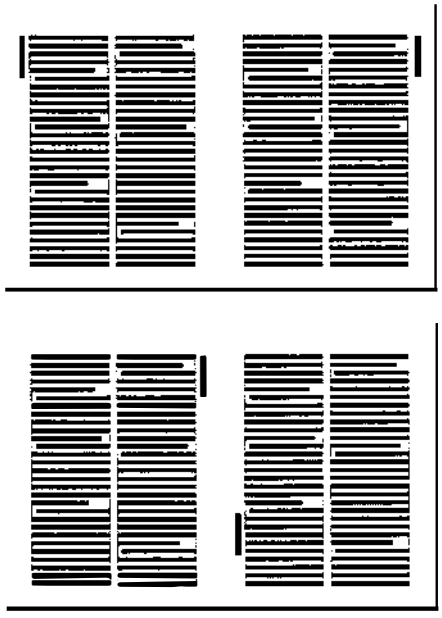
Note: *When you add change bars to an entire paragraph of text and then update the paragraph's format (for example, by importing formats from another document), don't remove format overrides during the update if you want to retain the change bars. Adding change bars to an entire paragraph alters the paragraph's format, and the alteration counts as a format override.*

To add change bars automatically:

1 Choose Format > Document > Change Bars.

2 Specify the thickness of the change bars and the distance from the column of text to the change bars.

3 Choose the position of the change bars from the Position pop-up menu. Choose Side Closer to Page Edge or Side Farther from Page Edge if you want the position of the change bars to vary from side to side based on the page layout.



Closer to page edge and farther from page edge

The position is relative to the edges of the column that contains the changed text, regardless of the number of columns on the page.

4 Choose a color for the change bars from the Color pop-up menu.

5 Select Automatic Change Bars and click Set.

Automatic change bars don't detect changes in graphics imported by reference unless the imported file's name has been changed. Automatic change bars also don't detect changes that affect only formatting. For example, if you only change the tag of a paragraph from Body to Bullet, no change bar will appear. In this case you can add a change bar manually if necessary.

Note: *If cross-references are updated when Automatic Change Bars is selected, change bars will appear next to all changed cross-references.*

To add change bars manually to selected text:

Select the text you want to mark and choose Format > Style > Change Bar. You can also use the Default Font properties in the Paragraph Designer.

To add change bars manually to entire paragraphs:

1 Click in a paragraph or drag through several paragraphs. (You don't need to select an entire paragraph.)

2 Choose Format > Paragraphs > Designer and display the Default Font properties.

3 Select Change Bar and click Apply to Selection.

Using a character format to apply change bars

Another way to selectively apply change bars to text is by using a character format. Once you create the character format, you select the text and apply the character format to it (see "Applying predefined formats to text" on page 78). Using a character format also allows you to retain change bars when you update your document with new paragraph formats and remove format overrides.

If you mark 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

in the next section. However, the only way to remove the format's tag from the text is to select the text and apply the Default ¶ Font from the Character Catalog.

To create a character format that adds change bars:

1 Click in any paragraph and choose Format > Characters > Designer.

2 In the Character Designer, choose Set Window to As Is from the Commands pop-up menu.

3 Select Change Bar, and then choose New Format from the Commands pop-up menu.

4 Enter a tag name and click Store in Catalog.

5 Click Create.

Removing change bars

You can remove all the change bars in a document at the same time or selectively.

To clear all change bars in a document:

1 Choose Format > Document > Change Bars.

2 Select Clear All Change Bars and click Set.

To remove specific change bars:

Do one of the following:

• Select the text and choose Format > Style > Change Bar. You can also use the Default Font properties in the Paragraph Designer. If some of the selected text isn't marked with a change bar, you need to choose Format > Style > Change Bar twice to remove the change bars.

• To remove a change bar applied by a character format, select the text and apply the Default ¶ Font from the Character Catalog (see page 78).



To examine and change text marked with change bars, use the Find/Change command. You can search for text that has the Change Bar property set or for text that uses a character format that sets the Change Bar property. For information, see "Searching for any item" on page 56 and "Searching for character format properties" on page 59.

Comparing document versions

When you compare two versions of a document, FrameMaker creates the following documents:

• The *composite document* is a conditional document that combines the newer and older versions; it shows the differences side by side. You can specify the condition tag to apply to changed text, and whether changes should be flagged with change bars.

• The *summary document* contains a general summary and a revision list for each type of item being compared. You can create the summary 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.

For information on comparing books, see page 348.

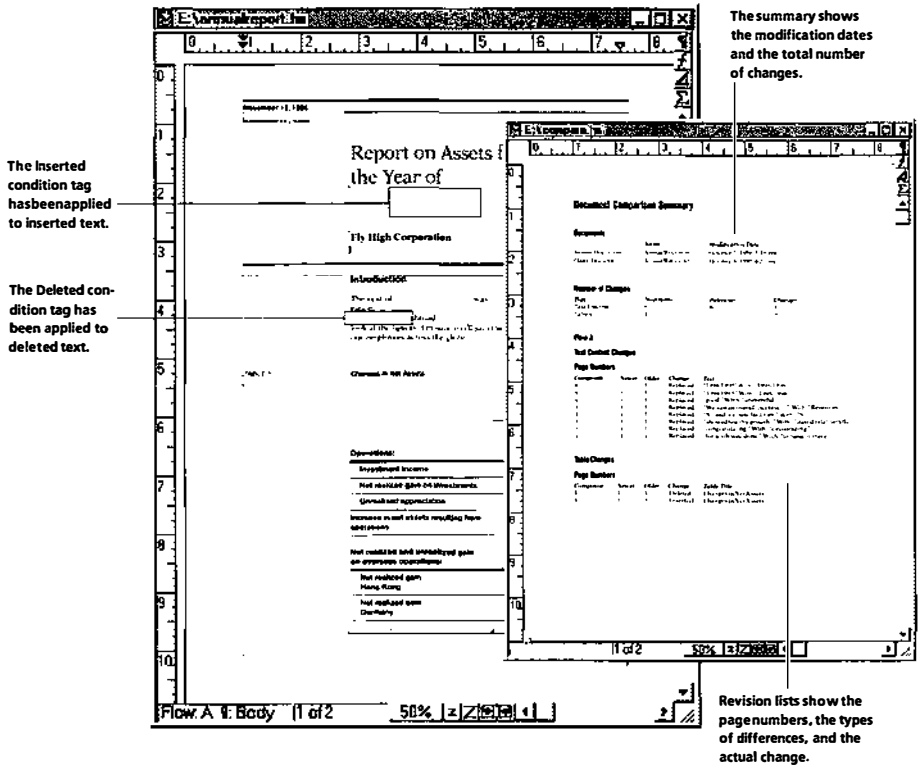
To compare two versions of a document:

1 Open both versions of the document. If the documents contain conditional text, all conditions must be visible.

2 In the newer version, choose File > Utilities > Compare Documents.

3 Choose the older version from the pop-up menu and specify the documents you want FrameMaker to create. All open, named documents (except the current document) are listed in the Older Document pop-up menu.

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 older 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).



4 Click Options, do the following, and click Set:

• Specify how to display inserted text in the Mark Insertions With area. You can use the default condition tag (Inserted), use a different condition tag, or choose not to mark inserted text.

• Specify how to display deleted text in the Mark Deletions With area. You can use the default condition tag (Deleted), use a different condition tag, or use text that you specify. To omit deleted text from the composite document, click Replacement Text and leave the text box empty.

• To mark all changes (insertions and deletions) with change bars in the composite document, select Mark Changes with Change Bars. FrameMaker uses the current change bar settings for the document.


If all you want to do is add change bars to the newer version of a document, select Mark Changes with Change Bars. Also click Replacement Text in the Mark Deletions With area and leave the Replacement text box empty.

• To make the summary report a hypertext document, select Create Hypertext Links in Summary. When you click the page number of a change in the summary, FrameMaker displays the page. You can display pages of the newer version, the older version, or the composite document that contains that change.

5 Click Compare. When the comparison is complete, FrameMaker displays the summary and composite documents. If the two versions are the same, neither document is created.

For information on the items compared and on the form and content of composite and summary documents, see page 370.

Comparing documents that contain 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 tag. For information on changing a flow tag, see "Changing flow tags and Autoconnect" on page 277.

Comparing documents that contain conditional text

When you compare documents that contain conditional text, FrameMaker compares all text in the document, whether or not the conditional text is visible.

To compare documents that contain conditional text:

1 Do one of the following:

• To compare the full texts of two documents that contain conditional text, show all conditions before performing the comparison.

• To exclude some conditions from the comparison, save copies of both documents, show the conditions you want to compare, and delete the rest of the tags. If you hide these conditions but don't delete them, the comparison gives you unexpected results.

• To compare the different conditions in a single document, save two copies of the document and show different conditions in the two documents. In both documents, delete tags for all the conditions you don't show.

2 Compare the documents (see page 368).

About composite and summary documents

When you compare documents, FrameMaker creates two documents that display the results.

Composite document In the composite document, FrameMaker considers differences 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 newer version is marked as inserted. Variables in the composite document use the newer definitions, but they aren't marked as changed. Only inserted and deleted variables are considered changes.

Summary document In the summary document (named Summary.fm), differences are considered to be insertions, deletions, or changes. If an item has moved, it's marked as deleted and inserted. FrameMaker displays the number of the page on which the change occurs in the newer version, the older version, and the composite 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.

Note: *If you create multiple summary documents, unlock each file by pressing Esc Shift+f l (lowercase* L*) k and use the Save As command to give each document a unique name.*

Items compared

When comparing two versions of a document, FrameMaker checks the contents of flows with the same names on body and reference pages. It looks at text, footnotes, anchored frames, tables, variables and their definitions, cross-references and their formats, footnote text, marker types, and marker text. The following are some specific differences that FrameMaker can find.

Anchored frames FrameMaker compares the objects in the frame. If the objects are different, or if they are in different positions (for example, if you changed their front-to-back order), FrameMaker marks the entire anchored frame as changed.

Cross-references FrameMaker checks whether a cross-reference is external or internal. It also checks the cross-reference format name, the marker text at the source, and the pathname of the referenced file (for external cross-references). If any of these are different, FrameMaker marks the cross-reference as changed.

Text insets FrameMaker compares the modification date, the filename, the relative pathnames of text insets, and the way the inset was imported (for example, whether the lines were merged into paragraphs). If any of these are different, it marks the entire text inset as changed.

Imported graphics FrameMaker compares the contents and dpi scaling of the imported graphic. For example, it checks whether the object has been flipped or rotated, and compares the size of the bounding box. It also compares how the graphic was imported—by reference or by copying. If the graphic was imported by reference, FrameMaker compares the pathnames. If any of these properties are different, it marks as changed the line that contains the anchored frame of the imported graphic.

Equations FrameMaker compares the size of the equation, the location of the equation within its graphic frame, and the math expressions. If any of these are different, it marks the entire equation as changed.

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 anchor symbol. If more than 75% of the cells have changed, it marks the entire table as changed.

Note: *FrameMaker doesn't compare Japanese text. It also 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, it won't notice different ruling or shading in a table or a different color assigned to text.*


17



Chapter 17: Importing, Linking, and Exporting

You can import other FrameMaker documents, documents created in other applications, text files, and graphics files. An imported object can simply be copied into the document. It can also be linked—such as when you import by reference—so that it remains tied to its source for easy updating.

You can export text and graphics to other applications by using a number of techniques, some of which are unique to the platform you're working on.

Choosing the right method for importing and linking

You can bring text or graphics into a FrameMaker document by doing the following:

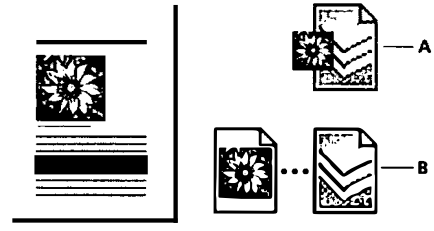
- Use the Clipboard to copy and paste text or graphics from another application.
- Use File > Import > File.
- (Windows) Use Object Linking and Embedding (OLE).
- (Windows and Macintosh) Drag objects between windows.
- (Macintosh) Use Publish and Subscribe.
- (UNIX) Use a graphic inset editor.

You use some of these methods for importing by copying and some for importing by reference. You use the File > Import > File command, available on all platforms, for both.

Importing by copying

You can import by copying by using the Clipboard or File > Import > File, or (in Windows and on the Macintosh) by dragging objects between windows.

Importing by copying makes it easy to transfer the imported material from one location to another, but it increases the document size. In addition, if you make changes to the source material, you must reimport it to update the document with the latest version.



A. Graphic imported by copying becomes part of the FrameMaker document. B. Graphic imported by reference remains a separate but linked document.

Importing by reference

You can import by reference by using File > Import > File, OLE (Windows), Publish and Subscribe (Macintosh), or a graphic inset editor (UNIX).

Importing by reference keeps the imported text or graphics linked to the source file. FrameMaker stores the pathname to the source file in the document. Each time you open the document, FrameMaker locates the file on the disk and redisplays it. If the source file was revised, FrameMaker updates the document with the latest version. Importing by reference can reduce total file size because it lets you use the same material in several places. Text imported by reference is called a *text inset*.

For information on how the pathname is stored when importing by reference, see "Using pathnames when importing by reference" on page 380.

Using Copy and Paste

Perhaps the easiest way to import text and graphics is by copying to and pasting from the Clipboard. Note the following:

- Tab-delimited text is converted to a table upon pasting.
- Text formatting is lost unless you're pasting into another FrameMaker document.
- Choosing Edit > Paste Special sometimes offers you more options. For example, you can exchange formatted text between FrameMaker documents and Microsoft Word documents in RTF format by using Paste Special instead of Paste.

Using the Import command to import text

You can use the File > Import > File command to import text on all platforms. This method provides more flexibility than using the Clipboard.

However, if you're working on only one platform, you might want to use a platform-specific approach. For information, see "Using OLE (Windows)" on page 384 and "Using Subscribe (Macintosh)" on page 386.

The text you import can be formatted or unformatted. Unformatted text contains only the words; there is no information on fonts, indents, spacing, autonumbering, and so on. Formatted text contains these types of information.

Importing formatted text

You can import formatted text into a FrameMaker document by importing from the following sources:

- A text flow from another part of the same document
- A text flow from another FrameMaker document
- A text flow from another FrameMaker document that is a Maker Interchange Format (MIF) file (see page 379)
- A file created in another application, such as Microsoft Word, for which there is an installed filter

When you import text from another FramcMaker document, you also import cross-references, footnotes, variables, markers, tables, and anchored

frames. Conditional text in the flow is also imported. When you import text from another application, some of these special items may be imported, depending on the capabilities of the other application and the filter used.

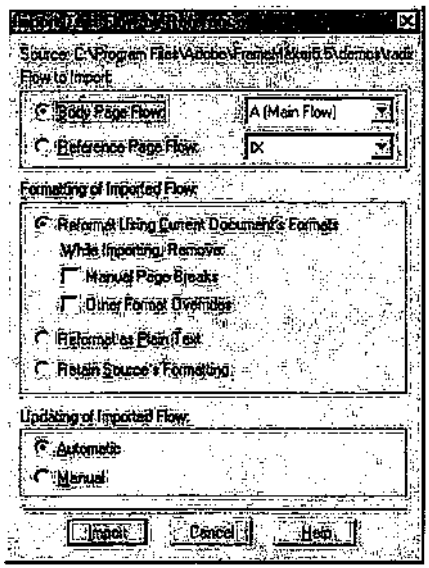
To import formatted text:

1 Click where you want to insert the text and choose File > Import > File.

2 Specify the file that contains the flow you want to import and the import method (see page 375).

3 Click Import.

4 If the Unknown File Type dialog box appears, select a file type and click Convert. The dialog box that appears next depends on the import method you chose in step 2. The Import Text Flow by Reference dialog box contains settings for specifying how to update the imported flow.



5 Choose a body page flow or a reference page flow. Typically, the text you import will come from body pages. Reference pages can contain flows with boilerplate text or graphics for use on body pages.

6 Specify how to format the imported text by doing one of the following:

- To apply the current document's formats to the imported text whenever their tags match, click Reformat Using Current Document's Formats. If the tags don't match, the formatting of imported text is unaffected. Usually, you would also select the options to remove manual page breaks and other format overrides (such as font properties or tab settings) so that the imported text looks like text in the current document with the same tags.
- To remove the formatting from the imported text and apply the character and paragraph formatting used at the insertion point, click Reformat as Plain Text. (Text in tables or anchored frames retains the formatting it had in the source document.)
- To keep the formatting from the source document, click Retain Source's Formatting. Formats in the imported text aren't added to the current document's format catalogs. If you later modify the current document's formats, the imported text formats won't be affected—even if the tags in the current document and imported text match.

7 If you are importing the text by reference, specify how to update the text inset by doing one of the following:

- To update the text inset whenever you open the document, click Automatic.

• To update only when you specify, click Manual.

8 Click Import. If you imported the text by reference, it appears as a text inset. (A text inset is linked to the source document and can't be edited outside of that source document.)

Importing unformatted text

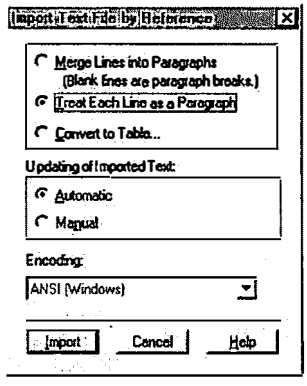
When you import the text from an unformatted text file, you specify whether to import it by copying or by reference and how to treat lines in the text file. The imported text adopts the character and paragraph formatting used at the insertion point.

To import a text file:

1 Place the insertion point where you want to insert the text and then choose File > Import > File.

2 Specify the text file you want to import and the import method. For information, see "Choosing the right method for importing and linking" on page 375.

3 Click Import. The dialog box that appears depends on the import method you chose.



4 Specify how to treat the imported text by doing one of the following:

• To break the text into paragraphs only at blank lines, click Merge Lines into Paragraphs. Use this option for a paragraph-oriented text file such as a file containing document text.

• To break the text into paragraphs at the end of each line, click Treat Each Line As a Paragraph. Use this option for a line-oriented text file such as a file containing computer code.

• To convert the imported text to a table, click Convert to Table. Specify a table format and other settings. Use this option only if the file contains delimited text, such as text output from a database program.

5 If you are importing the text by reference, specify how to update the text inset by doing one of the following:

• To update the text inset whenever you open the document, click Automatic.

• To update only when you specify, click Manual.

6 If necessary, choose a character encoding from the Text Encoding pop-up menu. Do this only if you know the preselected encoding is incorrect. If you force an incorrect encoding, character substitution may occur or some characters may appear as question marks.

7 Click Import. If you imported the text by reference, it appears as a text inset.

Importing MIF files

MIF is a text format that lets you exchange information between FrameMaker and other applications. All types of format and page layout information are translated to MIF commands. FrameMaker interprets the commands in the MIF file, turning them back to formatting and layout properties.

You can import the text of a specified flow of a MIF file as you do any FrameMaker file (see "Importing formatted text" on page 376). When you import by copying, all reference and master pages are imported as well as the body pages. The body text appears on a disconnected page. For information on connecting pages and flows, see "Connecting text frames" on page 277. For information on MIF, see the online manual *MIF Reference*.

Viewing the properties or source of text insets

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. You can also display the source of a text inset.

To view the properties or source of a text inset:

1 Click the text inset to select it and choose Edit > Text Inset Properties. You can also double-click the inset.

2 If you want to open the source of the text inset, click Open Source. The source is opened as a FrameMaker document.

Controlling the updating of text insets

You can control how and when text insets are updated from their source documents. For example, you can specify either automatic or manual updating, and you can manually update a single text inset or several insets in the document.

Note: *Text imported by reference is automatically updated only if its datestamp indicates that it is out of date. However, because the time settings may differ between file systems or networks, it's possible that an out-of-date text inset won't be updated automatically. In this case, you can manually update the inset.*

To change the updating of a selected text inset:

1 Choose Edit > Text Inset Properties and click Settings.

2 Specify manual or automatic updating and click Import.

To suppress the updating of all text insets:

1 Choose Edit > Update References.

2 Choose Suppress Automatic Updating from the Commands pop-up menu, and then choose the items you don't want to be updated automatically.

3 Click Set and then click Done.

To manually update a single text inset:

Select the inset, choose Edit > Text Inset Properties, and then click Update Now.

To manually update multiple insets in a document:

1 Choose Edit > Update References.

2 Select the insets you want to update and click Update. On the Macintosh, all subscribers in the document are also updated.


To interrupt the updating of text insets, press Control+c (Windows and UNIX) or Command+period (Macintosh).

Converting text insets to editable text

When you convert a text inset to editable text, FrameMaker no longer updates it. You can convert a single text inset or all the text insets in a document.

To convert one or more text insets to editable text:

1 If you're converting one text inset, click it to select it.

2 Choose Edit > Text Inset Properties.

3 Click Convert to Text, specify whether to convert the selected inset or all insets in the document, and then click Convert.

Locating the source of unresolved text insets

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), an alert message appears. After dismissing the alert message, you can locate the unresolved text inset and then reimport the text.

To locate the source of an unresolved text inset:

1 Choose Edit > Find/Change.

2 Choose Unresolved Text Inset from the Find pop-up menu and click Find to select the first unresolved text inset.

3 Choose Edit > Text Inset Properties, note the pathname and file type of the inset, and then click Cancel.

4 Using the pathname and file type information, reimport the text as described in "Importing formatted text" on page 376 or in "Importing unformatted text" on page 378.


If a document contains many unresolved text insets, it may be more convenient to generate a list of unresolved text insets. For information, see "Generating TOCs and other lists" on page 304.

Using pathnames when importing by reference

When you import by reference with File > Import > File, the pathname to the text or graphic can be either absolute or relative. A *relative pathname* begins at a current folder or one folder up the hierarchy and specifies the file's location from there. An *absolute pathname* begins at the root of the file system (the topmost folder) and fully specifies the file's location from there. The following table lists examples of absolute paths.

Platform	Absolute path
Windows	d:\Graphics\Mountain.gif \\DocServer\Graphics\Mountain.gif
Macintosh	Doc Hard Drive:Graphics:mountain.tif
UNIX	/usr/doc/graphics/mountain.rf

FrameMaker stores relative pathnames whenever possible so that it can find an imported file even when you move both the document and the source file—as long as you keep the files in the same relative locations. If you save the document in a different folder, FrameMaker adjusts the pathnames of the imported files accordingly. However, if the path to the imported file traverses the root (the topmost folder) of the file system, FrameMaker uses an absolute pathname that begins at the root.

To ensure that FrameMaker uses relative pathnames, make sure it does not have to traverse the root to locate the file.

Using the Import command to import graphics

You can use File > Import > File to import graphics on all platforms. (For information on the pathnames used when you import graphics by reference, see "Using pathnames when importing by reference" on page 380.)

However, if your documents will be edited only on a single platform, you might want to consider a platform-specific approach. For information, see "Using OLE (Windows)" on page 384, "Using Subscribe (Macintosh)" on page 386, and "Using graphic insets (UNIX)" on page 388.

You can import a graphic into an anchored or unanchored graphic frame, into a rectangle that serves as a bounding box, or directly onto a page. If you want the graphic to move with text as you edit the document—for example, a graphic in longer documents or documents intended for HTML conversion—import the graphic into an anchored frame. If you want the graphic to stay where you put it—for example, if the graphic is 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 on the basis of the graphic's format. When you import a bitmap image, you also specify its scale in dots per inch (dpi). The larger the dpi value, the smaller the graphic is on the page.

To import a graphic:

1 Specify the position of the graphic by doing one of the following:

- To place the imported graphic in a graphic frame, select an existing frame or put an insertion point in a text frame.
- To place the imported graphic directly on a page, click in the page margin.
- To use a drawn rectangle to define the size of the imported graphic, select an existing rectangle or draw one. (The rectangle is replaced by the graphic when you import.)
- To replace an existing graphic, select it.

2 Choose File > Import > File.

3 Select the graphic file you want to import and the import method. For information, see "Choosing the right method for importing and linking" on page 375.

4 Click Import. If the graphic is not a bitmap, it now appears in the document and you're finished.

5 If the Unknown File Type dialog box appears when you click Import, select a file type in the scroll list and click Convert.

If the imported graphic is not a bitmap, it now appears in the document and you're finished.

6 If you're importing a bitmap graphic, choose a scaling option and click Set.


For the best printed results, choose a dpi value that divides evenly (or leaves only a small remainder) into the resolution of your printer or typesetter. For the best screen representation, choose a dpi value that divides evenly into your screen resolution. (Windows screens typically have a resolution of 96 dpi, Macintosh is usually 72 dpi, and UNIX is usually 90 dpi.)

Importing movies (Windows and Macintosh)

In Windows, you can add movies to your documents by embedding .avi or .mov files. For details see "Using OLE (Windows)" on page 384.

On a Macintosh, you import a QuickTime movie in the same way that you import other graphics. For details, see the previous section. You can also play the movie in a document if QuickTime is installed on your system (but don't rotate the movie—you won't be able to play it until you return it to its original orientation).

When you print a document containing a QuickTime movie, only the movie's title appears.

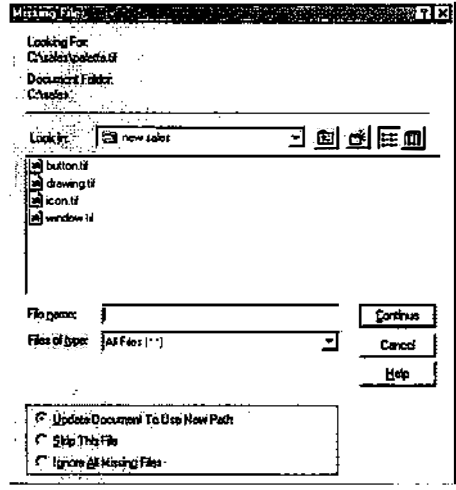
Note: *Don't move or delete the original QuickTime movie file, even if you used the Copy into Document option when you imported it. Even with this option, the entire QuickTime movie is not copied into your document.*

Locating missing graphics

When you open a document that contains graphic files imported by reference, FrameMaker looks for the referenced graphic files. If it can't find a graphic file, it displays a dialog box.

To locate a graphic FrameMaker can't find:

1 When FrameMaker displays the Missing File dialog box, do one of the following:



• To find and display the graphic, use the scroll list to select it and click Update Document to Use New Path. FrameMaker continues to use the new path to try to find other missing files while opening the document. That way, if you move all your graphic files to a new location, you have to specify the new path only once.

• To skip the graphic file, click Skip This 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.

• To skip other graphic files if they can't be found, click Ignore All Missing Files.

2 Click Continue.

To view an imported graphic's filename:

Select the graphic that has been imported by reference and choose Graphics > Object Properties. The graphic's name and path appear in the dialog box.

Changing the size of bitmaps

Changing the dpi value or the scaling factor changes the size of a bitmap graphic.



100 dpi and 150 dpi

To make a bitmap larger or smaller:

Do one of the following:

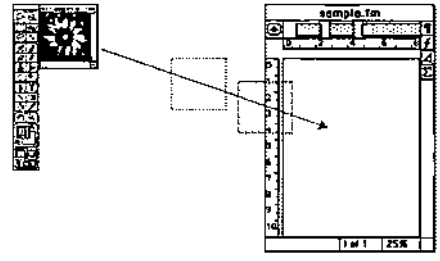
• Select the bitmap, choose Graphics > Object Properties, and click Set dpi.

• Select the bitmap, choose Graphics > Scale, and specify a scale factor.

• Shift-drag a corner handle of the bitmap. Holding down Shift while you drag maintains the proportions of the graphic.

Using drag and drop (Windows and Macintosh)

Import and export are greatly simplified when you can just drag an object to its new location. For example, on the Macintosh, you can drag a graphic from Adobe Photoshop into FrameMaker.



FrameMaker supports the following drag-and-drop operations:

• You can move a graphic from one open FrameMaker document window to another by dragging the graphic. In Windows, you can also

copy it by Control-dragging it or display a context (shortcut) menu when you drop it by right-dragging it.

- You can drag a graphic between a FrameMaker document window and any other application that supports drag-and-drop operations.
- You can drag a graphic file from a folder or the desktop into an open document window.
- In Windows, you can drag one or more document files into the application window to open the files, or you can drag a single file into a document window to embed that file (see "Embedding with OLE" on page 384).
- On the Macintosh, you can drag a graphic to the desktop to create a clipping file or drag a clipping file into a document.


Even though you can't drag and drop selected text, you can move text by dragging the *frame* that contains the text. This is a good way to manipulate small blocks of text in graphic frames, such as captions, callouts, and pull quotes.

Using OLE (Windows)

In Windows, you can use Object Linking and Embedding (OLE) as an alternative to the cross-platform File > Import > File command when importing by reference. Consider the following factors when deciding whether to import text and graphics by reference or to use OLE to embed or link them instead:

- If you want to collapse a linked file to an icon instead of displaying the full contents of the file in your document, use OLE linking.
- If the material you want to include is in a format that FrameMaker can't open, use OLE.
- If you edit or view your document on multiple platforms, use import by reference. OLE works only in Windows.
- If the text or graphics you want to include comes from an application that doesn't support OLE, use import by reference.
- If the material you want to include comes from another FrameMaker document, use import by reference. This provides many more import options.

Embedding with OLE

You can use OLE to embed text or graphics in a FrameMaker document. Embedded material retains its association with the application that created it (but does not retain a dynamic link to its source document). This lets you double-click an embedded object to open the object in the application that created it. Be sure to use an application that supports OLE as a server to create the object you want to embed.

You can also embed multimedia objects such as video or movie files (.avi or .mov files) and sound files (.wav files).

To embed only part of a file with OLE:

1 In its own application, open the file and copy the part you want to embed.

2 In FrameMaker, click where you want to embed the text or graphics and choose Edit > Paste Special.

3 Click Paste, select a format for the object (look for a format that starts with "embedded"), and then click OK.

To embed a whole file with OLE:

Click where you want to embed the text or graphics and choose File > Import > Object. You can then embed a new, empty file or specify an existing one.

To embed by dragging with OLE:

Do one of the following from an application that supports drag-and-drop features:

- To move text or graphics into a FrameMaker document, drag the object.
- To make a copy of an object instead of moving it, Control-drag the object.
- To choose between moving or copying when you release the mouse button, right-drag the object.

Linking with OLE

When you link to an OLE text or graphic object in a document, FrameMaker not only maintains information about the application that created the object but also keeps a dynamic association with the source document. If the source material changes, its representation in the FrameMaker document is updated as well. Be sure to use an application that supports OLE as a server to create the object you want to link to.

You edit linked text or graphics by editing the original source document. For information on editing linked text, see "Editing OLE objects," next.

To link to only part of a file:

1 In its own application, open the file and copy the part you want to link to.

2 In FrameMaker, click where you want to place the linked text or graphics and choose Edit > Paste Special.

3 Click Paste Link, select a format for the object (look for a format that starts with "linked"), and then click OK.

To link to a whole file with OLE:

1 Click where you want to place the linked file and choose File > Import > Object. Click Create from File and then select Link.

2 Specify the file you want to link to and click OK.

Editing OLE objects

You edit an OLE object by using the application that originally created it. When you finish editing, the changes appear in the FrameMaker window.

To edit an embedded OLE object:

Double-click it. The object appears in the creating application where you can edit it.

To edit a linked OLE object:

Do one of the following:

- Double-click the OLE object. Either the object appears in a new window in the application that created it or the menus in the FrameMaker

window temporarily merge with the menus of the creating application. In either case, the changes you make are reflected in the original document.

- Edit the original document outside of FrameMaker, in the application that created it.

For information on editing linked text, see "Controlling the updating of OLE links," next.

Controlling the updating of OLE links

You can control how and when OLE linked objects are updated from their source documents. For example, you can specify either automatic or manual updating, and you can manually update a single linked object or several objects in the document.

You cannot specify updating for OLE embedded objects because an embedded object is not dynamically linked with the original document.

To change the updating of a linked OLE object:

1 Select the object and choose Edit > Links.

2 Select the linked source from the list, click either Automatic or Manual as the update type, and then click OK.

To suppress the updating of all linked OLE objects:

1 Choose Edit > Update References.

2 Choose Suppress Automatic Updating from the Commands pop-up menu, and then choose the items you don't want to be updated automatically.

3 Click Set and then click Done.

To manually update a single OLE link object:

Choose Edit > Links, select the source file you want to update, and then click Update Now.

Canceling OLE links

When you break an OLE link, the text or graphic remains in your document but is no longer updated when the source changes. The text becomes editable.

To cancel an OLE link:

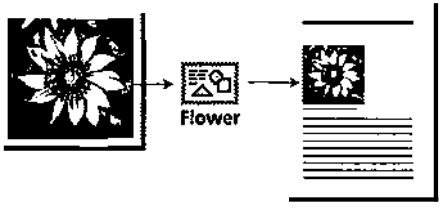
Select the object, choose Edit > Links, and then click Break Link.

Using Subscribe (Macintosh)

You can use Publish and Subscribe on the Macintosh as an alternative to the cross-platform File > Import > File command when importing by reference.

You can share text or a graphic in another application by designating it as a *publisher*. A separate file—an *edition*—is then created. You can place a

copy of the edition—a *subscriber*—in a document, even when the edition is on another disk or on another Macintosh on a network.



From publisher to edition to subscriber

Consider the following factors when deciding whether to import text and graphics by reference or to use Publish and Subscribe instead:

- If you edit or view your document only on a Macintosh, use Publish and Subscribe if you want to share editions with other applications that support Publish and Subscribe.
- If you want to import a portion of a file rather than the entire file, use Publish and Subscribe.
- If you edit your document on multiple platforms, use import by reference. You can then change import settings, open the source file, or update the imported file on any platform.
- If you need to minimize file size, use import by reference. When you import a file by reference, only one copy of the file is stored on disk. When you subscribe to a published edition, three copies are stored on disk: the publisher in the application that created it, the published edition file, and the subscriber in a document.

To subscribe to text or a graphic on the Macintosh:

1 In an application that supports Publish and Subscribe, select text or a graphic and designate it as a publisher. The application saves a copy of the text or graphic (the edition) in a separate file.

2 Do one of the following:

- To place a graphic subscriber in a graphic frame, select the frame or put an insertion point in a text frame.
- To place a graphic subscriber directly on a page, click in the page margin.
- To place a text subscriber, put the insertion point where you want the subscriber to appear.

3 Choose Edit > Subscribe To, select the edition you want, and click Subscribe.

Updating Macintosh subscribers

A subscriber is normally updated automatically whenever its edition changes. However, you can choose to update a single subscriber or multiple subscribers only on request.

To change the updating of a single subscriber:

1 Select the subscriber in your document and choose Edit > Subscriber Options.

2 In the Get Editions area of the dialog box, specify an update method and click OK.

To suppress the updating of multiple subscribers:

1 Choose Edit > Update References and choose Suppress Automatic Updating from the Commands pop-up menu.

2 Select Suppress Automatic Updating of All Text Insets, click Set, and then click Done.

To manually update a subscriber:

1 Select the subscriber you want to update and choose Edit > Subscriber Options.

2 Click Get Edition Now.

Viewing the properties or sources of Macintosh subscribers

You can view subscriber properties to see the edition name, its update setting, and the date it was last modified. You can also display the source of a subscriber.

To view the properties or source of a subscriber:

1 Click the subscriber to select it and choose Edit > Subscriber Options.

2 If you want to display the source in the application that created it, click Open Publisher.

Canceling Macintosh subscribers

When you cancel a subscriber, you break the link to its edition. The subscriber remains in your document, but is no longer updated when the edition changes. The subscriber text becomes editable.

To cancel a subscriber:

1 Select the subscriber and choose Edit > Subscriber Options.

2 Click Cancel Subscriber.

Using graphic insets (UNIX)

A *graphic inset* is a graphic created in a special UNIX application—a graphic inset editor—and then inserted in a document. You use the inset editor to create or modify the graphic inset, or you can start the editor from within FrameMaker.

Your system administrator can configure FrameMaker to use inset editors (see the online manual *Customizing FrameMaker Products*) and can provide more information on the inset editors you can use. In general, you work with graphic insets just as you do with other imported graphics—you can cut, copy, and paste them. (But avoid rotating an inset. When you reopen the graphic inset in the inset editor and then paste it back into your document, the rotation might be lost.)

To create a graphic inset in UNIX:

1 Choose Special > Graphic Inset. If only one inset editor is available, an alert message asks whether you want to start the editor. If more than one inset editor is available, you can choose the editor to start.

2 Use the inset editor to create the graphic inset. For information, see the documentation for your inset editor.

3 Do one of the following:

- To place the inset in a graphic frame, select the frame or put the insertion point in a text frame.
- To place the inset directly on a page, click in the page margin.

4 Choose the command in the inset editor that places the graphic inset in a document.

To edit a graphic inset in UNIX:

1 Double-click the graphic inset. If prompted, 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 document.

Exporting text and graphics

You can use the following techniques to export text and graphics:

- Copy and paste between files.
- Save a document in another format.
- Use print options to create a PostScript or EPS file. For information, see "Printing to a file" on page 45 and "Printing documents as EPS files (Macintosh)" on page 390.
- Create a Portable Document Format (PDF) file (see "Converting documents to PDF" on page 448).
- Save as HTML, which can convert a document's graphics to GIF, PNG, or JPEG format (see "Specifying graphics conversion" on page 443).
- (Windows) Send the document as an e-mail attachment.
- (Macintosh) Publish an edition.
- (Windows and Macintosh) Use drag-and-drop techniques (see page 383).
- (UNIX) Some graphics conversions are available using command-line utilities. For information, see the online manual *Using Filters.*

Using Save As to export to other formats

You can export a FrameMaker document to other applications by saving it in other formats (see "File formats you can save in" on page 40). When you save a document in a word-processing format, it can be used in that application with most of its formatting intact. The available formats depend on the platform you're using and the filters installed. Formats on the Macintosh also depend on which XTND translators are available.

Two text-based file formats—Rich Text Format (RTF) and Maker Interchange Format (MIF)—are *interchange formats.* These are widely recognized by other programs and can often serve as a bridge from FrameMaker to an application that does not recognize the native format.

You can also save a document as a Hypertext Markup Language (HTML) file or as a Portable Document Format (PDF) file (see Chapter 19, "HTML and PDF Conversion").

Sending files in e-mail (Windows)

You can send a document as an e-mail attachment if a mail system compatible with the Messaging Application Programming Interface (MAPI) is installed on your Windows computer. If your computer is not yet configured for MAPI, Windows guides you through a number of dialog boxes when you first try to send a document. If you need assistance, ask your network administrator for help.

To send a document as an e-mail attachment in Windows:

1 Choose File > Send. To send more than one document, hold down Shift and choose Send All Open Documents.

2 Pick an e-mail profile to use from the Choose Profile dialog box, and click OK.

3 Fill in the e-mail fields, and then send the message as you normally do.

Printing documents as EPS files (Macintosh)

An encapsulated PostScript (EPS) file contains PostScript commands for printing an image and usually a bitmap preview for viewing the file online. On a Macintosh, you can print a document or book as a series of EPS files, and then import the files into FrameMaker or use them in other applications. You can also create color separations for these EPS files in FrameMaker.

To export a document or book as a series of EPS files on the Macintosh:

1 Open the document or book and choose File > Print. Click File in the Destination area and then click Save.

2 Choose an EPS format from the Format pop-up menu, specify a name and location for the first EPS file, and click Save. Every page of the document or book is saved as a series of numerically named EPS files.

Publishing (Macintosh)

You can use Publish and Subscribe on the Macintosh to export text to other applications (see page 386). In the FrameMaker document containing the information you want to share, you designate the information as a publisher. This creates a separate file, an edition. You can then place subscribers to that edition in other files. As the information in the edition changes, all subscribers receive updated information.

You can show or hide publisher boundaries as brackets ([ ]). If you cancel a publisher, you break the link to its edition, so its subscribers will no longer be updated.

To publish an edition on the Macintosh:

1 Select the text or graphics you want to publish and choose Edit > Create Publisher.

2 Type the name you want to give to the new edition file and click Publish.

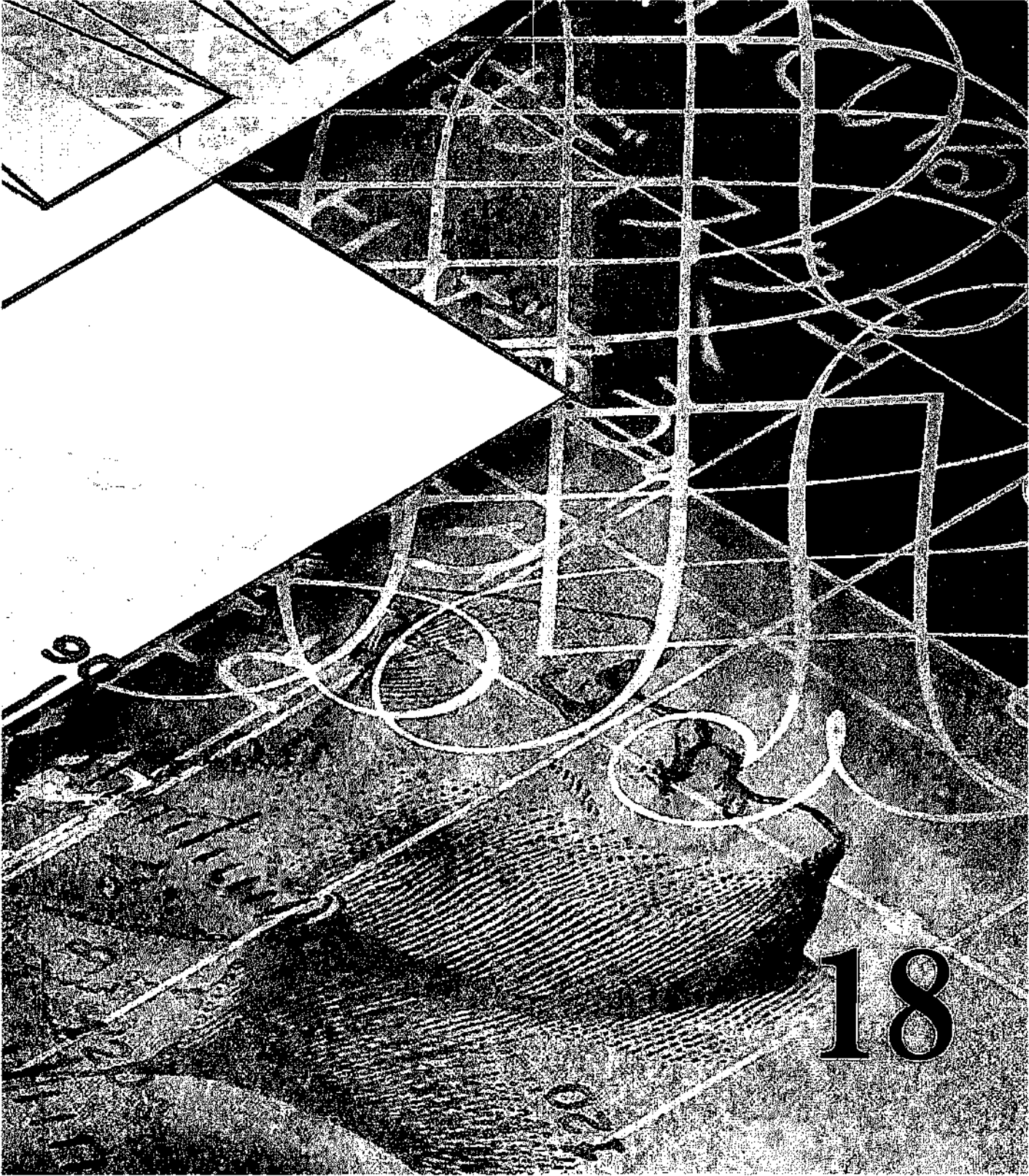
To show Macintosh publisher boundaries:

Choose View > Publisher Boundaries. The delimiting brackets appear in the printed document as well as on-screen.

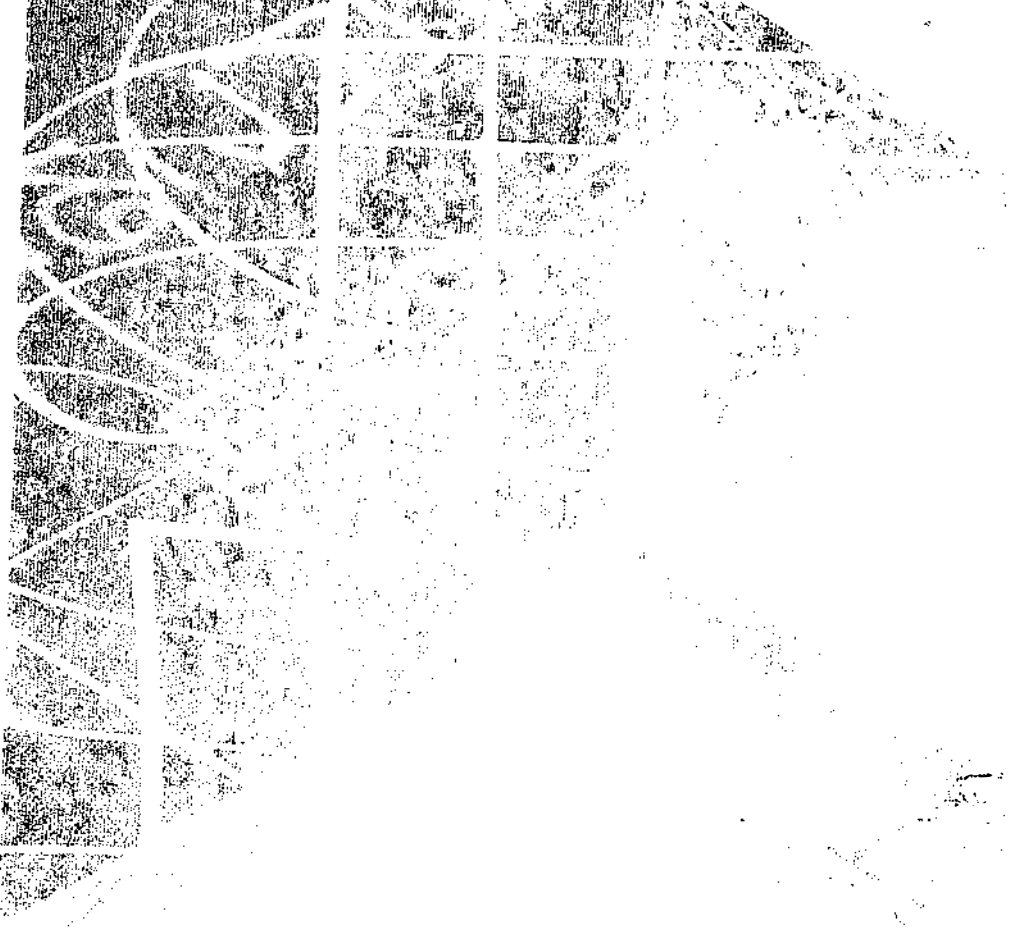
To cancel a Macintosh publisher:

1 Select the publisher and choose Edit > Publisher Options. (If you select a publisher nested inside another publisher, the dialog box that appears refers to the outer edition. To display the correct information on a nested publisher, copy and paste it outside the outer edition.)

2 Click Cancel Publisher. Canceling a publisher does not delete the edition or affect other documents that subscribed to the edition.



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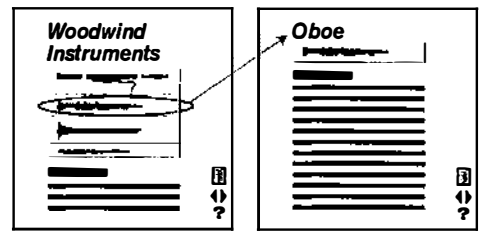
Chapter 18: Hypertext and View-Only Documents

You can distribute hypertext documents online as part of an *online system*. Readers can then page through the contents sequentially or explore at random, following the links you provide. You can create a simple online system from documents that you print (including a table of contents and index that contain hypertext links), or you can create a more elaborate online environment that contains extensive navigation aids such as document maps and navigation buttons.

About online systems

When you set up an online system, you create a series of hypertext documents. In each document, you designate active areas. An active area contains a hypertext command that instructs FrameMaker how to respond when a reader clicks there.

For example, readers might click in a list to learn about a specific item, click part of a graphic for a more detailed drawing of that part, or click in an index for information about the indexed term. They can choose a topic from a pop-up menu, or they can click buttons to navigate through a document.



Click an active area to display related information.

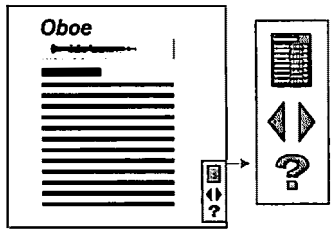
Distributing hypertext documents

You can save a document in Portable Document Format (PDF) or in Hypertext Markup Language (HTML) format, for distribution on the World Wide Web or on an intranet (see Chapter 19, "HTML and PDF Conversion").

You can also distribute your hypertext documents to readers in View Only format. Readers can use FrameMaker to open, read, search, and print such documents and they can use the embedded hypertext links, but they can't edit the documents. If your readers don't have FrameMaker for reading online hypertext documents, you can arrange to distribute FrameViewer with your hypertext system. With FrameViewer, readers can open and navigate through documents and also use standard commands such as Print, Copy, and Find.

Planning online systems

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 often include graphics or symbols (in the same place on each page) that the reader can click to navigate through the system.



Navigation aids are important in an online system.

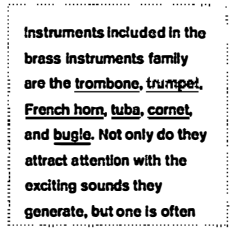
When creating documents for online distribution, follow these simple guidelines:

- Write several short documents rather than one long one. A long document takes longer to open.
- Keep all the documents that make up the system together in one folder. Then you won't have to keep track of pathnames for imported graphics and for hypertext commands that require filename specifications.
- If you'll distribute the documents as FrameMaker files, use fonts that are readily available. You may want to use fonts such as Times and Helvetica because these fonts are available on most computers and on all PostScript printers.

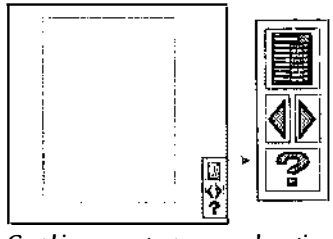
Preparing areas for becoming active

A reader navigates through a hypertext system by clicking active areas—areas containing hypertext commands—or by scrolling up or down. An active area can be a range of text, a graphic, or a part of a 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. When a reader clicks on an active area, the area's hypertext command is executed.

Before you insert a hypertext command, you prepare the area. For example, you can prepare a range of text by making it visually different from surrounding text.



Underlined text on body page can be active.



Graphics on master pages can be active.

Preparing text areas

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.

To prepare a text area:

Do one of the following:

- 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. Only pair kerning, spread, stretch, change bars, language, and case are ignored.



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 (see "Creating new formats" on page 112 and "Applying predefined formats to text" on page 78).

- To designate an entire paragraph as an active area, make sure the paragraph contains no character format changes. As long as the paragraph contains only one hypertext command and no character format changes, FrameMaker highlights the entire paragraph and performs the command when a reader clicks anywhere in the paragraph.
- To designate several adjacent words or phrases in a text string as active areas, use the same character format for the entire text string. Then insert the various hypertext commands. FrameMaker divides the text into active areas based on the locations of the markers. When a reader clicks in the text, FrameMaker determines which active area was clicked and executes the correct hypertext command.



Markers divide text into active areas.

Preparing graphics

Graphics often provide visual cues for hypertext actions. For example, readers can click an icon to display information on a topic, or an arrow to display the next page.

An active area over a graphic can contain a hypertext command that jumps to another location or one that divides the graphic into a matrix of hypertext commands.

Note: *If you're preparing documents for distribution in HTML format, you can use active areas over anchored graphics to create imagemaps. Unanchored graphics on master and body pages won't be converted to HTML.*

To prepare a graphic:

1 Draw a text frame that covers the entire graphic you want to make active. Later, you'll place a hypertext command in the text frame. (When the reader clicks an active text frame, FrameMaker will highlight the entire frame.) For information on using the Text Frame tool to draw a frame, see page 204.

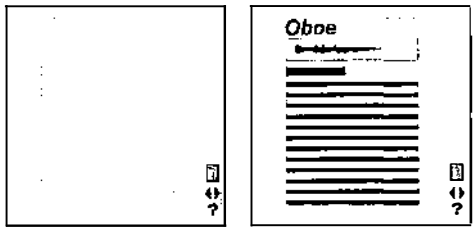
Make sure that the graphic is not set to have text run around it (see page 207).

2 Set the text frame's fill and pen patterns to None (see "Applying and changing drawing properties" on page 198). This makes the text frame transparent so that readers see the graphic behind the frame.

3 Choose Graphics > Bring to Front to place the text frame in front of the graphic, if it isn't already there. (Unless you placed the graphic on the page after drawing the text frame, the text frame will already be in front of the graphic.)

Preparing the same area on multiple 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 buttons on master pages that readers can click on body pages to display the next or previous page.



Navigation buttons on master page appear on body pages.

You can override active master page 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:

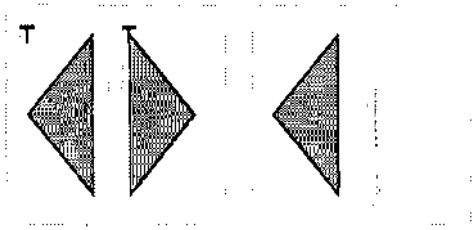
Set up the area on a master page rather than on a body page (see "Preparing text areas" on page 397 and "Preparing graphics" on page 397). The active area appears in the background of corresponding body pages. When your reader clicks that area on a body page, the hypertext command on the master page is activated.

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:

Do one of the following:

- 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.



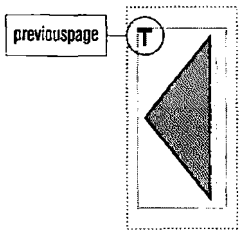
Master page commands can be overridden by graphics on body pages.

• Place a text frame that contains its own hypertext command over the graphic on the body page.

Inserting hypertext commands

You use a marker to insert a hypertext command in a prepared area. After you insert a command and save the document in View Only format, the area becomes active. When a reader clicks an active area, FrameMaker highlights the area and executes the command.

Hypertext commands let your readers navigate through the view-only documents. If you're distributing the documents in View Only format, hypertext commands can also display alerts, close documents, exit FrameMaker, and start other applications.



Hypertext command marker

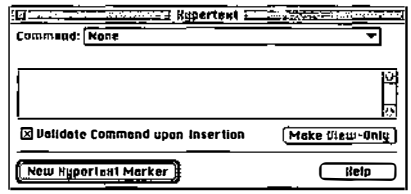
After inserting a hypertext command, you can test the command without saving the document in View Only format (see page 414).

Note: *To insert a hypertext command in a text inset, insert the command in the text inset's source document.*

To insert a hypertext command:

1 Click in a prepared area where you want to insert a hypertext command. (For details on preparing an area, see page 396.) You can insert hypertext commands in text frames but not in text lines (graphic objects created with the Text Line drawing tool). Later text editing will be easier if your marker is at the beginning or end of a word.

2 Choose Special > Hypertext.



3 Choose a hypertext command from the Command pop-up menu. The syntax for the command appears below the pop-up menu, and the command name appears in the text box. (For a description of the items in the Command pop-up menu, see page 400.)

4 Enter parameters in the text box as needed (for example, a filename and linkname). For details, see "Creating hypertext links" on page 404 and the sections that follow it.

Hypertext commands must always appear in lowercase. The parameters can be uppercase or lowercase, but they are case-sensitive. The entire command can be up to 255 characters long. (Each character in a Japanese font counts as two characters.)

Note: *If you enter a filename parameter for a file that isn't in the same folder as the current document, you must specify a path to the document (see page 403).*

5 If you want FrameMaker to validate the command when you insert it, select Validate Command upon Insertion.

6 Click New Hypertext Marker. FrameMaker checks the syntax in the text box. If Validate Command upon Insertion is selected, FrameMaker also validates the command. For example, FrameMaker validates a Jump to Named Destination command by verifying that the destination link exists in the specified document.

If FrameMaker finds an error, an alert message describes it, but the command is still inserted in a marker of type Hypertext. A marker symbol (T) appears at the insertion point when text symbols are visible.

To edit a hypertext command:

1 If the document is in View Only format, do one of the following to change it to Document format:

- If the Hypertext dialog box is open, click Make Editable.
- Press Esc Shift+f l (lowercase *L*) k.

2 Choose Special > Hypertext if the Hypertext dialog box isn't open.

3 Select the marker that contains the command you want to edit. To select a marker in an otherwise empty text frame, double-click anywhere in the frame. You can also use the Find command to find and select hypertext markers. The hypertext command appears in the Hypertext dialog box.



If no other markers appear near the marker you want to edit, drag through the marker to display its hypertext command in the Hypertext dialog box.

4 Edit the command in the text box and click Edit Hypertext Marker. Even if text around the marker is selected, only the command in the marker is affected.

5 If you want to return the document to View Only format, do one of the following:

- Click Make View Only in the Hypertext dialog box.
- Press Esc Shift+f l (lowercase *L*) k.

To delete a hypertext command:

Select the marker that contains the command and press Delete. To select a marker in an otherwise empty text frame, double-click anywhere in the frame. You can also use the Find command to find and select hypertext markers.

Hypertext commands

FrameMaker supports the following hypertext commands. For a full description of each command and its syntax, see the cross-referenced information.

Alert Displays an alert box (see "Creating alert messages" on page 410).

Alert with Title Displays an alert box with a user-defined title (see "Creating alert messages" on page 410). On the Macintosh, the alert message appears without a title.

Specify Named Destination Marks the location that will be displayed when either a Jump to Named Destination or an Open Document command is executed (see "Creating links to specific topics" on page 404).

Jump to Named Destination Displays the location in the current or a different document that contains a corresponding destination link (see "Creating links to specific topics" on page 404). The page is displayed in the current window.

Jump to Named Destination & Fit to Page Displays the location in the current or a different document that contains a corresponding destination link and then resizes the window to fit the document page displayed (see "Creating links to specific topics" on page 404).

Jump to First Page Displays the first page of the current or a different document (see "Creating links to pages" on page 405). The page is displayed in the current window.

Jump to Last Page Displays the last page of the current or a different document (see "Creating links to pages" on page 405). The page is displayed in the current window.

Jump to Page Number Displays a specific page in the current or a different document (see "Creating links to pages" on page 405). The page is displayed in the current window.

Jump to Previous Page Displays the previous page of the current document (see "Creating links to pages" on page 405). The page is displayed in the current window.

Jump to Next Page Displays the next page of the current document (see "Creating links to pages" on page 405). The page is displayed in the current window.

Jump Back Displays the last location the reader viewed (see "Creating a way to retrace steps" on page 407). The page is displayed in the current window.

Jump Back & Fit to Page Displays the last location the reader viewed and then resizes the window to fit the document page displayed (see "Creating a way to retrace steps" on page 407).

Open Document Displays the page that contains the corresponding Specify Named Destination command (see "Creating links to specific topics" on page 404). In Windows and on the Macintosh, the page appears in a new window (leaving the current window open) only if the page is in a different document. On UNIX systems, the page always appears in a different window.

Open Document & Fit to Page Displays the page that contains the corresponding Specify Named Destination command and then resizes the new window to fit the document page displayed (see "Creating links to specific topics" on page 404). In Windows and on the Macintosh, the page appears in a new window (leaving the current window open) only if the page is in a different document. On UNIX systems, the page always appears in a different window.

Open Document as New Opens a document as a new, unnamed document (see "Creating links to new documents" on page 406). The document is displayed in a new window, leaving the current window open.

HYPERTEXT COMMANDS IN HTML AND PDF DOCUMENTS When you convert a document to HTML or PDF, some FrameMaker hypertext commands work in the converted files in the same way that they work in view-only FrameMaker documents, while others do not. The differences are described in the following table.

Command	PDF	HTML
Alert, Alert with Title	Appears as a note, with no title	Does not work
Jump to Named Destination	Works as described in this chapter	Works as described in this chapter
Jump to Named Destination & Fit to Page	Works as described in this chapter, but doesn't fit to page	Works as described in this chapter, but doesn't fit to page
Jump to First Page, Jump to Last Page, Jump to Page Number, Jump to Previous Page, Jump to Next Page	Works as described in this chapter	Does not work
Jump Back, Jump Back & Fit to Page	Does not work	Does not work
Open Document	Works as described in this chapter	Works as described in this chapter
Open Document & Fit to Page, Open Document as New, Open Document at First Page, Open Document at Last Page, Open Document at Page Number	Works as described in this chapter, but doesn't fit to page or open a separate window	Works as described in this chapter, but doesn't fit to page or open a separate window
Pop-up Menu	Does not work	Does not work
Button Matrix	Does not work	Works as described in this chapter, if the text frame containing the command is in an anchored frame in the main text flow
Message Client	Does not work	Does not work
Close Current Window, Close All Hypertext Windows, Exit Application	Does not work	Does not work

Open Document at First/Last Page Displays the first or last page (see "Creating links to pages" on page 405). In Windows and on the Macintosh, the page appears in a new window (leaving the current window open) only if the page is in a different document. On UNIX systems, the page always appears in a different window.

Open Document at Page Number Displays a specific page (see "Creating links to pages" on page 405). In Windows and on the Macintosh, the page appears in a new window (leaving the current window open) only if the page is in a different document. On UNIX systems, the page always appears in a different window.

Popup Menu Displays a pop-up menu of items, each containing a hypertext command (see "Creating pop-up menus" on page 409).

Button Matrix Allows the user to choose from a matrix of items that execute hypertext commands (see "Creating button matrices" on page 407).

Message Client Communicates with other applications (see "Creating ways to start or open" on page 411). Also creates a link to a URL (Universal Resource Locator) on the World Wide Web or an intranet for use in documents that are later converted to HTML (see "Setting up links to URLs" on page 430).

Close Current Window Removes the current window from the screen (see "Creating ways to close or exit" on page 413).

Close All Hypertext Windows Removes all view-only windows from the screen (see "Creating ways to close or exit" on page 413).

Exit Application Exits the FrameMaker application (see "Creating ways to close or exit" on page 413).

About pathnames in commands

Many hypertext commands can contain a pathname. In a pathname, folder levels are separated by a slash (/), even in Windows and on the Macintosh. On UNIX systems, the pathname can include 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 filenaming requirements on different platforms, see the online manual *Working on Multiple Platforms*.

Note: *A hypertext command that contains a single-character filename may not work.*

Relative pathnames FrameMaker searches for a relative pathname beginning in the folder that contains the current document. To go up one folder level, use two periods (..). For example, suppose a hypertext command refers to a document named Trombone that is stored in a folder named Brass. If the Brass folder is in the same folder as the current document, use the pathname Brass/Trombone.

If the Brass folder is at the same level as the folder that contains the current document, use ../Brass/Trombone.

Absolute pathnames FrameMaker searches for an absolute pathname beginning at the top of the file system. In Windows, the absolute pathname begins with the drive specifier, a colon, and a slash. On the Macintosh and on UNIX systems, an absolute pathname begins with a slash. In addition, on the Macintosh the pathname includes the drive name.

For example, suppose a hypertext command refers to a document named Trombone in a folder named Brass. In Windows, if the Brass folder is at the top level of drive E, use the pathname

E:/Brass/Trombone. On the Macintosh, if the Brass folder is at the top level of the drive named MyDrive, use the pathname /MyDrive/Brass/Trombone. On UNIX systems, if the Brass folder is at the top of the file system, use the pathname /Brass/Trombone.

Absolute pathnames are not recognized across platforms, so you should always use relative pathnames if your hypertext documents will be viewed on multiple platforms.

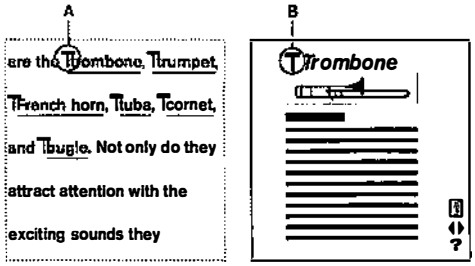
Creating hypertext links

You can create links to information in different locations in the same document or in different documents. For example, you can create links that jump to specific topics or pages, and you can use FrameMaker cross-references as links. You can also allow your readers to retrace their jumps.

If your documents will be distributed in PDF or HTML format, some of the commands described in this section will not work. For details, see page 402.

Creating links to specific topics

You can create a link from one location in a hypertext document to a topic in another location. You use one command to specify the topic you want to display, and you use another to mark the spot on the linked page.



A. Specify the topic to display. B. Mark the topic.

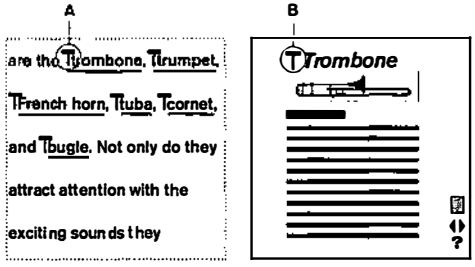
FrameMaker can display the linked information in the same window or in a new window (leaving the current window open).

To identify a linked topic:

Follow the instructions on page 399 to insert a Specify Named Destination command. This command uses the following syntax:

newlink *linkname*

linkname is a word or phrase that identifies the destination. A linkname with a trailing space differs from a linkname without a trailing space. Also, the linkname is case-sensitive; *French Horn* is not the same as *french horn.*



A. Jump to Named Destination command: gotolink trombone
B. Specify Named Destination command: newlink trombone

Note: *If you omit the Specify Named Destination command, the Jump to Named Destination and Open Document commands do nothing when clicked unless they refer to a filename. In that case, the other file will open, showing the first page.*

To create a link to a specific topic:

Follow the instructions on page 399 to insert one of the following hypertext commands:

• To display the linked information in the same window, insert a Jump to Named Destination command. This command uses the following syntax:

gotolink *filename:linkname*

• To display the linked information in a different window, insert an Open Document command. (In Windows and on the Macintosh, the information appears in a new window only if it's in a different document.) This command uses the following syntax:

openlink *filename:linkname*

filename is the name of the document you want to display, and *linkname* is the descriptive word or phrase that you used in the corresponding Specify Named Destination command (see the preceding procedure). When the topic you want to display is in the current document, you don't need to include the filename and colon.

If the linked information is in a document whose page size differs from the current document's, you can display the information in a window that is resized to fit the page. To do this, use the Jump to Named Destination & Fit to Page command or the Open Document & Fit to Page command.

Creating links to pages

You can create a link to the first, last, previous, or next page in the same document or in a different document. You can also create a link to a specific page number.

You can create navigation aids for your readers by creating links to the next and previous pages on the master pages of a document.

To create a link to a page:

Follow the instructions on page 399 to insert one of the following hypertext commands:

• To display the linked page in the same window, insert a Jump to Page Number, Jump to First Page, or Jump to Last Page command. The commands use the following syntax:

gotopage *filename*:*pagenumber*
gotopage *filename*:firstpage
gotopage *filename*:lastpage

• To display the linked page in a different window, insert an Open Document at Page Number, Open Document at First Page, or Open Document at Last Page command. (In Windows and on the Macintosh, the page appears in a new window only if the page is in a different document.) These commands use the following syntax:

openpage *filename*:*pagenumber*
openpage *filename*:firstpage
openpage *filename*:lastpage

Note: *When you insert a hypertext command to display a specific page number, use the actual page number in the document. For example, if the destination document MyDoc uses Roman numerals for page numbers and begins on page v, the command to display the third page would be openpage MyDoc:vii.*

• To display the next or previous page of the current document, insert a Jump to Previous Page or Jump to Next Page command. (If the first page of the document is already displayed, Jump to Previous Page has no effect; if the last page of the document is displayed, Jump to Next Page has no effect.) These commands use the following syntax:

previouspage
nextpage

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, don't include the filename and colon. The following table contains examples of the commands.

Command	Effect
gotopage 8	Displays, in the same window, page 8 of the current document
openpage Trombone:8	Displays, in a different window, page 8 of the document Trombone in the current folder

Creating links to new documents

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.

To create a link to a new document:

Follow the instructions on page 399 to insert an Open Document as New command. This command uses the following syntax:

opennew *filename*

filename is the name of the document you want to use as a template.

Creating links using cross-references

You use FrameMaker cross-references as hypertext links. When the reader clicks a cross-reference in a view-only document, FrameMaker jumps to the source information. If a cross-reference is present

in the same text area as a hypertext command, the cross-reference 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 always causes FrameMaker to open a new window. For information on using MIF to customize hypertext documents, see the online manual *MIF Reference*.

Highlighting markers in view-only documents

When you click an active area in a view-only document, FrameMaker doesn't usually select the cross-reference marker or the hypertext marker that identifies the linked information. (If the document is in Document format, the marker is selected.) You can use MIF to specify that the markers should be selected. For information on using MIF to customize hypertext documents, see the online manual *MIF Reference*.

Creating a way to retrace steps

You can create hypertext commands that allow readers to retrace the links they followed in a document window. (FrameMaker maintains a stack of the last 255 links in each window.) For example, you might use these commands on master pages to create a navigation aid that lets readers retrace their steps (for example, a "Go Back" button).

To create a way to retrace steps:

Follow the instructions on page 399 to insert a Jump Back command. This command uses the following syntax:

previouslink *filename*:*linkname*

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.

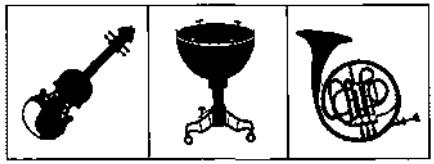


If the linked information is in a document whose page size differs from the current document's, you can display the information in a window that is resized to fit the page. To do this, use the Jump Back & Fit to Page command.

Creating button matrices

You can create a button matrix of equal-sized cells that correspond to hypertext commands. When a reader clicks a cell in a hypertext document, FrameMaker highlights the cell and executes the

corresponding hypertext command. For example, the button matrix could be a group of musical instruments.



A button matrix with three cells

If the reader clicks one of the instruments, FrameMaker highlights the area around the instrument and executes the corresponding hypertext command.

To create a button matrix:

1 Put the graphic in your document. The graphic should be appropriate for setting up as a matrix of equal-sized cells.

2 Prepare the graphic to be an active area by drawing a single text frame around the entire graphic (see page 397).

3 Double-click in the text frame to place the insertion point.

4 Follow the instructions in page 399 to insert a Button Matrix command in the text frame (leaving the frame otherwise empty). This command uses the following syntax:

matrix *rows columns flowname*

rows and *columns* are the numbers of rows and columns in the matrix, and *flowname* is the flow tag of a text frame you'll create on a reference page. The flowname cannot contain embedded spaces.

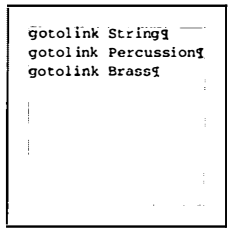
For the example shown earlier, with two rows and three columns, and with the corresponding hypertext commands in a reference page text frame whose flow tag is InstrumentTypes, the command would be as follows:

matrix 1 3 InstrumentTypes

5 Draw a text frame on a reference page and assign a flow tag that matches the flowname in the Button Matrix command. For information on using the Text Frame tool to draw a text frame, see page 204. For information on assigning flow tags, see page 277.

6 Double-click in the text frame to place the insertion point, and then 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.

The following illustration shows possible contents of the text frame for the example discussed at the beginning of this section.

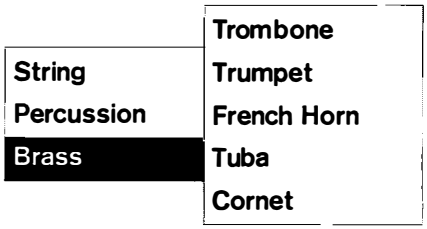


Text frame on reference page

Note: *You can use the Hypertext dialog box as an aid in identifying the syntax of the commands you need to type, but type the commands directly in the text frame. Don't use the Hypertext dialog box to insert a hypertext marker.*

Creating pop-up menus

Your hypertext document can display a pop-up menu from which readers can choose an item that links to related information. The pop-up menu can, in turn, contain one level of submenus.



Hypertext pop-up menu and submenu

To create a pop-up menu of hypertext commands:

1 Create the graphic button that the reader will click to display the pop-up menu.

2 Prepare the graphic to be an active area by drawing a single text frame around the entire graphic (see page 397).

3 Follow the instructions on page 399 to insert a Popup Menu command in the text frame (leaving the frame otherwise empty). This command uses the following syntax:

popup */flowname*

flowname is the flow tag of a text frame you'll create on a reference page. The flowname cannot contain embedded spaces.

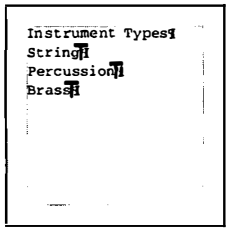
4 Draw a text frame on a reference page and assign a flow tag that matches the flowname in the Popup Menu command. For information on using the Text Frame tool to draw a text frame, see page 204. For information on assigning flow tags, see page 277.

5 Double-click in the text frame to place the insertion point, type the menu name in the flow, and press Return. (The first item in the text frame will always be considered as the title of the pop-up menu.) The menu name appears on UNIX systems, but not in Windows or on Macintosh systems.

6 Type a menu item in each subsequent paragraph. The contents of each paragraph will appear as a command in the pop-up menu. If necessary, widen the text frame so that each item fits on a single line.

7 Follow the instructions on page 399 to insert a hypertext command in each line except the line that contains the menu name. For example, you can use a Jump to Named Destination command to display related information, an Alert command to provide a short message to your readers, or a Popup Menu command to display a submenu of items.

The text frame for the pop-up menu described at the beginning of this section might look like the following.



Text frame for sample hypertext pop-up menu

Note: *You won't be able to open the pop-up menu until you insert at least one hypertext marker on the reference page.*

To create a pop-up submenu of hypertext commands:

1 Locate the text frame on the reference page that describes the pop-up menu for which you want to create a submenu.

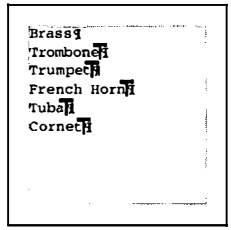
2 Follow the instructions on page 399 to insert a Popup Menu command in the line for which you want the submenu to appear. This command uses the following syntax:

popup *flowname*

flowname is the flow tag of a text frame you'll create on a reference page. The flowname cannot contain embedded spaces.

3 Create the submenu by following steps 4 through 7 of the previous procedure. However, you can't use a Pop-up Menu command in the submenu, because you can't create a submenu within a submenu.

The text frame for the submenu shown at the beginning of this section would have a flow tag of Seals. It might look like the following.



Text frame for sample hypertext pop-up submenu

Creating alert messages

You can create a hypertext command to display an alert box that contains a title (in Windows and on UNIX systems) and a message. If you don't specify a title in the command, the alert box contains the default title *FrameMaker—Alert*.

In Windows and on UNIX systems, you can also specify a default title for all hypertext alert boxes in a document.

To create an alert message:

Follow the instructions on page 399 to insert one of the following hypertext commands:

• To display a hypertext alert box with the default title, insert an Alert command. This command uses the following syntax:

alert *message*

• In Windows and on UNIX systems, to display an alert box with a title other than the default, insert an Alert with Title command. This command uses the following syntax:

alerttitle *title*:*message*

title is the title of the alert box and *message* is the text you want to display in the alert box. The total number of characters in *title* and *message* cannot exceed 243 characters. (Each character in a Japanese font counts as two characters.)

For example, the following command displays an alert box whose title is *Unavailable* and whose alert message is *This document is currently under construction.*

alertitle Unavailable:This document is currently under construction

To specify a default title for alerts in a document (Windows and UNIX):

1 Draw a text frame on a reference page and assign the frame a flow tag of AlertTitle. For information on using the Text Frame tool to draw a text frame, see page 204. For information on assigning flow tags, see page 277.

2 Type the default title in the text frame. For example, if *Not Available Online* appears in the flow, 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 Alert with Title command in the following form, without a title:

alerttitle :*message*

Creating ways to start or open

You can use hypertext commands to start other applications. For example, a reader can start a database application from a view-only document to retrieve and display data.

You can also use hypertext commands to accomplish the following platform-specific tasks:

• On the Macintosh, if AppleScript software is installed on your system, you can start an AppleScript script. For example, a reader can start a script that modifies a document or opens a spreadsheet to display data. For information on AppleScript, see the online manual *Using AppleScript* and the documentation that came with your AppleScript software.

• On UNIX systems, you can execute UNIX commands. For example, a reader can click an active area to remove backup files. You can also send messages to FrameMaker clients by using the Application Program Interface (API). For details, see the *FDK Programmer's Guide*, which is included in the Frame Developer's Kit™.

In addition, you can create hypertext commands that link to a Universal Resource Locator (URL) when the document is converted to Hypertext Markup Language (HTML). For information, see page 430.

To create a way to start another application in Windows:

Follow the instructions on page 399 to insert a Message Client. This command uses the following syntax:

message system *application path,windowstate*
message winexec *application path,windowstate*

application is the application filename, *path* is an optional command-line parameter, and *windowstate* specifies the state of the window that is opened. The possible *windowstate* values are as follows.

State	Meaning
SW_HIDE	Hides the window and activates another window
SW_MAXIMIZE	Maximizes the specified window
SW_MINIMIZE	Minimizes the specified window and activates the next window in the Alt+Tab order
SW_RESTORE	Activates and displays the window (If the window is minimized or maximized, Windows restores it to its original size and position.)
SW_SHOW	Activates the window and displays it in its current size and position
SW_SHOWDEFAULT	Sets the show state based on the SW_ flag specified in the STARTUPINFO structure passed to the CreateProcess function by the program that started the application
SW_SHOWMAXIMIZED	Activates the window and displays it as a maximized window
SW_SHOWMINIMIZED	Activates the window and displays it as a minimized window
SW_SHOWMINNOACTIVE	Displays the window as a minimized window (The active window remains active.)
SW_SHOWNA	Displays the window in its current state (The active window remains active.)
SW_SHOWNOACTIVATE	Displays a window in its most recent size and position (The active window remains active.)
SW_SHOWNORMAL	Activates and displays a window (If the window is minimized or maximized, Windows restores it to its original size and position.)

If you omit the *windowstate* value, the window state is set to SW_SHOWNORMAL. For more information on window states, see the documentation for the Windows software development kit.

For example, to start PaintBrush and open the Ship.pcx file on drive C in a minimized window, you would use the following command:

message system pbrush.exe C:/Ship.pcx, SW_MINIMIZE

For an explanation of the use of the forward slash rather than the backslash, see "About pathnames in commands" on page 403.

To create a way to open a file or another application on the Macintosh:

Follow the instructions on page 399 to insert a Message Client command. This command uses the following syntax:

message openfile *pathname*

pathname is the path to the file, application, or AppleScript script.

For example, to start the application that created the Tuba.eps file (located in the Graphics folder on the drive named HardDrive) and to open the file, use the following command:

message openfile /HardDrive/Graphics/Tuba.eps

To run the DocReport script (located in the Scripts folder on the drive named HardDrive), use the following command:

message openfile /HardDrive/Scripts/DocReport

For an explanation of the use of the forward slash in pathnames, see page 403.

To create a way to execute commands on UNIX systems:

Follow the instructions on page 399 to insert a Message Client command. This command uses the following syntax:

message system *command*

command is the text of any UNIX command you can type in a UNIX window.

For example, the following command lists the contents of the folder in which the document resides when the reader clicks an active area that contains the command

message system ls ~

In this example, FrameMaker passes the command to sh(1) for execution; stdout and stderr are redirected to your UNIX window. FrameMaker waits for the command, script, or program to finish before continuing.



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 folder that contains the current document and FMDOCNAME is set to the name of the current document.

To create a way to send messages to an application that is already running on UNIX systems:

Follow the instructions on page 399 to insert a Message Client command. This command uses the following syntax:

message *application parameters*

application is the name of the application, and *parameters* are any parameters to be passed to the application. For example, the following command causes an API client named ProductionCheck to process all files in the Guide folder:

message ProductionCheck Guide/*

Creating ways to close or exit

The hypertext commands for closing files and exiting FrameMaker work in the same way as the commands on the File menu.

If a reader executes a command to close a file that contains unsaved changes, FrameMaker prompts the reader to save the document before closing.

To create a way to close documents:

Follow the instructions on page 399 to insert one of the following hypertext commands:

- To create a way to close the current view-only document, insert a Close Current Window command. This command uses the following syntax:

quit

- To create a way to close all open view-only documents, insert a Close All Hypertext Windows command. In Windows and on UNIX systems, the Close All Hypertext Windows command also closes view-only documents that have already been closed to an icon. This command uses the following syntax:

quitall

To create a way to exit FrameMaker:

Follow the instructions on page 399 to insert an Exit command. This command uses the following syntax:

exit

Testing and troubleshooting hypertext documents

After writing the document and inserting hypertext commands, test the commands. To speed up your testing of hypertext commands, you can execute commands without first changing a document to View Only format and you can force the destination of a hypertext jump to appear in a separate window.

You can also have FrameMaker validate all the commands in a document.

Note: *On UNIX systems, to switch several documents at a time between View Only format and Document format, use fmbatch (see page 501).*

To execute a hypertext command without changing the document to View Only format:

Do one of the following:

- (Windows) Control-Alt-click an active area.
- (Macintosh) Control-Option-click an active area.
- (UNIX) Control-right-click an active area.

FrameMaker executes the hypertext command as if the document were view-only.

To force the linked destination to appear in a different window:

Do one of the following:

- (Windows) If the document is view-only, Shift-click an active area. Otherwise, Control-Alt-Shift-click an active area.
- (Macintosh) If the document is view-only, Shift-click an active area. Otherwise, Shift-Control-Option-click an active area.
- (UNIX) If the document is view-only, Shift-click an active area. Otherwise, Shift-Control-right-click an active area.

To validate all the commands in a document:

Press Esc v h. FrameMaker checks each hypertext command. For example, if a command refers to another document, FrameMaker attempts to open

the document; and if the command refers to a named destination, FrameMaker verifies that the destination exists. If any problems are found, an alert message describes the first error in the document.

Generating a list or index of hypertext markers

You can quickly check the text of hypertext commands by generating a list or index of hypertext markers. The generated list will contain the text of all hypertext markers inserted on body pages and their page numbers.

To generate a list or index of markers:

Use the File > Generate/Book command. For information on generating from a document, see "Generating TOCs and other lists" on page 304 and "Generating indexes" on page 313. For information on generating from a book, see "Adding files to books" on page 337 and "Generating and updating books" on page 345.

Troubleshooting hypertext documents

Errors in hypertext commands or in their placement in the document, or formatting errors in active areas can cause problems with the behavior of the commands. For example, an incorrect linkname will prevent a hypertext command from being executed correctly.

This section describes some common hypertext problems and possible solutions.

Clicking an active area has no effect Check for the following possible problems:

- The document might not be in View Only format.
- If the active area is highlighted correctly when you click, a command may contain a linkname that doesn't match the corresponding link at the destination.
- If the active area isn't highlighted when you click, the marker that contains the hypertext command may not be of type Hypertext.
- If the active area is over a graphic, the text frame containing the hypertext marker may not be in front of the graphic.

The jump goes to the wrong page The command may contain a correct filename but an incorrect linkname or an invalid page number.

Only part of the active area is highlighted Check for the following possible problems:

- If you're trying to make a range of text active, the text may contain an extra hypertext marker or the character format may change within the range of text.
- If you're trying to make an entire empty text frame active, the frame may contain an extra empty paragraph, or extra characters or markers.

Items are missing from a pop-up menu The hypertext commands for missing menu items are incorrect. If the pop-up menu does not appear, no commands are correct.

Adding hypertext links to generated files

When you generate an index or a list such as a table of contents, FrameMaker can insert hypertext links in the generated file. These links can greatly enhance the usefulness of an online index or table of contents. When you click a topic or page number in the generated file, the appropriate page in the linked document is displayed.

You can use generated hypertext documents for the following purposes:

- To distribute a generated table of contents or index in View Only format as a navigation tool for your online documents.
- To debug documents. (For example, when creating an index, you can generate the index with hypertext links and then quickly fix index marker errors by jumping to the exact locations of the markers.)


You can activate the hypertext commands in a generated document without changing the document to View Only format (see "Testing and troubleshooting hypertext documents" on page 414).

To add hypertext links to a generated file:

Do one of the following:

- From an individual FrameMaker document, select Create Hypertext Links when you use the File > Generate/Book command or the File > Utilities > Compare Documents command.

For complete information on using the Generate/Book command to generate lists and indexes, see "Generating TOCs and other lists" on page 304 and "Generating indexes" on page 313. For complete information on using the Compare Documents command, see page 367.

- From a book file, choose File > Set Up File in the book and then turn on Create Hypertext Links in the Set Up dialog box (see "Adding files to books" on page 337).

Adding linked thumbtabs to indexes

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 starting with that letter.

To add thumbtabs to a generated index:

1 Generate the index with hypertext links, in the way described in the preceding section.

2 In the index, choose View > Master pages.

3 On a master page, use the Text Line tool to create the thumbtab letters and then draw a text frame over each thumbtab letter (see page 204).

4 Insert a Jump to Named Destination command in the text frame for each thumbtab letter (see "Creating links to specific topics" on page 404). For example, in the text frame over the thumbtab letter *A*, insert a Jump to Named Destination command with the syntax *gotolink A*. (Each group title in the index already contains a corresponding Specify Named Destination command as a result of generating the index with hypertext links.)

If the index contains a collapsed group title, such as *P–R*, insert a Jump to Named Destination command with the same syntax 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*.

5 If the index uses more than one master page, copy the thumbtabs to the other master pages.

6 Save the index in View Only format.

Controlling how source documents are displayed

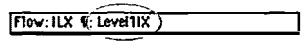
When you click an active area in a generated hypertext document, FrameMaker opens a new window and displays the correct page in the linked document. The linked marker or paragraph is highlighted and centered in the window. You can change the display of the linked document—for example, to display the document in the current window.

To control how a linked document is displayed:

1 Generate the hypertext document (see page 416).

2 In the generated file, choose View > Reference Pages and display the reference page that contains the special flow for the generated file.

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, and the special flow for an index is tagged IX. To determine a flow's tag, click in the text frame and look in the Tag area of the status bar.



3 In the special flow, find the paragraph that controls how the linked document is displayed.

In a table of contents, the paragraph's tag is ActiveTOC; in an index, it's named ActiveIX. The paragraph will look something like this:

openObjectId <$relfilename>:<$ObjectType> <$ObjectId>

To determine a paragraph's tag, click in the paragraph and look in the Tag area of the status bar.

4 Edit the paragraph so that it contains the display command you want.

For a list of the commands you can use, see page 418. In Windows and on UNIX systems, in addition to the commands in the list, you can use the Message Client command to send messages to applications that use the 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.

DISPLAY COMMANDS FOR GENERATED DOCUMENTS When the reader clicks an active area in a generated hypertext document, FrameMaker displays the correct page in the linked document. The following table lists some of the hypertext commands you can use to control how the linked document is displayed. You should type the commands exactly as shown. Use the <$relfilename> building block to create a relative pathname from the generated file to the linked document, and use <$fullfilename> for a full pathname. (The following examples show only the <$relfilename> building block.)

To display	Type
The linked marker or paragraph centered in the current window	gotoObjectId <$relfilename>:<$ObjectType> <$ObjectId>
The linked marker or paragraph centered in the current window resized to fit the page	gotoObjectIdFitWin <$relfilename>:<$ObjectType> <$ObjectId>
The linked marker or paragraph centered in a new window	openObjectId <$relfilename>:<$ObjectType> <$ObjectId>
The linked marker or paragraph centered in a new window resized to fit the page	openObjectIdFitWin <$relfilename>:<$ObjectType> <$ObjectId>
The page containing the linked marker or paragraph, with nothing highlighted, in the current window	gotopage <$relfilename>:<$pagenumonly>
The page containing the linked marker or paragraph, with nothing highlighted, in a new window	openpage <$relfilename>:<$pagenumonly>
An alert that displays the filename of the linked document	alert <$relfilename>

Overriding the generated file's display command

You can specify how a specific document is displayed, overriding the display command contained in the ActiveTOC or ActiveIX paragraph in the generated file. 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.

To override the display command for a linked document:

1 Draw a text frame on a reference page in the linked document and assign the frame the flow tag HypertextLinks. For information on using the Text Frame tool to draw a text frame, see page 204. For information on assigning flow tags, see page 277.

2 Do one of the following:

• To display the document in the same window, type **gotoObjectId**

• To display the document in a different window, type **openObjectId**

3 Save the document and regenerate (see "Generating TOCs and other lists" on page 304 and "Generating indexes" on page 313). When you click in the generated file, the linked document will be displayed using the command specified in the HypertextLinks flow, rather than using the command in the ActiveTOC or ActiveIX paragraph.

Incorporating generated files into an online system

If you're using a generated hypertext document as a debugging tool, the document is ready to use when you generate it. If, however, the generated file is going to be part of a hypertext online system, you may want to do the following before distributing the documents to your readers in View Only format:

• Set up links from the documents back to the generated file. You can 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.

Working in view-only documents

You distribute online documents in View Only format. Readers can view, search, copy, and print—but not edit—a view-only document using FrameMaker, FrameMaker+SGML, or FrameViewer.



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. To display a view-only document without the menu bar or scroll bars, see the online manual *MIF Reference.*

To save a document in View Only format:

1 Choose File > Save As.

2 Specify View Only format and click Save.

You can't save a book file in View Only format. However, if a reader opens a book file from FrameViewer, it will automatically open in View Only format.

Note: *On UNIX systems, to switch several documents at a time between View Only format and Document format, use fmbatch (see page 501).*

To change a document to View Only format without saving it:

Do one of the following:

• Choose Special > Hypertext and click Make View-Only.

• Press Esc Shift+f l (lowercase *L*) k.

To change a view-only document to Document format:

Do one of the following:

• If the Hypertext dialog box is open, click Make Editable.

• Press Esc Shift+f l (lowercase *L*) k.

Note: *On the Macintosh, to look at a locked, view-only document in FrameMaker, open it with the File > Open command, or drag the document onto the FrameMaker application icon. Double-clicking the icon of a document saved in View Only format opens the document in FrameViewer (if available), not FrameMaker.*

Navigating to specific pages

You can display pages in view-only documents by following links in the documents, by using controls in the document window, or by using menu commands.

To navigate to specific pages in view-only documents:

Do one of the following:

• Click any active area whose hypertext command jumps to a different location.

• Click the page buttons in the status bar.

• Use the scroll bar or the Page Up and Page Down keys.

• Use the commands on the Navigation menu.

• (Windows and UNIX) Right-click anywhere in the document window and choose a command from the context menu.

• (Macintosh) Hold down Control while pressing the mouse button anywhere in the document window, and choose Go Back from the context menu.

If you customized your view-only window environment as described in the online manual *MIF Reference*, some viewing methods may not be available.

Jumping backward or forward

You can jump back to previous links and then jump forward again.

To jump backward:

Do one of the following:

• Click an active area with a Jump Back or Jump Back & Fit to Page command.

• Choose Navigation > Go Back.

• (Windows and UNIX) Right-click anywhere in the document window and choose Go Back from the context menu.

• (Macintosh) Hold down Control while pressing the mouse button anywhere in the document window, and choose Go Back from the context menu.

To jump forward:

Press Esc v Shift+n. You can jump forward only if you have previously jumped backward.

Opening a new window

If a link is set to display a document in the current window, you can force FrameMaker to open a new window instead.

To open a new window when following a link:

Shift-click an active area. In Windows and on the Macintosh, FrameMaker doesn't open a new window unless the link is to a different document.

Using 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 an editable document, search for text and paragraph tags, and print.

View-only document windows use three FrameMaker menus: File, Edit, and Navigation. In order to use some menu commands, you have to place an insertion point. Other menu commands, such as Edit > Copy, require you to select items.

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*.

To place the insertion point or to select an object in a view-only document:

Do one of the following:

- (Windows and UNIX) Control-click.
- (Macintosh) Command-click.

To select in a view-only document:

Do one of the following:

- (Windows and UNIX) Hold down Control and select text as you would in an editable document.
- (Macintosh) Hold down Command and select text as you would in an editable document.

Working with FluidView format

A document in FluidView™ format appears as one continuous page, without headers, footers, or margins. When you resize the document window, the text is reformatted to fit within the width of the new window.

In most cases, you work with FluidView documents just as you work with view-only documents. For example, you can click hypertext links to navigate within and between documents. A FluidView document differs from a view-only document in the following ways:

- Because the document appears on-screen as one continuous page, clicking the Page Up or Page Down button on the bottom of the document window displays the previous or next screenful of text instead of the previous or next page.
- The printed version of a FluidView document may not match what you see on the screen. You can use headers and footers, multiple columns, and other page layout options to optimize the printed appearance of the document.

To change a document to FluidView format:

1 Click in the text flow that you want to display in FluidView format. Only one text flow in a document can appear in FluidView format at a time.

2 Press Esc Shift+v Shift+f. This hides the headers, footers, margins, page breaks, and any background graphics; removes multicolumn formatting; and makes the document view-only.

3 Close the document, and when an alert message prompts you to save the document, click Save.

When you save the document in FluidView format and then reopen it, the main text flow (usually tagged *A*) will always appear, even if a different text flow was visible when you changed the document to FluidView format. However, when you click an active area that points to another flow, the new flow appears in the FluidView document.

To change a FluidView document back to Document format:

Press Esc Shift+f l (lowercase *L*) k.

To restore margins, headers, and footers to a FluidView document but keep it view-only:

Press Esc Shift+v Shift+f.

Creating documents for use in FluidView format

Keep in mind the following points as you create FluidView documents:

- When users open a FluidView document that contains more than one text flow, the main flow always appears in the document window. However, you can create links to other flows in the document. When a user clicks an active area that points to another flow, the new flow appears in the FluidView document.
- Although a FluidView document may be as long as any FrameMaker document, try to keep the length of each document under 200 inches. A page break will appear every 200 inches, and footnotes and graphic frames anchored at the bottom of a column will appear at these page breaks instead of at the end of the document.
- Set anchored frames in your document to one of three anchoring positions: Below Current Line, At Insertion Point, or Run into Paragraph. Frames anchored at positions other than these may produce unexpected results.
- You can change the view-only window display or selectively disable menu commands. These 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*.

Changing side-head area setup

You can use side heads in one format and not in the other. For example, you can display headings in the side-head area in FluidView and in the body-text area in the printed copy.

To set up different side-head areas in Document format and FluidView format:

1 Use Format > Page Layout > Column Layout to turn side-head formatting on or off while the document is in Document format (see "Creating side heads" on page 98).

2 Press Esc Shift+v Shift+f to change the document to FluidView format.

3 Press Esc j p Shift+s to turn side-head formatting on or off in FluidView. For information on setting up side heads, see page 98.



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Chapter 19: HTML and PDF Conversion

Hypertext Markup Language (HTML) and Portable Document Format (PDF) are popular formats used on the World Wide Web of the Internet and in companywide Web sites, called *intranets*. If preserving the graphic identity or page layout of your document is important, consider creating PDF files for use on the Web.

This chapter describes how to prepare your documents and convert them to either format. The information on PDF starts on page 448.

About HTML

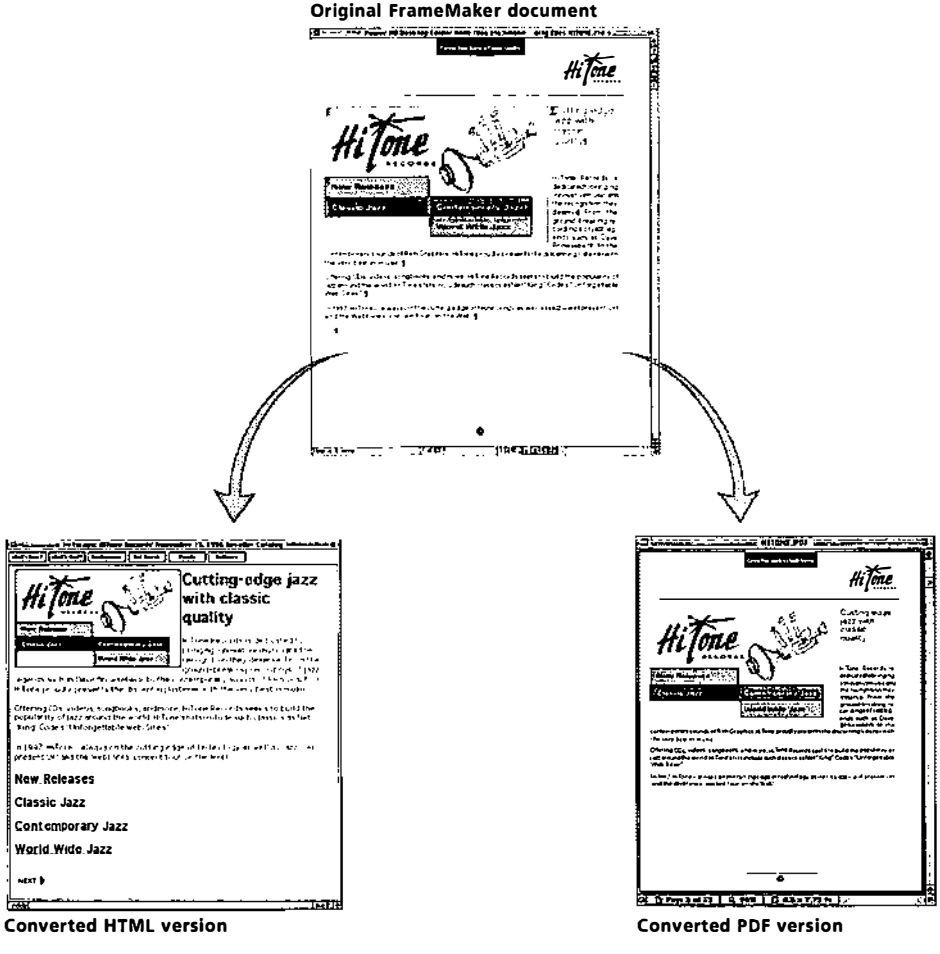
HTML provides a set of elements that describe how each part of a document is used. For example, the P (paragraph) element is a normal body paragraph; the H1 element is a first-level heading.

HTML elements are conceptually similar to FrameMaker formats. For example, HTML documents contain body paragraph elements and heading elements, while FrameMaker documents contain paragraphs that use formats designed for body paragraphs and headings. However, HTML elements differ from FrameMaker formats in the following ways:

- HTML documents use a standard set of elements, while FrameMaker documents can contain any number of formats and use any names for the formats.
- HTML elements describe the structure of a document, not its format. A Web browser such as Netscape Navigator or Microsoft Internet Explorer displays each element in a predefined format. Two browsers may display the same element in different ways.

HTML documents can contain hypertext links to locations in the same file or to other files anywhere on the Internet or on an intranet. Most of the FrameMaker hypertext commands (see Chapter 18, "Hypertext and View-Only Documents") are automatically converted to HTML hypertext commands when you save a document as HTML.

CONVERTING A FRAMEMAKER DOCUMENT TO HTML AND TO PDF



Preparing documents for conversion to HTML

You can write a single version of a document and then use that version to create HTML documents and PDF documents. You don't have to reformat or rewrite your document to produce Web pages.

HTML is an online format optimized only for certain kinds of presentation. For example, you can't easily create a two-column layout in HTML. For this reason, don't expect your HTML documents to look identical to the FrameMaker originals. If design items in your documents have no acceptable equivalents in HTML, consider converting to PDF instead of HTML. For information, see "About PDF" on page 448.

What is converted

When you save a document as HTML, FrameMaker converts only the contents of the main text flow (the flow tagged A). Make sure the text in flow A is the one you want and that all of flow A is connected (see "Connecting text frames" on page 277).



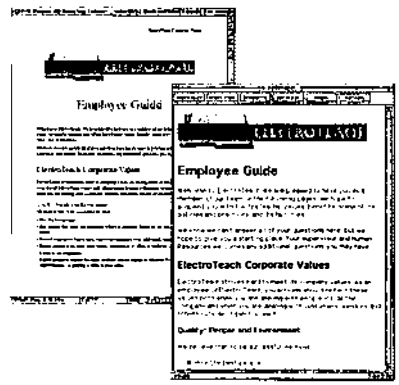
If your document has multiple flows that you want preserved, consider saving as PDF instead (see page 448). When you save as PDF, each flow can be converted to an Acrobat article thread.

The contents of anchored frames in the flow are converted to graphics (including the text within anchored frames). Graphics and text not in the main flow—whether they appear on master pages (such as headers and footers) or directly on body pages (such as graphics placed directly on the page)—are not converted to HTML. If you want to duplicate the effect of headers so that text or graphics appear at the top of every HTML document (for example, text for a logo or navigation buttons), use macros, as described in "Using HTML conversion macros" on page 441.

Some FrameMaker hypertext commands convert to equivalent HTML links. For details, see page 402.

Using templates that map well to HTML

To minimize fine-tuning when you save documents as HTML, create your documents from one of the supplied FrameMaker templates. The formats of these templates map easily to HTML equivalents.



Sample chapter template before and after HTML conversion

Changing format overrides to new formats

Accurate conversion depends on the consistent use of formats in your FrameMaker documents. Results will not be as good if your documents use format overrides instead of defined formats stored in the catalogs. For example, a document that uses a Body format for both regular paragraphs and headings will not convert to HTML accurately. If your documents use overrides extensively, you should create and apply a new set of formats based on the overrides.

To create and apply a new set of formats based on the format overrides in a document:

1 Choose File > Utilities > Create & Apply Formats, and then click Continue. Any format used in the document but not stored in a catalog is added to the catalog. Also, if the document uses a format with a format override, a separate format based on the override is added to the catalog.

For example, if a document contains a Body paragraph with an override (for example, a left indent), that paragraph will be tagged Body1. If another override is used for Body (for example, a default font change), any paragraph using that override will be tagged Body2.

2 Open the Paragraph Catalog and Character Catalog to inspect the new tags. You may want to rename some formats to make them easier to interpret (see "Renaming and deleting formats" on page 112). For example, you could rename Body1 to BodyIndent.

Setting up links to URLs

A uniform resource locator (URL) is the location of a document anywhere on the Internet or on an intranet. You can embed a special marker in a FrameMaker document that becomes a link to a URL when the document is saved as HTML or PDF.

To add a link to a URL:

1 Select the text you want to be linked to a URL and apply a character format to it. For example, you might apply an underline format to the words *Click here for more information.*

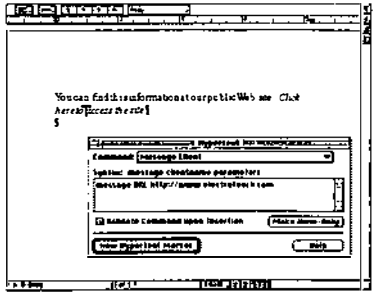
For more information, see "Preparing areas for becoming active" on page 396.

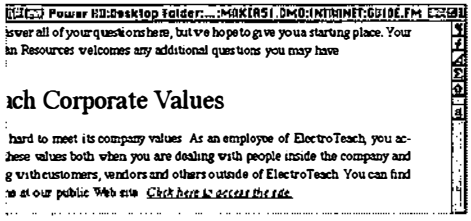
2 Click in the formatted area, and choose Special > Hypertext.

3 Choose Message Client from the Command pop-up menu and enter the following in the Syntax text box: **message URL *url_name***

Replace *url_name* with the URL you want to link to. For example, to link to the Adobe Systems home page, you would enter the following: **message URL http://www.adobe.com**

4 Click New Hypertext Marker. When the document is converted to HTML or PDF, clicking on the formatted text displays the location specified by the URL.





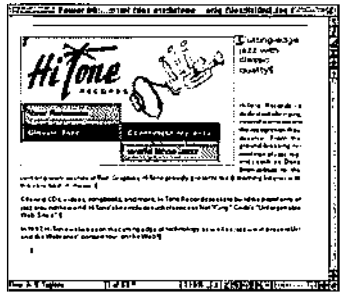
FrameMaker marker (top) and after conversion to an HTML link (bottom)

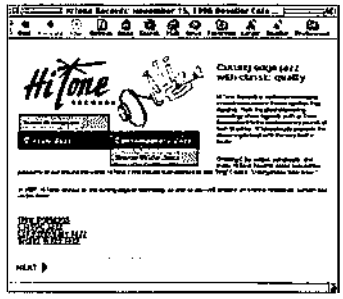
Setting up links for imagemaps

Imagemaps on a Web page are graphics with areas defined as links. Imagemaps can add visual interest to otherwise plain text-only links to Web pages.

When you convert a FrameMaker document to HTML, graphics in the main text flow are automatically converted to imagemaps if you have set them up correctly. They convert in these cases:

- When a graphic in an anchored frame has one or more text frames on top of the graphic, and these text frames have valid hypertext markers in them. For details, see "Preparing graphics" on page 397.





FrameMaker text frames (top) and after conversion to an HTML imagemap (bottom)

- When a graphic in an anchored frame has a rectangular matrix of links over it. For details, see "Creating button matrices" on page 407.

Saving documents as HTML

To convert a FrameMaker document to HTML, simply save it as HTML. Saving as HTML sets up definitions for how each FrameMaker format will convert, or *map*, to an HTML element.You can also save a whole book as HTML (see page 445).

FrameMaker automatically creates the mappings of formats to HTML elements upon initial conversion to HTML, but you can fine-tune them, and make further customizations, by creating conversion macros. For information, see "Adjusting HTML mappings" on page 433 and "Fine-tuning mappings by editing reference pages" on page 437.

Even if you plan to fine-tune the conversion, you should begin by saving as HTML. You can then fine-tune the automatic mappings as needed.

To save a document in HTML format:

1 Choose File > Save As and choose HTML from the pop-up menu.

2 Give the filename an extension of .html, specify the file location, and click Save. The converted file is saved where you specified.

3 Open the HTML file in a Web browser to examine the converted file. If it meets with your approval, you're done.

If you'd like to refine some mappings, continue by following the steps in "Adjusting HTML mappings" on page 433.

Preserving the FrameMaker look by using stylesheets

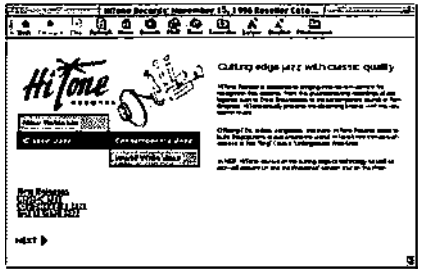
HTML was designed not as a formatting language but as a way of presenting the structure of a document (its semantics). In some cases, however, you may be concerned with the format of a document as well as its semantics. You may want to preserve the look of your FrameMaker document more than is possible with regular HTML elements alone.

For example, suppose you have a document that uses blue 20-point type for the first letter of a chapter. An HTML *stylesheet* can preserve unique formatting of this kind.

An HTML cascading stylesheet is created for you with the same name as the main HTML file but with an extension of .css. It is a standardized file format that many Web browsers can use and interpret. A .css stylesheet contains formatting specifications that can duplicate the font, style, size, indents, spacing, and margins of the original document.

The HTML file contains a reference to a .css stylesheet. If the browser finds the stylesheet, it uses the information to format the Web page. If

the browser doesn't support stylesheets, it uses only the built-in formatting defined for each HTML element.



Converted file with stylesheet (top) and without a stylesheet (bottom)

To use an HTML stylesheet:

1 Save your document as HTML (see page 432). A .css file is automatically created in the same folder as the HTML file.

2 Copy the HTML stylesheet (.css file) to the Web server in the same folder as your HTML files.

Note: *Stylesheets are sometimes called "cascading" because their format rules can overlap—and collide—with rules in other stylesheets, such as a personal stylesheet set up by someone viewing your converted document. The stylesheet that FrameMaker creates takes precedence over other stylesheets.*

Adjusting HTML mappings

You can change the following HTML mappings:

- Paragraph formats map to HTML elements to define paragraph-level formatting (including formats for body paragraphs and headings).
- Character formats map to HTML elements to define character-level formatting (including common mappings for bold or emphasized text).
- Cross-reference formats map to HTML conversion macros to specify how cross-references will be displayed in HTML.

After you save a document in HTML format, you typically will want to refine the mappings.

Note: *A few mappings cannot be changed. For example, a FrameMaker table always converts to an HTML table and an anchored frame always becomes an image with an IMG tag.*

To set up or modify HTML mappings:

1 Choose File > Utilities > HTML Setup. FrameMaker either loads the current mappings into the HTML Setup dialog box or, if no mappings have been created yet, creates default mappings.



2 From the Map pop-up menu, choose the type of formats to map (paragraph, character, or cross-reference).

3 Specify a mapping by choosing a FrameMaker format from the From pop-up menu and an HTML element or macro from the To pop-up menu.

For information on the contents of the To pop-up menu, see the tables beginning on page 435 and "Mappings for cross-reference formats" on page 437.


You can click in the document to select a format to adjust. The HTML Setup dialog box immediately shows the current mapping for the format you click.

4 Choose from the following options:

• If you're mapping paragraph formats and want to include the paragraph autonumber in the converted text, click Include Autonumber. (You don't have to include an autonumber for items in a list.)

• If you're mapping to Heading (AutoLevel) and want to start a new Web page whenever this format is found, click Start New, Linked Web Page. For more information on mapping headings, see the following section, "Autolevel mappings for headings."

Use this option to break up a long FrameMaker document into several HTML files, each linked to a single file. Whenever the specified format is found, FrameMaker leaves the heading in the original file (the *parent* file) and makes it a link to a *subdocument* whose content starts at the heading format and continues until the next instance of the format. For information on using this setting to simulate a table of contents, see page 446.

• If you're mapping to the List Item element for either a bulleted or numbered list and want to specify how many levels deep the item is (which usually translates as how much the item should be indented), enter a Nest List at Depth value. For more information on mapping lists, see "Mappings for lists" on page 435.

5 Click Change to accept the mapping.

6 Repeat steps 2 through 5 as needed.

7 When you finish specifying mappings, close the dialog box and save the document as HTML, as described on page 432.

Autolevel mappings for headings

HTML supports six levels of headings. You can convert any FrameMaker paragraph format to a heading by mapping it to Heading (Autolevel), as described in step 3 of the preceding procedure. With this special mapping, headings in the document are mapped to H1, H2, and so on, according to their relative levels and based on the highest-level mapping in that file. The advantage of this method is that if the document is broken into separate HTML files, each will always have an H1 mapping and an appropriate hierarchy of headings under that H1.

For example, suppose your document uses Title1, Title2, and Title3 formats. When you convert to HTML, you might want to break up the document into two files, and the second file might contain

only instances of Title2 and Title3. The autolevel feature ensures that Title2 maps to H2 in the first file but maps to H1 in the second file.

For more information on how the autolevel headings work when you choose to split a document into separate HTML files, see page 439.

If you want to fine-tune the autolevel mechanism or override the autolevel function and make mappings to specific heading levels, you must edit special tables on reference pages of the FrameMaker document. For more information, see "Using the Headings reference page" on page 438 and "Editing the HTML Mapping table" on page 440.

Mappings for lists

FrameMaker automatically maps bulleted lists to HTML unordered lists and numbered lists to HTML ordered lists. If you want to override the automatic mapping, you must edit a table on the HTML reference page of the FrameMaker document (see page 440).

In the HTML Setup dialog box, you can define the level of a list by specifying a value for Nest List at Depth. Typically, a browser displays different levels with different amounts of indentation.

You can include a FrameMaker autonumber in the converted text by choosing Include Autonumber. However, most browsers provide their own bullet characters and numbers with lists, so you are unlikely to use this option when converting lists.

Paragraph-based HTML elements		
Mapping name in the HTML Setup dialog box	**Equivalent HTML element**	**Recommended use and typical appearance in a Web browser**
Heading (AutoLevel)	H1, H2, H3, H4, H5, H6	Six levels of headings, with H1 the largest and most prominent
Paragraph	P	Normal body paragraphs
Preformatted Text	PRE	Text that closely matches the original's line breaks and spacing; usually achieved by using multiple spaces and a fixed-width font
Address	ADDRESS	Text set off from the rest denoting an e-mail address or the like; usually indented or italicized
Block Quote	BLOCKQUOTE, BQ	A quotation set off by indenting
List Item	LI	Item preceded by a bullet character when it is part of an unordered list (UL) or by a sequential number when it is part of an ordered list (OL)
List Item (Continued)	P	Body paragraph within a list (not preceded by a bullet or number)
Data Term	DT	Item (such as a term in a glossary) that is to be defined by a DD element

Paragraph-based HTML elements		
Mapping name in the HTML Setup dialog box	**Equivalent HTML element**	**Recommended use and typical appearance in a Web browser**
Data Definition	DD	Definition of a term (a DT), such as in a glossary item
Data Definition (Continued)	P	Body paragraph within a data definition
Throw Away	None	Discarded during conversion to HTML

Character-based HTML elements		
Mapping name in the HTML Setup dialog box	**Equivalent HTML element**	**Recommended use and typical appearance in a Web browser**
Blink (Netscape)	BLINK	Blinking text (may not work in non-Netscape browsers)
Citation	CITE	A citation, usually displayed in italics or underlined
Code	CODE	Computer-program code, usually displayed in a fixed-width font such as Courier
Definition	DFN	Definition of a term, usually displayed in italics
Emphasis	EM	Emphasized text, usually displayed in italics or underlined
Keyboard	KBD	Text that a user types, usually displayed in a fixed-width font such as Courier
Sample	SAMP	Text that appears in a fixed-width font such as Courier
Short Quotation (Intl)	Q	Quotation of less than a full paragraph, usually displayed in quotation marks (may not be recognized by all browsers)
Span (CSS)	SPAN	Text that is displayed as specified in an HTML stylesheet (by browsers that recognize stylesheets) or without special formatting (by other browsers). For use when no other mapping is appropriate—for example, for a drop cap.
Strong	STRONG	Emphasized text, usually displayed in bold
Typewriter	TT	Text in a fixed-width font such as Courier
Variable	VAR	A special term or, in programming contexts, the name of a variable, usually displayed in italics or bold italics
Plain Text	None	Text that cancels any previous character mapping, displayed as appropriate for the paragraph mapping
Throw Away	None	Discarded during conversion to HTML

Mappings for cross-reference formats

A typical cross-reference in a printed document such as *See "Syntax" on page 8 for more information* loses its meaning in HTML documents, which don't use page numbers. For this reason, cross-references are mapped by default to a predefined cross-reference conversion macro called See Also. The See Also macro changes the cross-reference so that it refers to the text of the paragraph but not to the page number (for example, *See "Syntax" for more information*). The cross-reference text in the original document becomes an HTML link in the converted document regardless of what format is used.

You can modify the See Also macro, or you can create your own macros and then map cross-reference formats to them.

When you first map a cross-reference, the See Also macro is the only macro in the To pop-up menu in the HTML Setup dialog box. If you create other conversion macros, they will appear in this menu as well. For information on how to create and edit cross-reference macros, see "Using HTML conversion macros" on page 441.

Two other choices in the To pop-up menu let you map a cross-reference in other ways:

- Choose Original Cross-Reference Format to leave the text of the cross-reference unchanged.
- Choose Throw Away to delete the text of the cross-reference.

Fine-tuning mappings by editing reference pages

You can fine-tune the HTML conversion by editing tables on two special FrameMaker reference pages: the Headings page and the HTML page. If you're converting a book, the reference pages are BookHeadings and BookHTML (see "Converting books to HTML files" on page 445). For general information on reference pages, see "Working with reference pages" on page 281.

Note: *Don't edit the information on the HTML reference page unless you're familiar with HTML coding. Most users won't need to edit the tables on this page.*

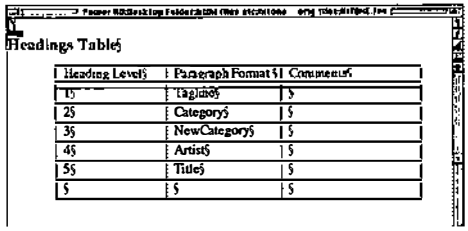
The reference-page tables are set up automatically the first time you save as HTML or the first time you choose File > Utilities > HTML Setup. The Headings reference page contains one table, the Headings table. The HTML reference page contains the following tables:

- The HTML Mapping table (see "Editing the HTML Mapping table" on page 440)
- The HTML Options table, which contains the settings you make in the Options dialog box (see "Specifying graphics conversion" on page 443)
- The HTML System Macros table, the HTML Cross-Reference Macros table, and the HTML General Macros table (see "Using HTML conversion macros" on page 441)
- The HTML Character Macros table (see "Converting special characters" on page 442)

If the tables are large, the HTML reference page will continue on for as many pages as needed.

Using the Headings reference page

The Headings table on the Headings reference page identifies which tags should be used for headings and what their hierarchy is.


Headings Table¶

Heading Level¶	Paragraph Format¶	Comments¶
1¶	Tagline¶	¶
2¶	Category¶	¶
3¶	NewCategory¶	¶
4¶	Artist¶	¶
5¶	Title¶	¶
¶	¶	¶

A Headings table on the Headings reference page

Using this table, you can modify the mappings for headings and the relative levels of those headings.

To help you identify heading formats, text appears in the same font and point size as the headings do on the body pages of the document.

For more information on how the Headings table works when you split up documents into separate HTML files, see page 439.

To edit the Headings table:

1 Choose View > Reference Pages and display the Headings page. (The Headings page will not exist until you save the document as HTML or choose File > Utilities > HTML Setup.)

2 Edit the table by doing the following:

• To map a different paragraph format to a heading level, change the paragraph tag in the second column but don't change the heading level number. For example, if a Tip format were mapped to a level-6 heading but you wanted the Warning format to be mapped at that level instead, you could just change *Tip* to *Warning* in the second column.

• To change the relative levels of headings, change the numbers in the Heading Level column. For example, to promote the Warning format to a higher heading level, change the 6 to a 5 in the Heading Level column. (You don't have to change the order of the rows when you do this, but you might want to so that the table is easier to read.)

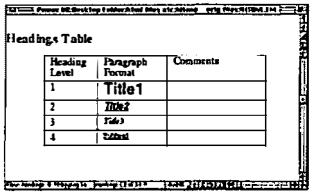
• To map several formats to a single level of heading, use the same number in the Heading Level column. For example, the Note and Warning formats are both level-6 headings in the following Headings table.

Heading Level	Paragraph Format	Comment
6	Note	
6	Warning	

• To add a format to the Headings table, press Control+Return to add a row and then fill in the Heading Level and Paragraph Format columns.

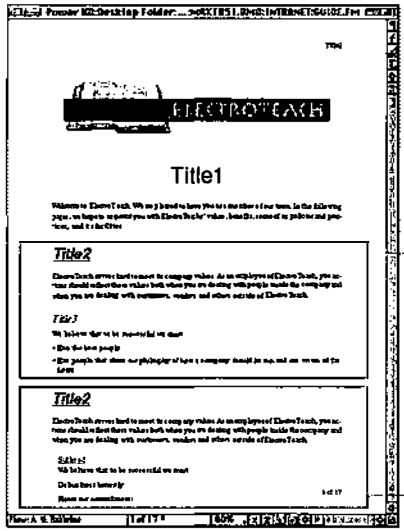
3 If you removed or added formats in the Headings table, change their mappings in the HTML Mapping table as well. For example, you might change the entry of a SubHead format from H* to P in the HTML Mapping table. For more information on editing this table, see the next section.

HOW THE HEADINGS TABLE WORKS

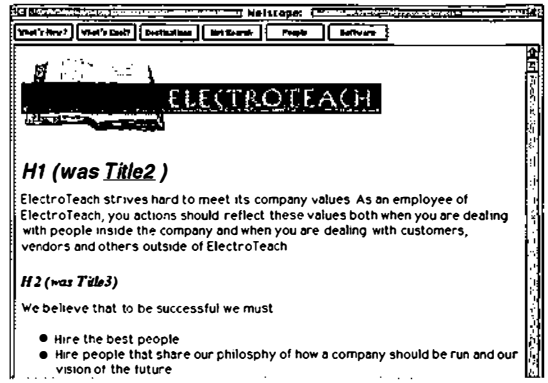

Heading Table

Heading Level	Paragraph Format	Comments
1	Title1	
2	Title2	
3	Title3	
4	Title4	

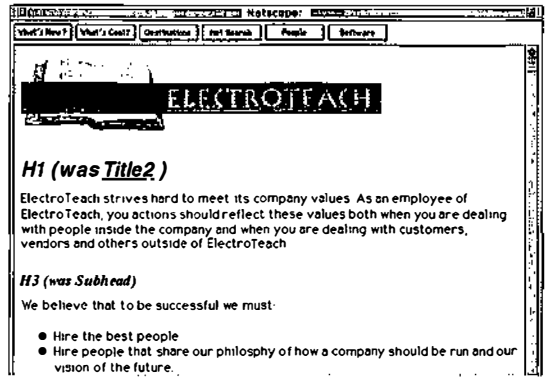
The Headings Table sets up the relative hierarchy of the headings.



Suppose your document contains headings in the order shown.



If you decide to break up the document at Title2, you will produce two sub-documents. Whatever format you split on, that format becomes H1 in the subdocuments. FrameMaker preserves the relative levels of headings even though they always start with H1. For example, in the second subdocument, Subhead appears as an H3.

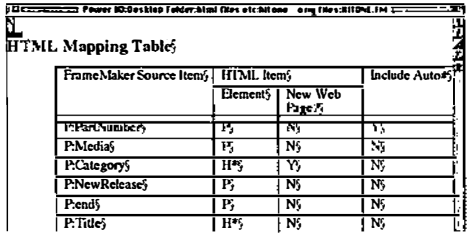


Editing the HTML Mapping table

The HTML Mapping table on the HTML reference page contains the mappings you assign using the HTML Setup dialog box. (Mappings for headings appear here too, as well as in the Headings table.) You usually don't need to edit this table directly, but you might want to edit it in the following situations:

- To bypass the autolevel mapping of headings and instead map a format explicitly to a heading level such as H1 or H2 (see "Autolevel mappings for headings" on page 434)
- To change many mappings quickly or globally by using Edit > Find/Change
- To change a bulleted list to a numbered list, or the reverse
- To use an HTML element that is not available through the HTML Setup dialog box
- To document the mappings in the Comments column of the table

The first column of the Mapping table contains a FrameMaker source item prefixed with a letter that indicates the type of item: *P* for paragraph format, *C* for character format, or *X* for cross-reference format. The second column can contain the name of an HTML element or an HTML conversion macro name.


HTML Mapping Table

FrameMaker Source Item	HTML Item		Include Auto#
	Element	New Web Page	
P:PartNumber	P	N	Y
P:Media	P	N	N
P:Category	H*	Y	N
P:NewRelease	P	N	N
P:end	P	N	N
P:Title	H*	N	N

The HTML Mapping table on the HTML reference page

For information on defining macros, see "Using HTML conversion macros" on page 441.

To edit a mapping using the HTML Mapping table:

1 Choose View > Reference Pages and display the HTML page.

2 Locate the Mapping table on that page, and find the format whose mapping you want to change.

3 Make the following changes as needed:

- In the Element column, enter the name of the HTML element or conversion macro that the format is to be mapped to. If you're not sure of the correct HTML element name, see the tables that start on page 435. Enter **H*** to map to an autolevel heading.
- In the New Web Page column, enter **Y** or **Yes** to create a separate HTML document whenever this format is found. Otherwise, enter **N** or **No**.
- In the Include Auto# column, enter **Y** or **Yes** to include the full autonumber text of this format in the conversion. Otherwise, enter **N** or **No**.

• In the Comments column, enter any text to document the purpose of the mapping, special cases, and so on. You can leave this column blank.

An edited row might look like this.

FrameMaker Source Item	HTML Element	New Web Page?	Include Auto#?	Comments
P:Fnote	FOOTNOTE	N	N	Won't work in all browsers

Using HTML conversion macros

You can use the following tables on the HTML reference page to define HTML conversion macros:

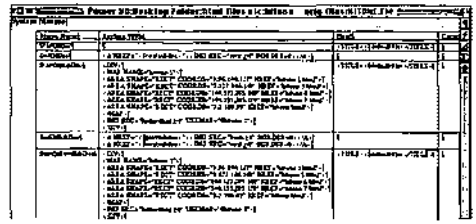
• The HTML System Macros table, which contains eight predefined macro names you can use to perform special functions at the start or end of Web pages

• The HTML Cross-Reference Macros table, which contains replacement text for FrameMaker cross-references

• The HTML General Macros table, which contains general-purpose macros that you define (for example, the title of the converted document)

After a macro is defined, you can use it by name in other macros or you can map to it in the HTML Mapping table. The macro name appears in the To pop-up menu in the HTML Setup dialog box, so you can map a format to it without editing the Mapping table directly.

For examples of HTML conversion macros, see the reference pages of the templates that are included with FrameMaker.



Sample conversion macros

To create or edit an HTML conversion macro:

1 Choose View > Reference Pages and display the HTML page.

2 Edit a macro in a table, or create a new row (by pressing Control+Return) and enter a new macro starting with a macro name. (You can't add macros to the HTML System Macros table; you can only edit their replacement text.)

Replacement text can contain any mixture of text, HTML codes, and FrameMaker building blocks (see "Using building blocks in HTML conversion macros," next). Be sure you enter valid HTML code; FrameMaker doesn't check the HTML syntax.

Using building blocks in HTML conversion macros

You can use the following building blocks in HTML conversion macros to include special types of text.

Building block	Description
<$paratext> <$paratag> <$paranum> <$paranumonly>	See "Using building blocks for source information" on page 160 and "Using building blocks for character formats" on page 161 for details.
<$variable[*varname*]>	Contains the text of the variable
<$defaulttitle>	Contains the text of the first heading that appears in the current document
<$nextsubdoc>	Contains the URL of the next HTML subdocument
<$prevsubdoc>	Contains the URL of the previous HTML subdocument
<$parentdoc>	Contains the URL of the parent HTML document

Building blocks are enclosed in angle brackets (< and >) and begin with a dollar sign ($). Enter these building blocks in all lowercase letters.

Note: *The General Macros table has a column labeled "Replace With (in HEAD)." Use this column to define a title (see page 444) or to include special, advanced information about the HTML document (such as keywords that a search engine might use). To fill in this column, you need to know the HTML elements that are permitted in the HEAD section of an HTML document.*

Redefining HTML system macros

HTML system macros are a special case because you can redefine them but cannot add new ones.

These macros are especially useful when splitting up documents into separate HTML files. For example, you can define the StartOfSubDoc macro so that your company logo appears at the top of every new Web page.

In these descriptions, the *parent* document refers to the first Web page and *subdocument* refers to a document linked to the parent document.

System macro	Use
StartOfDoc	Inserts text at the top of the topmost Web page
EndOfDoc	Inserts text at the end of the topmost Web page
StartOfSubDoc	Inserts text at the top of each subdocument except the first and last
EndOfSubDoc	Inserts text at the end of each subdocument except the first and last
StartOfFirstSubDoc	Inserts text at the top of only the first subdocument created
EndOfFirstSubDoc	Inserts the replacement text at the end of only the first subdocument
StartOfLastSubDoc	Inserts the replacement text at the top of only the last subdocument created
EndOfLastSubDoc	Inserts the replacement text at the end of only the last subdocument

Converting special characters

The FrameMaker character set and the character set used by HTML and the Web are not identical. Because of this, some characters are mapped to

substitutions when converted to HTML. Some mappings are internal and rely on special HTML codes called *entities.* (For example, curved quotation marks are changed to the entity for straight ones.) Other substitutions are defined in the Character Macros table. For example, an em dash is defined as two hyphens. If no mapping exists, the character is ignored.

The following characters either have special predefined mappings or are treated specially.

Character	Default mapping	Where defined
… (ellipsis)	... (three periods)	Character Macros table
— (em dash)	-- (two hyphens)	Character Macros table
– (en dash)	- (one hyphen)	Character Macros table
¢ (cent)	¢ (HTML character reference)	Character Macros table
© (copyright)	© (HTML character reference)	Character Macros table
® (registered)	® (HTML character reference)	Character Macros table
° (degree symbol)	° (HTML character reference)	Character Macros table
< and > (angle brackets)	< and > (HTML entities)	Internal
" and " (curved quotation marks)	" (HTML entity for ")	Internal
& (ampersand)	& (HTML entity)	Internal

You can add or change mappings for characters by adding or editing entries in the Character Macros table. As the previous table illustrates, you can map characters to text or to HTML character and entity references (which begin with an ampersand and end with a semicolon).

To add or change a mapping for a special character:

1 Choose View > Reference Pages and display the Character Macros table on the HTML page.

2 Edit a mapping, or create a new row (by pressing Control+Return) and enter a new mapping.

If you're unsure how to type a special character in the first column, look up its keystroke in Appendix A, "Typing in Dialog Boxes."

For example, to set up mappings for the dagger character, the trademark symbol, and the ae ligature, you could add the following rows.

Character	Replace With	Comments
†	*	Dagger symbol
™	(tm)	Trademark symbol
æ	æ	ae maps to the HTML entity reference for that symbol

Specifying graphics conversion

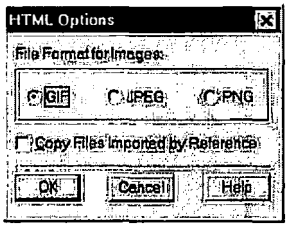
When you save documents as HTML, all graphic files imported by copying into anchored frames are converted to GIF format unless you specify that all the graphics be saved to another format. Each graphic is saved to a separate file. Text in anchored frames is also converted to GIF.

Graphic files imported by reference are left in their original locations unless you specify that copies should be made. In that case, the formats are

inspected and converted as needed (preserving the dpi scaling of a graphic). The new files are created in the same folder as the HTML document.

To specify the file format for converted graphics:

1 Choose File > Utilities > HTML Setup and then click Options.



2 Specify the graphic file format you want. You can choose from the following formats:

- GIF is best used for nonphotographic images with no more than 256 colors.
- JPEG format is best used for images with a wide range of color such as a 24-bit photograph.
- PNG format is a public-domain format that's becoming more widespread on the Web. Like GIF, it is best used for images with no more than 256 colors.

3 Click OK.

To specify that graphics imported by reference be copied and converted:

1 Choose File > Utilities > HTML Setup and then click Options.

2 Select Copy Files Imported by Reference.

Customizing titles

The title of an HTML document appears in the window's title bar. When you add a bookmark to that page, it also appears in the bookmark list. Initially, the <$defaulttitle> building block is used for the title, which uses the first heading in an HTML file as the title for that file. Usually, the default titles are satisfactory. However, you can specify a different title by editing macro tables on the HTML reference page.

System macros and general macros can define two sets of replacement text—one that appears in the body of the code and one that is inserted in the head area.

To modify a title, you change the replacement text within the HEAD element (most other HTML elements are entered in the BODY element). The most common element allowed in HEAD is TITLE.

You can modify the default title, or you can remove the default title and set up your own titles.

To modify the default titles:

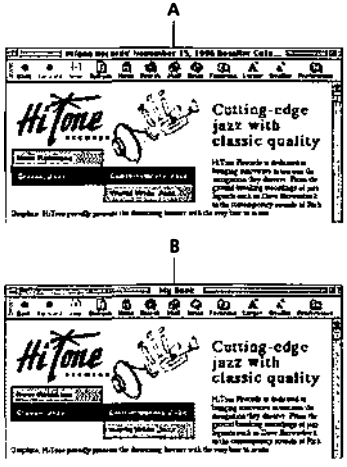
1 Choose View > Reference Pages and display the HTML reference page.

2 In the HTML System Macros table, locate the four system macros that set up the default titles. Initially, they use the <$defaulttitle> building block to assign the first heading in the file as the title. You can change any or all of them.

Macro Name	Replace With (in BODY)	Replace With (in HEAD)
StartOfDoc		<TITLE><$defaulttitle></TITLE>

3 Change the default macro in the third column. For example, the following macro changes the text of the title to static text.

Macro Name	Replace With (in BODY)	Replace With (in HEAD)
StartOfDoc		<TITLE> My Book </TITLE>



A. Original title B. Modified title

To set up your own titles:

1 Choose View > Reference Pages and display the HTML reference page.

2 Remove the four default title replacement texts from the HTML System Macros table.

3 In the HTML General Macros table, define a macro that uses the <TITLE> HTML element in the third column, the Replace With (in HEAD) column. For example, the following macro uses a paragraph autonumber and text for the title, and also as paragraph text in the document.

Macro Name	Replace With (in BODY)	Replace With (in HEAD)
MyTitle	<P><$paranum> <$paratext></P>	<TITLE><$paranum> <$paratext> </TITLE>

4 Map the macro to the format that you're splitting the HTML document on (see "Adjusting HTML mappings" on page 433).

Converting books to HTML files

You follow the same basic procedure to save a book in HTML format that you use to save a single document (see "Saving documents as HTML" on page 432). When FrameMaker maps the files in the book, it stores the mappings on reference pages added to the first file in the book. You can edit the tables on the reference pages in the same way you edit the tables on reference pages of individual documents.

The files in a book may not remain separate files when the book is saved as HTML. To break up a book file into separate HTML files, use the Start New, Linked Web Page option (see page 433). For information on using this option to simulate a table of contents, see "Creating links that simulate a TOC," next.

To save a book in HTML format:

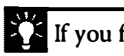
1 Open the book file and choose File > Save As.

2 Choose HTML from the pop-up menu.

3 Give the filename an extension of .html and click Save. The converted files of the book are saved where you specified.

4 Examine the converted files by opening them in a Web browser. If they meet with your approval, you're done.

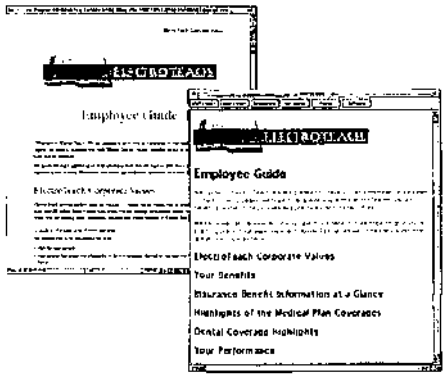
5 If you'd like to refine some mappings, open the first file in the book file and display its BookHeadings or BookHTML reference page. Edit the tables there (see "Fine-tuning mappings by editing reference pages" on page 437). Then save the file and save the book file as HTML again.



If you fine-tuned the mappings for a document and want to use these mappings for a whole book, remove the tables on the BookHeadings and BookHTML reference pages in the book file's first file. Then copy the tables on the document's Headings and HTML reference pages and paste them onto the BookHeadings and BookHTML reference pages.

Creating links that simulate a TOC

You can convert a large file into a series of small HTML subdocuments that are linked to one parent document. The parent document can then function as a linked table of contents for the subdocuments.



FrameMaker document and the simulated TOC in a Web page

Subdocuments are automatically named sequentially. For example, when you save MyDoc to HTML, the parent document is called MyDoc.html, the first subdocument is MyDoc.1.html, the second one is MyDoc.2.html, and so on. Don't rename the files; otherwise, the links will become invalid.

The hierarchy of heading levels in the subdocuments is controlled by the Headings table. For more information, see page 439.

To simulate a TOC:

1 Adjust your document's mappings so that a heading starts a new file. Do this by using the Start New, Linked Web Page option in the HTML Setup dialog box (see page 433).

Note: *Look for a heading whose contents are neither too large nor too small. (Readers might get lost if they have to do too much scrolling or might be frustrated if the page they jump to has only one paragraph.) Also, you may want to make sure some text appears before the first instance of the heading you choose so that there's an introduction to the list of links.*

2 Give readers an easy way to return from the linked subdocuments to the parent document by defining the EndOfSubDoc or StartOfSubDoc system macro. The text or graphics defined by this macro will appear at the end or the start of each linked Web page as in the following example.

Macro Name	Replace With
EndOfSubDoc	<HR><P><A HREF="<$parentdoc>"> Return to main page</A></P> <P><A HREF="<$prevsubdoc>"> Go to previous page</A></P> <P><A HREF="<$nextsubdoc>"> Go to next page</A></P>

3 Save the file or book as HTML. The parent document will contain the linked table of contents.

Inserting HTML code

You may want to insert special HTML code into your document (for example, the code that defines a Java applet).

To insert HTML code in a document:

1 Choose View > Reference Pages and display the HTML reference page.

2 In the HTML General Macros table, define a macro whose content is the HTML code.

3 Choose View > Body Pages and place the insertion point where you want to insert the HTML code.

4 Choose Special > Marker and choose HTML Macro as the marker type.

5 Enter the name of the general macro as the marker text and click New Marker.

For example, you could enter the following Java code as a macro definition.

Macro Name	Replace With
MyCode	<applet code="Bullets.class" width="600" height="6" codebase="classes/bullets/" > <param name="bgColor" value="White"> </applet>

Where you want to insert this applet, you insert a marker whose marker type is HTML Macro and whose marker text is MyCode.

Troubleshooting and tips on HTML conversion

Follow these guidelines to ensure a smooth conversion to HTML:

- When converting a book, open all documents before starting. This ensures that there will be no error messages that might interrupt the conversion process.

- Make sure the table formats you use have regular ruling lines defined for at least one body row. Otherwise, the HTML tables will have no lines around table cells.

- Make sure your documents contain no unresolved cross-references before you save as HTML. Unresolved cross-references appear as broken links in HTML. For information on resolving cross-references, see page 164.

- If text or graphics don't convert when they should, make sure they're on body pages and not master pages, that they are part of the main text flow (flow A), and that they're in anchored frames.

- If you want to import the HTML conversion settings from one document to another, use the File > Import > Formats command to copy reference pages. For details on importing reference pages, see "Importing and updating formats in a document" on page 295.

About PDF

You can convert a FrameMaker document or book file to a Portable Document Format (PDF) file, and distribute it in that format. Your readers can view it with Acrobat Exchange, Acrobat Reader, or any other application that supports PDF files.

Important: *Use version 3.0 or later of Acrobat Exchange or Reader when viewing converted files. Some features may not be available in an earlier version. For example, using an earlier version of Acrobat in Windows will force you to adopt short (8.3) filenames.*

Converting documents to PDF

You convert a FrameMaker document to PDF by setting up bookmarks and then saving the document as PDF.

When you save a FrameMaker document as PDF, the following changes occur:

- Cross-references and hypertext commands become links in the PDF file.

- Hypertext alert messages become notes in the PDF file.

- Hypertext URL messages (see page 430) become Web links in the PDF file.

- Other hypertext commands convert to equivalent HTML links (see page 402).

- Paragraphs you specify in the Acrobat Setup dialog box become bookmarks in the PDF file.

- Tagged text flows used on body pages can become article threads in the PDF file.

Saving documents as PDF

The easiest way to convert a document to a PDF file is to save it as PDF. When you save as PDF, FrameMaker actually prints a PostScript file and then invokes Acrobat Distiller to *distill* the PostScript file—to convert it to PDF. You can also convert to PDF by creating the PostScript file and then distilling that file in Acrobat Distiller in a separate step (see page 450).

Note: *If Distiller is unavailable or can't be found, FrameMaker creates a PostScript file and then alerts you that it couldn't complete the conversion to PDF. You can then distill the PostScript file yourself later.*

To save a document or book as PDF:

1 (Windows and Macintosh) Make sure at least one PostScript printer is installed before you start FrameMaker.

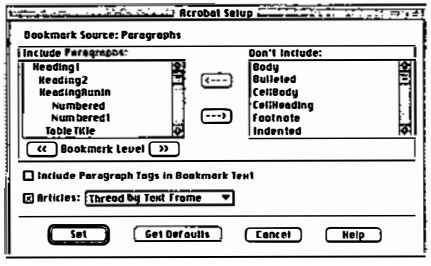
2 Open the document or book you want to convert to PDF. A book will be saved to a single PDF file.

3 If there are references to other FrameMaker documents that are in other books, also open the other book files. This ensures that links will work properly when all the books are converted to PDF.

4 In the original document or book file, choose File > Save As, and then choose PDF from the pop-up menu.

5 Add a .pdf extension to the original filename (but don't change the filename beyond that). You can also change the save location. Then click Save.

6 Set up Acrobat bookmarks by doing the following:



• To indicate which paragraphs should be converted to PDF bookmarks, move paragraph tags between scroll lists. The paragraphs in the Include Paragraphs scroll list will have bookmarks in the PDF file. 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 change bookmark levels for the included paragraphs, select a paragraph tag 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.

• To include paragraph tags along with the paragraph text in the bookmarks, select Include Paragraph Tags in Bookmark Text. Use this option to check the assigned levels of bookmarks in a draft of the PDF file. (Turn this option off when you print the final draft of the document.)

7 Set up article threading by doing one of the following:

• To have the reading order of each article follow the same order that the insertion point moves, select Articles and choose Thread by Column from the pop-up menu. This setting is usually the most appropriate in multicolumn formats.

• To have the reading order of each article go from text frame to text frame, select Articles and choose Thread by Text Frame from the pop-up menu. This setting is usually the most appropriate in single-column formats.

• To create no article threads, turn off Article Threading.

8 Click Set.

To save a set of interlinked books as PDF:

1 (Windows and Macintosh) Make sure at least one PostScript printer is installed before you start FrameMaker.

2 Open all the books you want to convert to PDF. This ensures that links will work properly when all the books are converted to PDF.

3 In the first book file, choose File > Save As, and then choose PDF from the pop-up menu.

4 Add a .pdf extension to the original filename (but don't change the filename beyond that). You can also change the save location, but be sure to make the relative nesting of the converted PDF files the same as the nesting of the original book files. Then click Save.

5 Set up bookmarks and article threading by following the steps on page 449, beginning with step 6.

6 Repeat the process for the other linked books.

Distilling PostScript files manually

If you have Acrobat Distiller installed, you can convert documents to PDF files by creating a PostScript file and then later distilling the file yourself. By using Distiller, you can explicitly set some advanced settings having to do with compression, font embedding, and color conversion. However, saving as PDF (see page 448) is often faster and more convenient and produces excellent results. Also, if you're working on a platform where Distiller is not available, you can create the PostScript file and then move it to another platform to distill it there.

To distill a document or book to a PDF file

1 (Windows and Macintosh) If necessary, specify a PostScript printer as the current printer.

2 Open the document or book you want to distill and choose File > Print. If you're printing a book file, move the desired files to the Print scroll list in the Print Files dialog box and click Print.

3 Select Generate Acrobat Data, and then click Acrobat Setup and set up bookmarks and article threading (see steps 6 through 8 in the previous section).

• Print to a PostScript file (see page 45). To print a book as a series of separate PostScript files instead of one large file, enter an asterisk (*) instead of a filename.

4 Use the resulting PostScript (.ps) file in Distiller. Consult your Distiller documentation for details.

Importing PDF-conversion settings

You can import all the settings in the Acrobat Setup dialog box from one document to another.

To import PDF-conversion settings:

Choose File > Import > Formats and select Document Properties and Paragraph Formats. For details on importing settings from one document to another, see "Importing and updating formats in a document" on page 295.

Specifying PDF-conversion settings without converting

You can specify PDF-conversion settings for a document without actually converting it to PDF. You may want to do this in a document so you can then import those settings to other documents, prior to conversion.

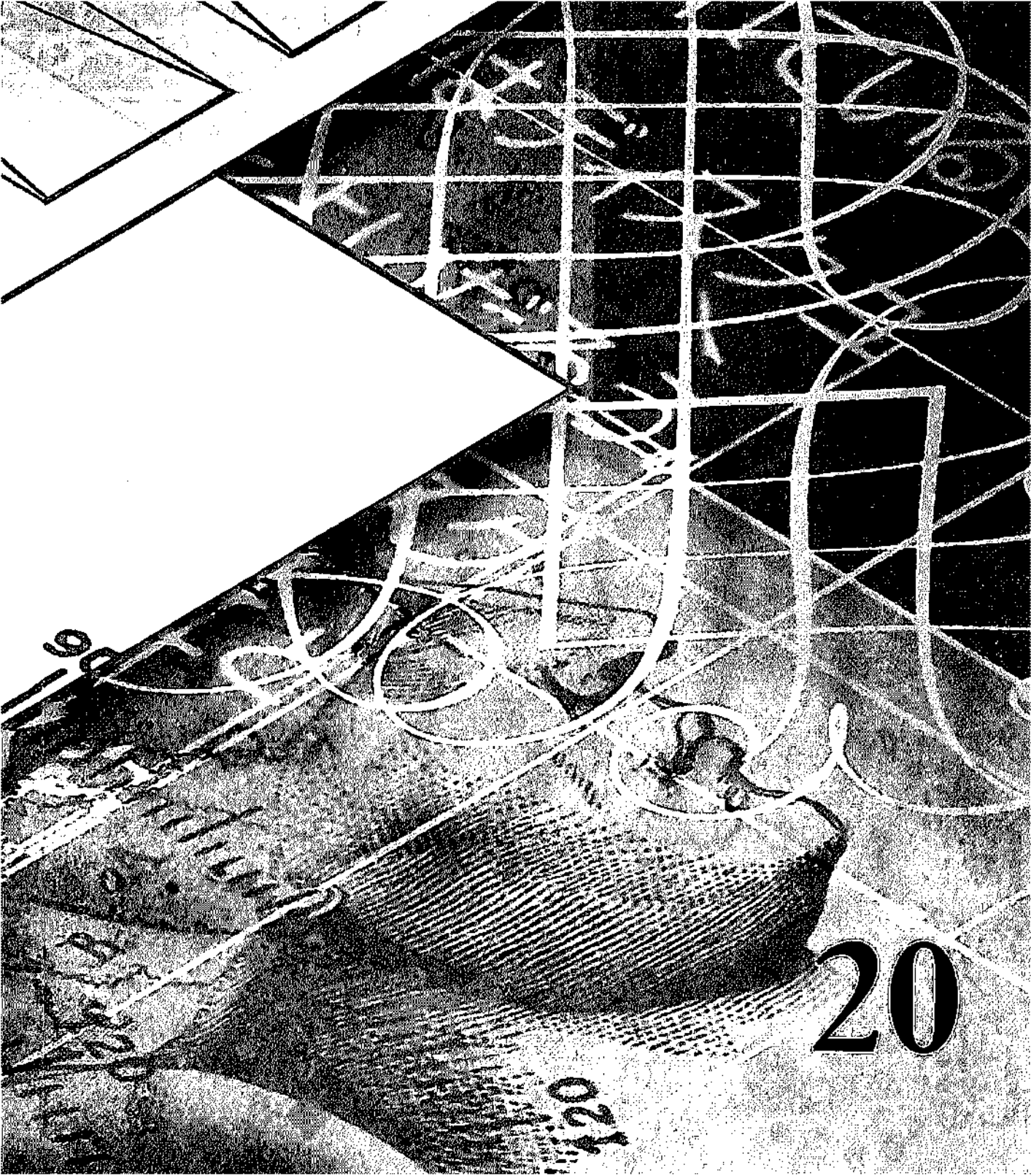
To specify PDF-conversion settings without converting:

Choose Format > Document > Acrobat Setup, specify the settings, and then click Set.

Troubleshooting and tips on PDF conversion

Follow these guidelines to ensure a smooth conversion to PDF:

- For the best 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.
- To improve the display performance of PDF files, avoid using complex master pages that contain multiple complex graphics. You can also improve graphics display and reduce file size by selecting Optimize when saving a PDF file in Acrobat Exchange.
- If you're converting a book that has a table of contents or an index, be sure to include the TOC or index file in the book file before you save as PDF.
- If performance is slow when viewing a large document converted to PDF, reopen the FrameMaker document or book and turn off Article Threading. Then convert to PDF again.
- If you're printing a book as separate files, all PDF files will be created in the same folder, regardless of where the original documents are. For this reason, be sure that all the original documents in the separate folders have unique names before saving as PDF. Otherwise, some files will overwrite others.
- (Windows) Set the output format of the PostScript driver to "optimize for portability (ADSC)." You specify this in the Properties dialog box of the current printer (click the PostScript tab).
- (Macintosh) Be sure you're using version 8.3 or later of the PSPrinter printer driver. If you're using a Hewlett-Packard printer, use the Acrobat Distiller 3.0 PPD.

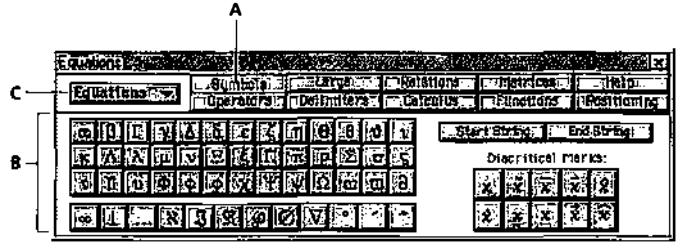

20



Chapter 20: Equations

FrameMaker provides a full palette of math elements to streamline the creation of typeset equations. After you create equations, you can reformat them by changing their fonts, their alignment, and the exact positioning of their math elements. You can also use commands on the Equations palette to evaluate equations mathematically.

THE EQUATIONS PALETTE 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.



A. The names of the pages appear here, with the current page highlighted. B. This part of the palette changes from page to page. C. The Equations pop-up menu appears on every page.

The Equations palette contains 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

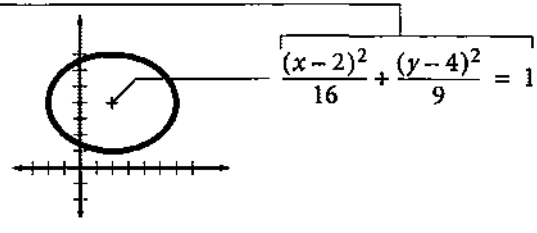
POSITIONING EQUATIONS You can put an equation in line with paragraph text or on display in a paragraph of its own. In either case, FrameMaker creates an anchored frame for the equation. You can also position an equation with other objects in an existing graphic frame—for example, to annotate a graphic or to put more than one equation in a graphic frame. The graphic frames that contain equations can be either anchored or unanchored.

Suppose that the axes of an ellipse lie along the lines $x = x_0$ and

A —**$y = y_0$. The ellipse is represented by the following equation.**

B $$\frac{(x-x_0)^2}{a^2} + \frac{(y-y_0)^2}{b^2} = 1 \qquad \text{EQ 1}$$

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.

C 

A. In-line B. Display C. In a graphic with other objects

Creating equations

To create an equation, you insert an equation object in the document and then insert math elements in the equation. This section describes how to create an equation object. For instructions on inserting math elements into the equation, see page 459.

When working with an equation, zoom in until it's easy to read.

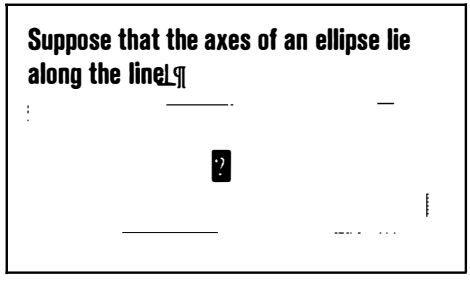
To create an in-line equation:

1 Click in text where you want to insert the equation. If the text is in a rotated text frame, unrotate the frame first by selecting the rotated text frame and pressing Esc g 0 (zero).

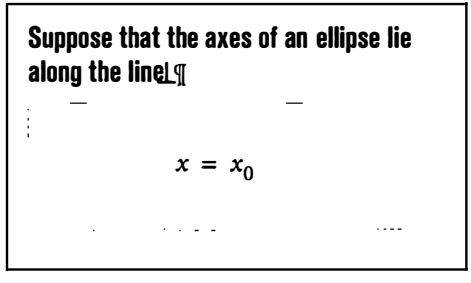
2 Click the Equations button (Σ) at the right side of the document window.

3 On the Equations palette, choose one of the New Equation commands from the Equations pop-up menu. Small, Medium, and Large specify the font sizes used in the new equation.

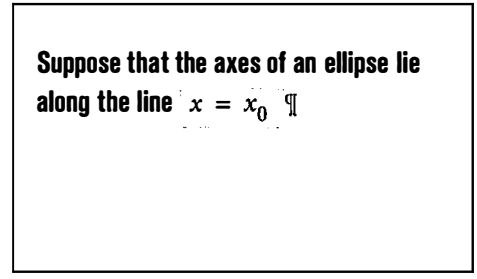
A new equation object appears as a question mark in a frame anchored below the line with the insertion point. The first math element you insert replaces the question mark prompt.



4 Insert the math elements in the equation by typing the elements or by clicking items on the Equations palette. For instructions, see the following sections.



5 Choose Shrink-Wrap Equation from the Equations pop-up menu. This shrinks the frame around the equation and puts the equation in 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 inline equation as a character and doesn't provide extra space around it.

7 If the equation is too tall for the line, open up more space above or below the line by using the Line Spacing pop-up menu on the formatting bar to turn off fixed line spacing. For details, see page 90.

To create an equation in a paragraph of its own (a display equation):

1 Click in an empty paragraph.

2 Apply a paragraph format from the Paragraph Catalog (see page 78) 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 book or report template, use the Equation paragraph format. You can also copy this format to your document, but you'll probably want to make some changes (for example, to the Default Font and Spacing properties).

3 Click the Equations button (Σ) at the right side of the document window.

4 On the Equations palette, choose one of the New Equation commands from the Equations pop-up menu. Small, Medium, and Large specify the font sizes used in the new equation.

A new equation object appears as a question mark in a frame anchored below the empty paragraph. The first math element you insert replaces the question mark prompt.

The ellipse is represented by the following equation:¶
⊥¶



5 Insert the math elements in the equation by typing the elements or by clicking items on the Equations palette. For instructions, see the following sections.

The ellipse is represented by the following equation:¶
⊥¶

$$\frac{(x-x_0)^2}{a^2}+\frac{(y-y_0)^2}{b^2}=1$$

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.

The ellipse is represented by the following equation:

$$\frac{(x-x_0)^2}{a^2}+\frac{(y-y_0)^2}{b^2}=1\,¶$$

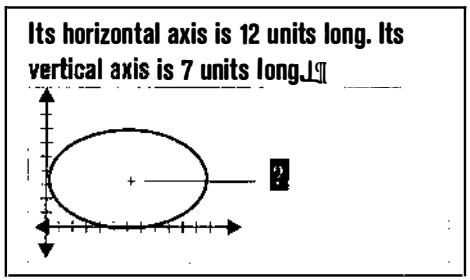
To create an equation in a graphic frame with other objects:

1 Click the Equations button (Σ) at the right side of the document window.

2 Select a graphic frame or an object in a graphic frame.

3 On the Equations palette, choose one of the New Equation commands from the Equations pop-up menu. Small, Medium, and Large specify 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 by typing the elements or by clicking items on the Equations palette. For instructions, see the following sections.

5 To place the equation exactly where you want it, first select it by doing one of the following:

- (Windows and UNIX) Control-click the equation.
- (Macintosh) Option-click the equation.

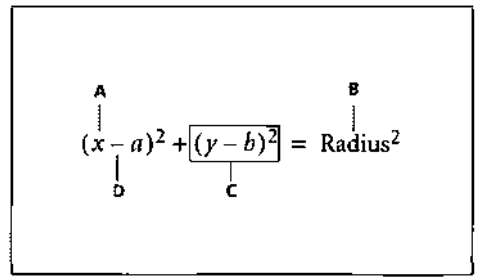
6 Move the equation by doing one of the following:

- Drag it with the mouse.
- Move it with the arrow keys.
- Position it precisely with the Graphics > Object Properties command.

For details, see page 209.

Inserting math elements

An equation contains expressions made up of math elements—characters, text strings, operators, and other mathematical elements from the Equations palette.



A. Alphanumeric character B. Text string
C. Expression D. Operator

After you create an equation object, you insert math elements in it by typing them or by clicking them on the Equations palette. (The Equations palette doesn't have to be open when you insert an item from the keyboard.) For details on creating equations, see page 456. For a general description of the math elements on the Equations palette, see page 455.

Use the following general steps when you insert any math element. For details on inserting particular types of elements, see the following sections beginning with "Inserting text strings" on page 461.

To insert a math element in an equation:

1 Select an expression or put the insertion point in an equation.

2 Do one of the following:

- To insert a math element by using the Equations palette, click the element.
- To insert an alphanumeric character or 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 using a keyboard shortcut, press the sequence of keys. For information on the shortcuts, see online Help.
- 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 online Help.
- To insert a custom math element, see page 466.

If an element needs one or more operands, a question mark prompt (?) appears for each operand; otherwise, an insertion point appears. To move from one operand to another, press Tab.

About the scope of operations

When you insert a math element in an equation, FrameMaker adjusts the mathematical syntax. The result depends on 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.

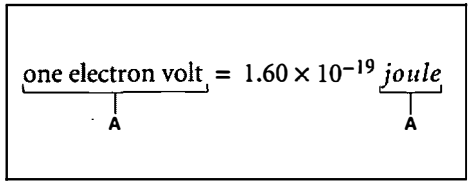
If you multiply by *x*	The result is
$\frac{2y+7}{4}$ or $\frac{2y+7}{4}$	$\frac{2y+7x}{4}$
$\frac{2y+7}{4}$	$\frac{(2y+7)x}{4}$
$\frac{2y+7}{4}$ or $\frac{2y+7}{4}$	$\frac{2y+7}{4}x$

In the first example, only the *7* is multiplied by *x*. In the second example, FrameMaker adds parentheses to show that the entire expression *2y + 7* is multiplied by *x*. In the last example, the entire fraction is multiplied by *x*. The size of the insertion point in the first and last examples indicates the scope.

Many 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. For information on changing the selection in an equation, see page 467.

Inserting text strings

A text string is a series of characters that is interpreted as a unit. Unlike characters that make up an expression, the characters in a text string don't usually appear in italics and aren't multiplied together.



A. Text strings

Text strings have no mathematical meaning in FrameMaker. For example, evaluation commands can evaluate the function *tan* but not the string "tan".

To insert a text string in an equation:

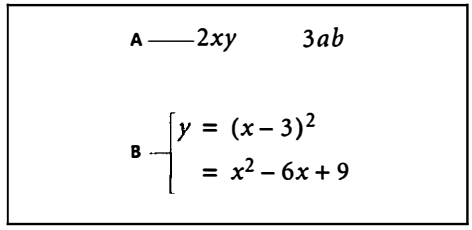
1 On the Symbols page of the Equations palette, click Start String. Two double quotation marks ("") appear. You can also type an apostrophe (') or a double quotation mark (") to start the string.

2 Type the text of the string. The quotation marks disappear, and the text appears as you type. To insert a straight apostrophe or straight double quotation mark as part of the string, hold down Control while pressing the key.

3 Click End String on the Symbols page or press Return.

Inserting horizontal and vertical lists 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 contained in the same object. When you select a list, all the expressions in the list are selected as one object.



A. Horizontal list B. Vertical list aligned on equal signs

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 page 478.

To insert a horizontal or vertical list of expressions:

1 Select the expression you want to be the first item in the list.

2 On the Operators page of the Equations palette, click the horizontal list element ([??]) or vertical list element ([⋮]). A horizontal or vertical list

appears. The selected expression appears as the first item in the list. A second item appears in the list as a question mark prompt.

Before clicking	After clicking
?	? ?
abc	abc ?
ab**c**	$ab\binom{c}{?}$

In the first example, a horizontal list is inserted. In the second example, a vertical list is inserted, and the selected expression becomes the first item in the list. In the last example, a vertical list is inserted as part of a larger expression.

To add an item to a horizontal or vertical list:

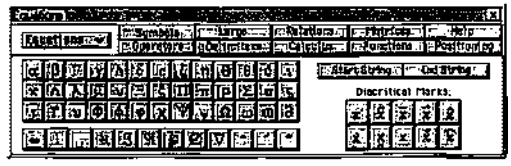
1 Select one of the items in the list.

2 On the Operators page of the Equations palette, click the horizontal list element ([? ?]) or vertical list element ([?]).

3 Insert the math elements in the list item by typing the elements or by clicking items on the Equations palette. For instructions, see page 459.

Inserting symbols

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*). The following examples show the result of clicking π on the Symbols page.

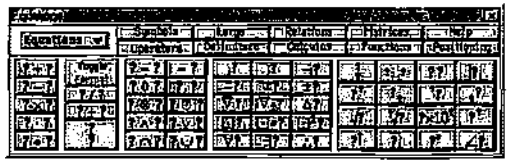
Before clicking	After clicking
$y + 7$	$y + 7\pi$
$y + 7$	$(y + 7)\pi$

Diacritical marks appear on the element to the left of the insertion point or on the selected expression. Click the dot or prime button once for each dot or prime diacritical mark you want to insert.

Note: *If you want a summation, product, or partial differential element to be interpreted and manipulated mathematically, insert the element from the Large page or Calculus page rather than from the Symbols page. Elements from the Symbols page are not evaluated.*

Inserting operators

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.

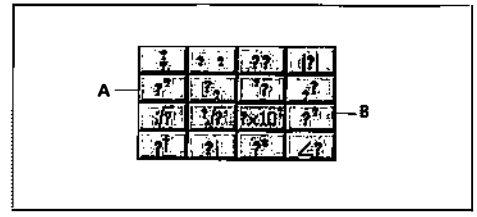


If an expression is selected when you insert the operator, the expression becomes the first operand. The following examples show the result of clicking the plus sign (+) or the division operator (÷) on the Operators page.

Before clicking	After clicking
$2x$	$2x + ?$
$2x$	$2(x + ?)$
$3xy$	$3\frac{xy}{?}$

You can represent the division operator as a slash (/), a horizontal bar (–), or a division symbol (÷). For details, see "Toggling an element's format" on page 469.

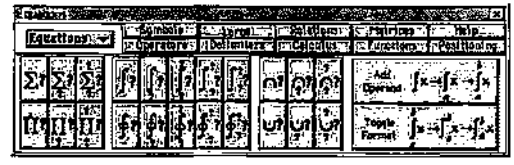
FrameMaker can evaluate exponents mathematically, but not superscripts.



A. Superscript B. Exponent

Inserting large elements

The Large page on the Equations palette contains sums, products, integrals, intersections, and unions.



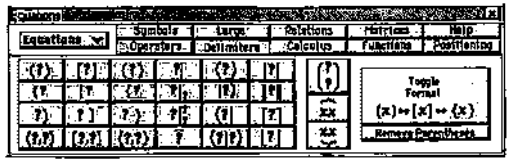
If an expression is selected when you insert a large element, the expression becomes the first operand. The following examples show the result of clicking the summation symbol (Σ) on the Large page.

Before clicking	After clicking
$2x$	$2x\sum ?$
$2x$	$\sum 2x$

You can add an operand after inserting a math element from the Large page. For details, see page 469.

Inserting delimiters

The Delimiters page contains delimiters such as parentheses, brackets, and braces.



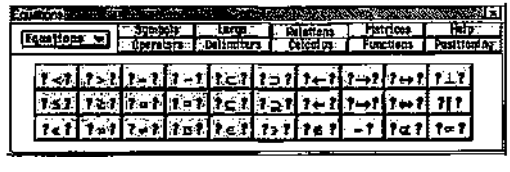
If an expression is selected when you insert a pair of delimiters, the expression is placed inside the delimiters. The following examples show the result of clicking the parentheses on the Delimiters page.

Before clicking	After clicking
$2x$	$2x(?)$
$2x$	$(2x)$

You can also represent parentheses as brackets ([ ]) or braces ({ }). For details, see "Toggling an element's format" on page 469.

Inserting relations

The Relations page contains relation symbols such as =, <, >, ≈, ≡, ∈, ⊃, and ⊂.



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.

Binary equal signs ([? ?]) appear to the right of the current expression (as shown in the second example). 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
abc	$abc =$
$2x + 3y$	$2x + 3y = ?$
$2x_{A} + 3y$	$2x_{p=?} + 3y$

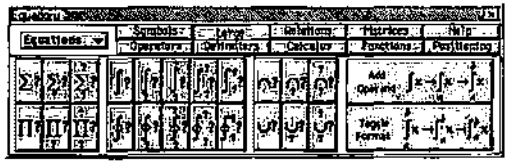
To insert a binary equal sign at the insertion point rather than to the right of the expression:

Press Esc m =

Before clicking	After clicking
$\frac{a}{b}$	$\frac{a}{(b = ?)}$

Inserting calculus elements

The Calculus page contains integrals, derivatives, partial derivatives, gradients, and the limit function.



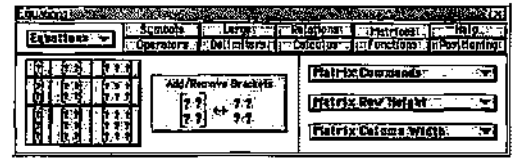
If an expression is selected when you insert the calculus element, the expression becomes the first operand. The following examples show the result of clicking the integral symbol ($\int$) on the Calculus page.

Before clicking	After clicking
x^2	$x^2\int ?$
$x^2 dx$	$\int x^2 dx$

You can change the position of operands and add operands. For details, see "Toggling an element's format" on page 469 and "Adding operands to math elements" on page 469.

Inserting matrices

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 page 470.

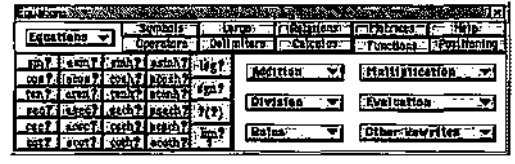


If an expression is selected when you insert the matrix element, the expression becomes the first cell in the matrix.

Before clicking	After clicking
$3x$	$3x\begin{bmatrix} ? & ? \\ ? & ? \end{bmatrix}$
$3x$	$3\begin{bmatrix} x & ? \\ ? & ? \end{bmatrix}$

Inserting functions

The Functions page contains trigonometric, hyperbolic, and logarithmic functions, and also the sign, limit, and general functions.



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 (?(?)) and($\lim_{?}^{?}$). The following examples show the result of clicking the sin function on the Functions page.

Before clicking	After clicking
π	π sin ?
π	sin π

Inserting custom math elements

In addition to inserting math elements that are built into FrameMaker, you can insert custom math elements that have been defined for a document. For details on defining custom math elements, see page 471.

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.

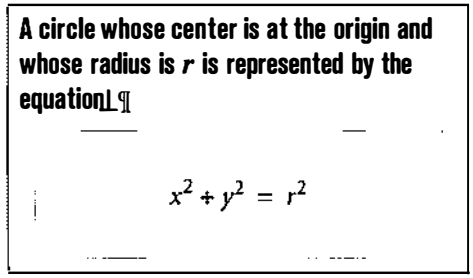
To insert a custom math element in an equation:

1 On the Equations palette, choose Insert Math Element from the Equations pop-up menu.

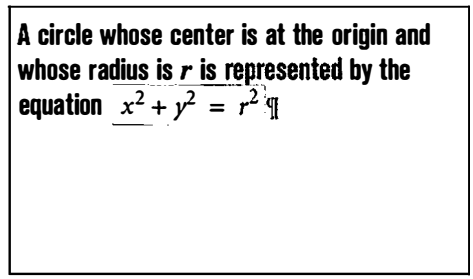
2 Select the element name and click Insert.

Shrinkwrapping equations

Shrinkwrapping an equation shrinks the surrounding anchored frame so that it's just large enough for the equation, changes the frame's anchoring position to At Insertion Point, and puts the insertion point after the frame.



Before shrinkwrapping



After shrinkwrapping

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. Unwrap an equation to enlarge the anchored frame for easy editing.

To shrinkwrap or unwrap an equation:

1 Click in the equation or select its frame.

2 On the Equations palette, choose Shrink-Wrap Equation or Unwrap Equation from the Equations pop-up menu. The edges of a shrinkwrapped equation may not appear on-screen, but they will appear in the printed document.

Editing equations

You can edit an equation as you edit text—adding, changing, rearranging, and removing math elements, and cutting, copying, and pasting them. As you edit an equation, the syntax of the equation is adjusted 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.

Note: *To edit a rotated equation, you first need to restore the equation or text frame to its unrotated position by pressing Esc g 0 (zero).*

To place and move the insertion point in an equation:

Do the following:

• To put the insertion point next to a specific character, click as close as possible to the character.

$$F(x) = \frac{1}{\sigma\sqrt{2\pi}}$$

• To put the insertion point next to an entire equation, click at the far right of the equation. The size of the insertion point depends on its location in the equation. This helps you determine whether the insertion point is in the right place.

$$F(x) = \frac{1}{\sigma\sqrt{2\pi}}$$

• To move the insertion point left or right, press the Left Arrow or Right Arrow key.

• To move the insertion point from beside a fraction to its numerator, press the Down Arrow key.

• To move the insertion point beside a fraction from the denominator, press the Up Arrow key.

To select part of an equation by using the mouse:

Drag through the elements you want to include. As you drag, the selection expands to include the next subexpression.

Changing matrices

You can change the number of rows or columns in a matrix and add or remove brackets around the matrix. You can allow the column width to vary from column to column, depending on the contents, or specify that all columns be of equal width. Similarly, you can allow the row height to vary from row to row.

You can also transpose a matrix and perform matrix algebra (see "Matrix Commands pop-up menu" on page 483).

To add a row or column to a matrix:

1 Put the insertion point in the matrix.

2 On the Matrices page of the Equations palette, choose Add Row or Add Column from the Matrix Commands pop-up menu.

Before Add Column	After Add Column
$\begin{bmatrix} a & b \\ c & d \end{bmatrix}$	$\begin{bmatrix} a & b & ? \\ c & d & ? \end{bmatrix}$

Add Row adds a row at the bottom. Add Column adds a column at the far right.

To delete a row or column from a matrix:

Select the row or column and press Delete.

Before	After
$\begin{bmatrix} a & b & c \\ d & e & i \end{bmatrix}$	$\begin{bmatrix} a & b \\ d & e \end{bmatrix}$

To add or remove brackets around a matrix:

1 Select the entire matrix.

2 On the Matrices page of the Equations palette, click Add/Remove Brackets.

To change the row height or column width in a matrix:

1 Select the matrix.

2 On the Matrices page of the Equations palette, choose All Equal or Proportional from the Matrix Row Height or Matrix Column Width pop-up menu.

$\begin{bmatrix} \frac{x+3}{y} & x \\ x & y-2 \end{bmatrix}$

Equal row heights

$\begin{bmatrix} \frac{x+3}{y} & x \\ x & y-2 \end{bmatrix}$

Proportional row heights

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.

Creating and defining math elements

If you need a math element that doesn't appear on the Equations palette, you can create a custom element—for example, a new operator such as ✱. However, FrameMaker won't be able to evaluate custom math elements mathematically.

If you want to display a built-in element on the palette differently in your document, you can redefine the element. For example, you can redefine the *asin* (inverse sine) function so it appears as sin^{-1}. You can redefine the appearance of a built-in element, but you can't change its type. For a description of the custom math elements you can create, see the following section.

You can also import math element definitions from another document. For details, see "Importing and updating formats in a document" on page 295.

Math element types

An element's 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.

You can define custom math elements of the following types.

Type	Example	Number of operands
Atom	α	None
Delimiter	(α)	One
Function	$\sin\alpha$	One, to the right of the element
Infix	$\alpha + \beta$	Two, to the left and the right of the element
Large	$\sum_{1}^{\infty} x^2$	Up to three, above, below, and to the right of the element
Limit	$\lim_{x \to \infty} \frac{1}{x^2}$	Up to two, below and to the right of the element
Prefix	$-\alpha$	One, to the right of the element
Postfix	$\alpha!$	One, to the left of the element
Vertical list	α β γ	Two, one above the other (The text line that defines a custom vertical list is used as a separator between list items.)

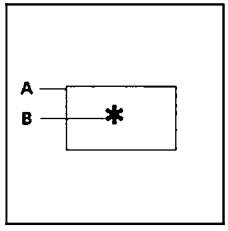
You cannot define custom math elements of the following types.

Type	Example
Derivative	$\frac{d}{dx}$
Diacritical mark	α' , $\ddot{\beta}$
Horizontal list	xy $x + y$
Matrix	$\begin{bmatrix} \alpha & \beta \\ \gamma & \delta \end{bmatrix}$
Roots	$\sqrt{x}$, $\sqrt[3]{x}$

Type	Example
Script	α^2 , β_0
Substitution	$x\|_{x=3}$
Vertical division bar	$\frac{\alpha}{\beta}$

Creating and changing math element definitions

Custom math element definitions are stored on one or more reference pages whose name begins with *FrameMath*. Each definition is a text line in an unanchored graphic frame whose name is the element name.



A. Graphic frame B. Text line

To define a custom math element or change a built-in math element's definition:

1 Choose View > Reference Pages and display a FrameMath reference page.

If the document doesn't contain a FrameMath reference page, display a reference page and then choose Special > Add Reference Page. Name the new page FrameMath1. (Capitalize the letters *F* and *M* as shown.)

2 Use the Graphic Frame tool to draw an unanchored graphic frame on the page (see "Using reference frames on reference pages" on page 282).

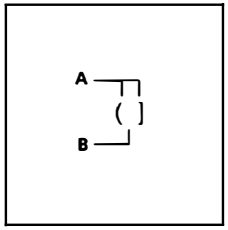
3 In the Frame Name dialog box, enter a name for the element. If you are redefining a built-in element, enter that element's name. To find the name of a built-in element, see the following procedure.

4 Use the Text Line tool to add a text line in the graphic frame (see page 203).

5 Create the math element in the text line using the following guidelines:

- You can type any characters in the text line, and you can change the character format (see "Applying predefined formats to text" on page 78 and "Changing font properties" on page 83). You can also move the characters by using micropositioning shortcuts. For a list of keyboard shortcuts, see online Help.
- 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.
- 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.



A. Characters in delimiter B. Space indicates the operand.

• FrameMaker uses the first text line in the frame for the custom math element, so make sure there's only one text line in the frame.

6 Select the graphic frame.

7 On the Equations palette, choose Add Definition to Catalog from the Equations pop-up menu.

8 If you're defining a custom math element, choose an element type from the pop-up menu and click Add. For information on the types of elements you can define, see page 471.

To find the name of a math element:

1 Place the insertion point in an equation.

2 On the Equations palette, choose Insert Math Element from the Equations pop-up menu.

3 Turn off Show Custom Only, and then scroll through the element names to find the one you want.

4 Click Cancel.

To change a custom math element definition:

1 Display the FrameMath reference page that contains the math element by doing one of the following:

• If the custom math element appears in an equation, select the element and choose Update Definition from the Equations pop-up menu on the Equations palette. Then click Go to Frame.

• If you haven't inserted the custom math element into an equation, choose View > Reference Pages. Then display the FrameMath 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 and shrinkwraps the equations again.

To delete a custom math element definition:

Display the FrameMath reference page that contains the math element and delete the graphic frame. If the element appears in an equation, FrameMaker displays the element name, surrounded by question marks, instead of the element.

Graphing mathematical expressions (Power Macintosh)

You graph a mathematical expression in a document by using the Graphing Calculator application included with your Power Macintosh. You can also paste the graph into a document. For information on the Graphing Calculator, see its online Help.

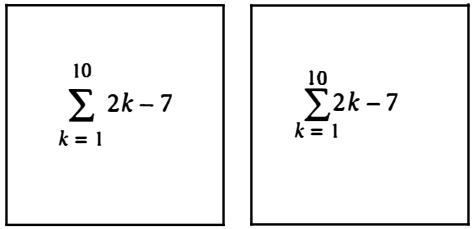
To graph a mathematical expression on the Power Macintosh:

1 Select the expression.

2 Choose Graph Equation from the Equations pop-up menu on the Equations palette.

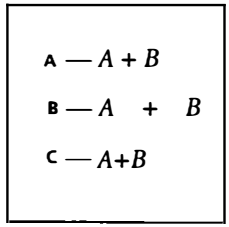
Positioning math elements in an equation

FrameMaker positions math elements according to their mathematical meaning in an equation. In some cases, though, you may want to *micropositi-tion* elements—reposition them so they're closer to or farther from other elements in the equation.



Before and after micropositioning

You can also control the amount of white space on each side of an element—left, right, above, and below.

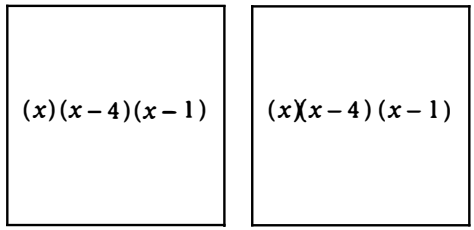


A. Default spacing B. Space added to the left and right C. Space removed from the left and right

And you can update the spacing in a math element definition so the new spacing appears wherever the element appears in the document.

Positioning expressions precisely

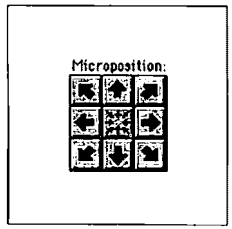
When you microposition an element or expression, its position changes with respect to all other elements in the equation. For example, if you microposition the middle expression closer to the one on the left as shown below, it moves farther away from the one on the right.



Before and after micropositioning

To position a selected expression:

On the Positioning page of the Equations palette, click a micropositioning arrow. Click as many times as necessary. (Each click moves an expression one pixel on the screen.) Zoom in for greater precision.



Micropositioning arrows

To remove micropositioning from a selected expression:

On the Positioning page of the Equations palette, click the button at the center of the Microposition area (⊠).

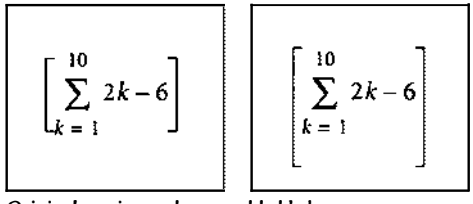
To inspect the position offsets of a selected expression and adjust them numerically:

1 On the Positioning page of the Equations palette, click Position Settings. The exact offsets appear in the Microposition Offset area of the Math Element Position Settings dialog box.

2 To adjust the position, enter values in the Microposition Offset area and click Set.

Changing the spacing around an expression

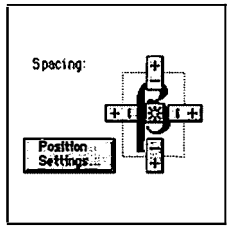
You can change the amount of white space around elements or expressions. For example, you can force FrameMaker to use larger delimiters around an expression by increasing the amount of white space above and below the expression.



Original spacing and space added below

To add or subtract white space around a selected expression:

On the Positioning page of the Equations palette, click a plus (+) to add white space or a minus (–) to remove it.



Spacing controls

Click as many times as necessary. Each click adds or subtracts one pixel of space. Zoom in for greater precision.

Note: *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 page 471.*

To restore the default amount of white space around a selected expression:

On the Positioning page of the Equations palette, click the button at the center of the Spacing area (⊠).

To inspect the spacing values of a selected expression and adjust them numerically:

1 On the Positioning page of the Equations palette, click Position Settings. The exact spacing appears in the Spacing area of the Math Element Position Settings dialog box.

2 To adjust the spacing values, enter values in the Spacing area and click Set.

Changing the spacing for a math element wherever it appears

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 page 471.

You can also change the spread—the space between characters—uniformly in all small, medium, and large equations. For details, see "Changing equation fonts throughout a document" on page 481.

To change the spacing for a math element wherever it occurs:

1 After you adjust the spacing around the element in an equation, select the element.

2 On the Equations palette, choose Update Definition from the Equations pop-up menu.

3 Do one of the following:

- To update the spacing for the element throughout the document, click Update.
- To reset the spacing to the default, click Get Default.

Setting line breaks and aligning equations

You can control when an equation breaks across lines and the alignment of the lines in a multiline equation, or of the items in a list or matrix. You can also align several equations with one another, even if they appear in different anchored frames.

$$\begin{aligned} 2a + 3b - c &= 2x + 1 \\ 3a - b &= 4x \\ 2b + c &= 3x - 7 \\ 2a - 3b + 7c - 2 &= 2x + 4 \end{aligned}$$

Aligned along left side of equal signs

You can manipulate equation objects as you do other objects. For information on grouping, aligning, distributing, and rotating objects, see Chapter 8, "Graphics."

Changing an equation's line breaking

When an equation breaks across lines, the entire equation remains in a single anchored frame. You can set where an equation breaks across lines automatically. When you change the line-break width, the equation is reformatted to the new width.

$$(x+1)^4 = x^4 + 4x^3 + 6x^2 + 4x + 1$$

Original equation

$$(x+1)^4 = x^4 + 4x^3 + 6x^2 + 4x + 1$$

Equation set to break at 1.25"

You can also force a line break at a specific location in the equation. However, don't use manual line breaks to create separate equations. Instead, insert a vertical list of expressions (see page 461).

To change an equation's automatic line-break width:

1 Click in the equation or select any part of it.

2 Choose Graphics > Object Properties.

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 insert a manual line break:

1 Click where you want the equation to break into two lines.

2 On the Positioning page of the Equations palette, choose Set Manual from the Line Breaking pop-up menu. A line-break symbol (⟨) appears at the insertion point when text symbols are visible.

$$(x+1)^8 = x^8 + 8x^7 + 28x^6 + 56x^5 + \langle$$
$$70x^4 + 56x^3 + 28x^2 + 8x + 1$$

Manual line break

To remove a manual line break:

1 Select the part of the equation that contains the line-break symbol.

2 On the Positioning page of the Equations palette, choose Clear Manual from the Line Breaking pop-up menu.

Aligning display equations

The alignment (left, center, or right) of a display equation is controlled by the format of the paragraph that contains the equation.

The ellipse is represented by the following equation¶

$$\frac{(x-x_0)^2}{a^2} + \frac{(y-y_0)^2}{b^2} = 1\,¶$$

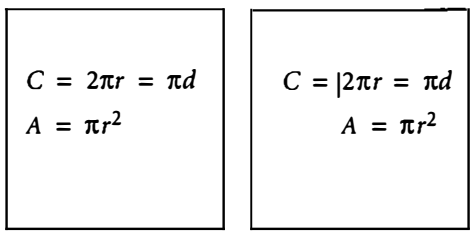
Paragraph alignment set to Center

To change the alignment of a display equation:

Click in the paragraph that contains the equation (not in the equation itself) and choose the alignment from the Alignment pop-up menu in the formatting bar or in the Paragraph Designer. For details, see "Changing indents and alignment" on page 87.

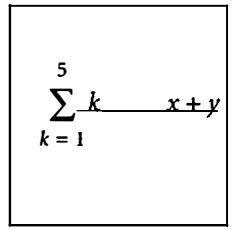
Aligning items in lists, matrices, and multiline equations

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.



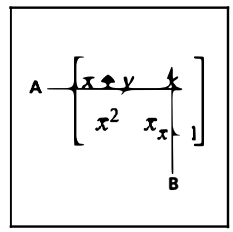
Aligned on left side and at manual alignment point

You can align the items in a horizontal list along their tops, bottoms, or baselines.



Baseline-aligned

You can also 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.



Aligned along: A. Baselines B. Centers

To set automatic alignment for a vertical list or multiline equation:

1 Click in the equation or list.

2 On the Positioning page of the Equations palette, choose an item from the Left/Right pop-up menu. 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 a multiline equation or for an item in a vertical list:

1 Do one of the following:

- Click in the first line of a multiline equation where you want subsequent lines to align.
- Click in a vertical list item where you want the item to align with the rest of the list.

2 On the Positioning page of the Equations palette, choose Set Manual from the Left/Right pop-up menu. A manual alignment symbol (|) appears at the insertion point when text symbols are visible. Subsequent lines of a multiline equation are left-aligned with the manual alignment point. A vertical list item aligns with other items in the list at the manual alignment point.

To clear a manual alignment point:

1 Select the part of the equation that contains the manual alignment point.

2 On the Positioning page of Equations palette, choose Clear Manual from the Left/Right pop-up menu. You can also clear a manual alignment point by setting another.

To align items in a horizontal list:

1 Click in the list.

2 On the Positioning page of the Equations palette, choose an item from the Up/Down pop-up menu.

To align cells in a matrix:

1 Click in the matrix.

2 On the Positioning page of the Equations palette, choose an item from the Up/Down pop-up menu or from the Left/Right pop-up menu. The Left/Right and Up/Down commands affect the whole matrix. To align individual cells, use micropositioning (see "Positioning expressions precisely" on page 474).

To check alignment settings for a horizontal or vertical list, or for a matrix:

1 Do one of the following to select the entire list or matrix:

- Drag through the list or matrix.
- Put the insertion point in the matrix and press the spacebar repeatedly.

2 On the Positioning Page of the Equations palette, click Position Settings.

Aligning several equations

You can align several equation objects with one another in a graphic frame, just as you align other objects. You can also align several equation objects along a manual alignment point, even when they're in separate graphic frames.

$$(x+2)^2 = |x^2+4x+4$$

$$(x+3)(x-2) = |x^2+x-6$$

Equations aligned at manual alignment points

FrameMaker maintains the equation objects' alignment as you edit the equations. For example, if two equations are left-aligned, the left alignment is maintained as the equations expand or shrink.

To left-, center-, or right-align equations in a frame with one another:

1 Select the equations to be aligned by doing one of the following:

• (Windows and UNIX) Control-click the first equation; Control-Shift-click the other equations.

• (Macintosh) Option-click the first equation; Option-Shift-click the other equations.

Make sure that the last equation you select is the one you want to align with.

2 Choose Graphics > Align.

3 Select the left/right alignment you want and click Align. For more information, see page 211.

To align equations along a point:

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 (see page 479).

If you don't set a manual alignment point, FrameMaker aligns an equation on the left.

2 Click in the equation and choose Graphics > Object Properties.

3 Choose Manual from the Alignment pop-up menu and specify the location of the alignment point within the frame in the Alignment Point Offset area. 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.

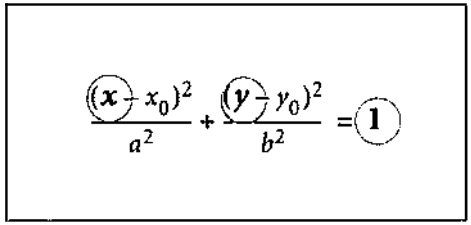
4 Click Set.

5 Repeat steps 1 through 4 for each equation 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.

Changing font settings in equations

A document contains 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 character format used for Greek characters and for symbols, functions, numbers, strings, and variables.

You can change the preset size of an entire equation, and you can change the character format of individual math elements—for example, to use color or a special font.



Font changes

You can also change the font sizes and character formats used for all equations in a document.

Changing the character format in individual equations

You can change the preset size—Small, Medium, or Large—and color of an entire equation, or the character format of just one element or expression. For example, you might want to display an element in a larger point size or in bold.

You can't change the spread, stretch, 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 the following section.

To change the preset size or color of an equation:

1 Click in the equation and choose Graphics > Object Properties.

2 Do one of the following:

- To change the equation's size, choose a size from the Size pop-up menu and click Set. If the equation is shrinkwrapped, FrameMaker rewraps it.
- To change the equation's color, choose a color from the Color pop-up menu and click Set.

To change the character format of an element or expression:

Select the element or expression and use the same method you would use with text. For details, see "Using font commands on the Format menu" on page 83 and "Using a designer to change font properties" on page 83.

To create a superscript or subscript:

Use the appropriate operator. For details, see page 463.

To change the spread of characters:

Microposition them. For details, see "Positioning expressions precisely" on page 474.

To put a line over or under an expression:

Use the diacritical marks on the Symbols page of the Equations palette.

Changing equation fonts throughout a document

You can change the font size and spacing for all small, medium, and large equations in a document. When you make global font changes, FrameMaker reformats and rewraps all shrinkwrapped equations in the document.

Greek characters and symbols in equations normally appear in the Symbol font, but you can use fonts such as Mathematical Pi and Universal Greek if these fonts are installed on your system. For information on installing additional math fonts for FrameMaker, see the online manual *Managing Fonts* (UNIX) or *Customizing FrameMaker Products* (Macintosh).

Functions, numbers, and strings normally appear in Times. Variables normally appear in Times italic. You can change the character format of each of these kinds of elements. For example, you can display all elements in Helvetica, with functions in italic and variables in bold.

Note: *Don't delete formats from the Character Catalog if you're using them to specify the character format of math elements. If you delete these character formats from the Catalog, all equations in the document will be reformatted using the default font.*

To change equation font size and spacing throughout a document:

1 On the Equations palette, choose Equation Sizes from the Equations pop-up menu.

2 Do one of the following:

- Specify the font sizes and spread, and click Set. Spread is expressed as a percentage of the font size. Positive spread values cause wider spacing around elements; negative values cause narrower spacing.
- Click Get Defaults.

To change the font for Greek characters and symbols:

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.

To change the character format for functions, numbers, strings, and variables:

1 Create the character format you want (see page 112).

2 On the Equations palette, choose Equation Fonts from the Equations pop-up menu.

3 Choose the character format from the Functions, Numbers, Strings, or Variables pop-up menu, and click Set. The pop-up menus contain the formats stored in the Character Catalog.

Evaluating equations

After you create an expression or equation, you can transform it by changing its mathematical representation. For example, you can multiply polynomials, factor terms, simplify expressions, and combine fractions.

Original selection	$y = (x+4)^3$
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 can also evaluate it by substituting values and performing computations.

Original selection	$x^3\Big\|_{x=1}^{3}$

Expanded	$x^3\big\|_{x=3} - x^3\big\|_{x=1}$
Value substituted	$27 - 1$
Result computed	26

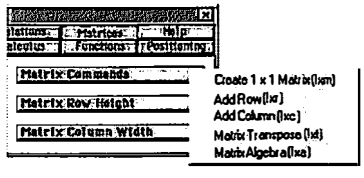
To transform or evaluate an expression:

Select the expression, or part of it, and choose a command on the Matrices or Functions page of the Equations palette. For example, you might select an expression and then choose Multiply Out from the Multiplication pop-up menu on the Functions page.

The following sections describe 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.

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 on the menu, see "Changing matrices" on page 470.

Matrix Transpose Transposes the rows and columns of a selected matrix.

Selected matrix	After transposing
$\begin{bmatrix} a & b & c \\ d & e & f \end{bmatrix}$	$\begin{bmatrix} a & d \\ b & e \\ c & f \end{bmatrix}$

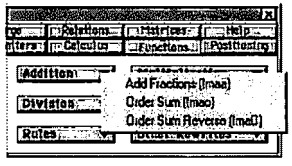
Matrix Algebra Performs matrix multiplication and addition and evaluates dot and cross products in a selected matrix.

Selected matrix (or matrices)	After matrix algebra
$2\begin{bmatrix} a & b \\ c & d \end{bmatrix}$	$\begin{bmatrix} 2a & 2b \\ 2c & 2d \end{bmatrix}$
$\begin{bmatrix} 2 & b \\ c & 2d \end{bmatrix}\begin{bmatrix} a & b \\ c & e \end{bmatrix}$	$\begin{bmatrix} 2a+bc & 2b+be \\ ac+2cd & bc+2de \end{bmatrix}$
$\begin{bmatrix} 2 & b \end{bmatrix} + \begin{bmatrix} 3 & a \end{bmatrix}$	$\begin{bmatrix} 2+3 & b+a \end{bmatrix}$
$\begin{bmatrix} a \\ b \\ c \end{bmatrix} \cdot \begin{bmatrix} a \\ 2 \\ c \end{bmatrix}$	$aa + b2 + cc$
$\begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} \times \begin{bmatrix} a \\ b \\ c \end{bmatrix}$	$\begin{bmatrix} 2c-3b \\ 3a-1c \\ 1b-2a \end{bmatrix}$

After performing matrix algebra, you can use the Simplify command to combine like terms (see page 491).

Addition pop-up menu

Use the Addition pop-up menu on the Functions page to add fractions and order polynomials.



Add Fractions Adds selected fractions, expressing the result as a single fraction. This command also combines like terms.

Selected fraction	After adding
$\frac{1}{3}+\frac{4}{5}$	$\frac{17}{15}$
$\frac{a}{4}+\frac{2a}{3}$	$\frac{11a}{12}$
$\frac{2x}{y}+\frac{3a}{b}$	$\frac{2bx+3ay}{by}$

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.

Selected expression	$\frac{2x}{y}+\frac{3a}{b}-\frac{2a}{3b}$
Added once	$\frac{2bx+3ay}{by}-\frac{2a}{3b}$
Added twice	$\frac{3b(2bx+3ay)-2aby}{3yb^2}$

Order Sum Arranges polynomials in decreasing powers of a selected variable.

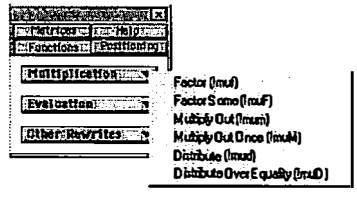
Before ordering	After ordering
$x^3+2x^5-4x^2+1$	$2x^5+x^3-4x^2+1$

Order Sum Reverse Arranges polynomials in increasing powers of a selected variable. In the following example, you select an x—any x—before choosing Order Sum Reverse.

Before ordering	After ordering
$x^3+2x^5-4x^2+1$	$1-4x^2+x^3+2x^5$

Multiplication pop-up menu

Use the Multiplication pop-up menu on the Functions page to factor terms, multiply out expressions, and distribute multiplication and division over addition.



Factor Factors a selected term out of a product.

Before factoring	After factoring
$ac+bc$	$a\left(c+\frac{bc}{a}\right)$

Before factoring	After factoring
$a^2 + 2a + 1$	$a\left(a + 2 + \frac{1}{a}\right)$

Factor Some Factors a selected term from only those terms that contain it.

Before factoring	After factoring
$xy + 2x + v$	$v + (y + 2)x$

Multiply Out Simplifies the selected expression, distributes multiplication over addition, and expands a selected term raised to a positive integral power.

Selected expression	After multiplying
$(a - 3)(2a + 4)$	$2a^2 - 2a - 12$
$(a + 2b)^2$	$a^2 + 4ab + 4b^2$

The Simplify command also simplifies the selected expression (see page 491).

Multiply Out Once Multiplies the first pair of factors on the left side of a selected expression.

Selected expression	After multiplying
$a(b + c)(2a)$	$ab(2a) + ac(2a)$

If you use this command several times, the results appear in a different form.

Distribute Performs a variety of operations depending on the expression you select, as shown in the following examples:

- Distributes division over addition.

Selected expression	After distributing
$\frac{a + b}{c}$	$\frac{a}{c} + \frac{b}{c}$

Use the Add Fractions command to perform the reverse operation (see page 484).

- Distributes multiplication over addition.

Selected expression	After distributing
$a(b + c)$	$ab + ac$

Use the Factor command to perform the reverse operation (see page 484).

- Transforms products and quotients involving radicals and exponents into a single expression raised to a power.

Selected expression	After distributing
ab^2	$(\sqrt{a}b)^2$
a^3b^2	$(a^{3/2}b)^2$
$a^2\sqrt{b}$	$\sqrt{a^4b}$

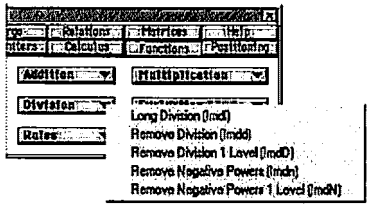
Use the Simplify command to perform the reverse operation (see page 491).

Distribute Over Equality Performs the same operation on both sides of an equal sign.

Selected expression	After distributing
$(x = y)z$	$xz = yz$
$(x = y) - 5$	$x - 5 = y - 5$
$(x = y)^2$	$x^2 = y^2$

Division pop-up 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.



Long Division Performs long division in a fraction that contains a polynomial numerator and denominator.

In the following example, 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 dividing	$\frac{x^2 + 2x + 1}{x + 1}$
Divided once	$x + \frac{1x + 1}{x + 1}$
Divided twice	$x + 1$

Remove Division Converts division to multiplication in a selected expression by changing positive exponents in a denominator to negative and negative exponents in a denominator to positive.

Selected expression	After removing division
$\frac{x}{y^2}$	xy^{-2}
$\frac{b + \frac{c}{d}}{x}$	$(b + cd^{-1})x^{-1}$

To convert negative exponents to 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.

Selected expression	After removing division
$\frac{x}{y^2}$	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.

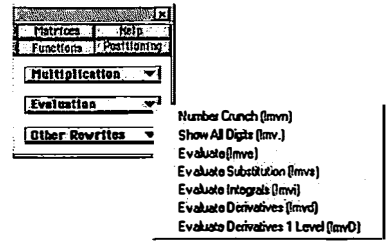
Selected expression	After removing negative powers
xy^{-2}	$\frac{x}{y^2}$
$(b + cd^{-1})x^{-1}$	$\frac{b + \frac{c}{d}}{x}$

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.

Selected expression	After removing negative powers
$(b + c^{-1})^{-2}$	$\frac{1}{(b + c^{-1})^2}$
xy^{-2}	xy^{-2} (no effect)

Evaluation pop-up menu

Use the Evaluation pop-up menu on the Functions page to evaluate expressions numerically.



Number Crunch Changes integers to floating-point numbers in a selected expression and then evaluates the expression.

Selected expression	After number crunch
$\sin\frac{3\pi}{2}$	-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.

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.

Selected expression	After number crunch
$\frac{1}{0} - \frac{1}{0}$	NaN
$\frac{1}{0}$	Infinity

Show All Digits Shows the full internal accuracy of a floating-point number.

Selected number	After showing all digits
3.1415927 ...	3.1415926535897

Evaluate Evaluates the selected expression. The operations performed depend on the type of expression selected, as shown in the following examples.

- Rewrites an expression raised to a power less than 20 as a product.

Selected expression	After evaluating
a^3	aaa

- Computes the factorial of an integer. If the result is too large to calculate, the result appears as Infinity.

Selected expression	After evaluating
5!	120

- Computes the determinant of a 1-by-1 or 2-by-2 matrix.

Selected expression	After evaluating
$\left\lvert \begin{bmatrix} a & b \\ c & d \end{bmatrix} \right\rvert$	$ad - bc$

- Extracts a term from a sum or product.

Selected expression	After evaluating
$\sum_{x=1}^{5} x^3$	$1 + \sum_{x=2}^{5} x^3$

- Evaluates a substitution just as the Evaluate Substitution command does.
- Rewrites an Evaluate Between operator as a difference.

Selected expression	After evaluating
$x^2\Big\rvert_{x=6}^{8}$	$x^2\Big\rvert_{x=8} - x^2\Big\rvert_{x=6}$

• Rewrites the logarithm of a product as a sum of logarithms and rewrites a logarithm of a power as a product.

Selected expression	After evaluating
$\log 2xy$	$\log 2 + \log x + \log y$
$\log a^n$	$n \log a$

• Rewrites a logarithm to a base in terms of natural logarithms.

Selected expression	After evaluating
$\log_2 x$	$\frac{\log x}{\log 2}$

• Rewrites a choice function in terms of factorials.

Selected expression	After evaluating
$\binom{x}{y}$	$\frac{x!}{y!(x-y)!}$

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.

Selected expression	After evaluating
$x^2\Big\|_{x=1}^{6}$	$x^2\Big\|_{x=6} - x^2\Big\|_{x=1}$
$\sin(2x)\Big\|_{x=\pi}$	$\sin(2\pi)$

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.

Selected expression	$\int_1^3 x^2 dx$
Evaluated once	$\int (dx) x^2 \Big\|_{x=1}^{3}$
Evaluated twice	$\frac{x^3}{3}\Big\|_{x=1}^{3}$

Evaluate Derivatives Evaluates a selected derivative, applying the chain rule to complex expressions when necessary. This command 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 Evaluate Derivatives to evaluate it.

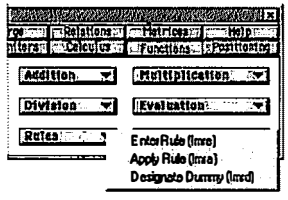
Before	After
$\frac{d}{dx}(3x^3 - 2x^2 - 3)$	$9x^2 - 4x$
$\frac{\partial}{\partial x} \sec xy \tan xy$	$y \sec xy \tan^2 xy + y \sec^3 xy$

Evaluate Derivatives 1 Level Evaluates only the first level of a selected derivative.

Before	After
$\frac{d}{dx}(3x^3 + 2x^2 + 3)$	$\frac{d}{dx}3x^3 + \frac{d}{dx}2x^2 + \frac{d}{dx}3$

Rules pop-up menu

Use the Rules pop-up menu on the Functions page to store and apply rules that transform expressions.



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.

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.

Apply Rule Substitutes one term or set of terms for another in a selected expression, using the rule stored with the Enter Rule command.

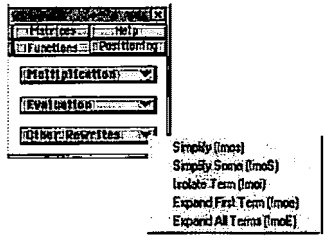
Rule entered	$a = a + 3$
Selected expression	$a^2 - 2ab + b^2$
After rule is applied	$(a + 3)^2 - 2b(a + 3) + b^2$

Before you apply a rule that contains a dummy variable, select the term you want the variable to replace. In the following example, x is the dummy variable in the rule.

Rule entered	$x \leftarrow \sqrt{y}$
Before rule is applied	$a^2 - 2ab + b^2$
After rule is applied	$a^2 - 2ab + \sqrt{y}^2$

Other Rewrites pop-up menu

Use the Other Rewrites pop-up menu on the Functions page to simplify algebraic expressions and to isolate and expand terms.



Simplify Simplifies the selected expression. To evaluate fractions that involve infinity or division by zero, use the Number Crunch command instead of Simplify (see page 487).

The operations performed depend on the type of expression selected, as shown in the following examples:

- Performs integer arithmetic.

Selected expression	After simplifying
$c + 0$	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.

Selected expression	After simplifying
$2ab + 3ab$	$5ab$
$ab(ac)$	a^2bc
$a^x a^{2x+3}$	a^{3x+3}

- Divides out common factors in a fraction.

Selected expression	After simplifying
$\frac{(ab)^2}{a^2b}$	$1b$
$\frac{2x^3y^2}{6xy^5}$	$\frac{x^2y^{-3}}{3}$

Use the Remove Negative Powers command to remove negative powers from the result (see page 487).

- Interprets the complex number i, represented by the Greek letter iota (ι).

Selected expression	After simplifying
$\sqrt{-ab}$	$\iota\sqrt{a}\sqrt{b}$

- Distributes exponentiation across multiplication and division.

Selected expression	After simplifying
$(xy)^2$	x^2y^2

Selected expression	After simplifying
$\left(\frac{x}{y}\right)^2$	$\frac{x^2}{y^2}$

Note that simplifying $\sqrt{x^2}$ x produces x rather than $|x|$.

Simplify Some Simplifies the selected expression, as the Simplify command does, but does not multiply fractions.

Selected expression	After simplifying
$8\frac{\text{km}}{\text{hr}} + 4\frac{\text{km}}{\text{hr}}$	$12\frac{\text{km}}{\text{hr}}$

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.

Selected expression	After isolating term
$x^3 + x + 2 = 0$	$x = (-x-2)^{1/3}$
$bx + by = c$	$x = \frac{c-by}{b}$
$\log x = z$	$x = e^z$

Expand First Term Expands the first term of a selected summation or product.

Selected expression	After expanding
$\sum_{x=2}^{4} x^3$	$\sum_{x=3}^{4} x^3 + 8$
$\prod_{x=2}^{5} (x^3 - 2)$	$6\prod_{x=3}^{5} x^3 - 2$

Expand All Terms Expands all terms of a selected summation or product.

Selected expression	After expanding
$\sum_{x=2}^{4} x^3$	$8 + 27 + 64$
$\prod_{x=2}^{5} x^3 - 2$	$6(25)62(123)$


21



Chapter 21: UNIX Macros and Utilities

The UNIX version of FrameMaker has several features that can increase your productivity.

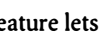
- Macros can automate repetitive keyboard actions.
- The screen-capture feature lets you capture on-screen images that you can then import into FrameMaker documents.
- Several UNIX command-line utility programs perform batch operations on FrameMaker files and work with graphic files.

Using UNIX keyboard macros

A *macro* is a shortcut for a sequence of keystrokes. You assign the macro a *trigger*—a key sequence you'll press to play back the macro. When you press the trigger, the macro plays back as if you were typing the keystrokes yourself.

A macro can be simple—for example, it could type a word or phrase you use often—or it can be complex. 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 Clipboard.

Before recording macros, become familiar with the extensive set of FrameMaker keyboard shortcuts. You'll use them to create macros. For a complete list of keyboard shortcuts, see the online Help.


You don't need to use a macro to change the default keyboard shortcut for an action. You can add, change, or delete the built-in shortcuts by following the instructions in the online manual *Customizing FrameMaker Products.*

You can work with any number of macros at a time. Each macro can be about 600 keystrokes long. (Most nonprinting keys—such as the spacebar, Return key, and function keys—count as two keystrokes.)

A macro can do anything you can do in FrameMaker except the following:

- 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 appropriate context (shortcut) menu
- Record Japanese characters

To record a macro in UNIX:

1 Choose File > Utilities > Keyboard Macros.

2 Click Record a New Macro, click Begin, and then click OK.

3 Type the keystrokes you want FrameMaker to record. When you press a key, FrameMaker records it and carries out its normal function. You can also press the trigger for a macro that you've already recorded.

4 To finish recording, choose File > Utilities > Stop Recording Keys.

5 Press the key or combination of keys you want to use as a trigger, and then click Continue. You must type a trigger, or the recording is canceled.

As you type the trigger, the keystrokes appear in the text box. (Function keys appear preceded with a slash; Control appears as ^; Meta appears as ~; Shift appears as +; and Esc appears as \!.) For more information on triggers, see "Choosing a macro trigger," next.

6 Type a comment for the macro if you want, and click Continue.

To cancel recording in UNIX:

Choose File > Utilities > Stop Recording Keys, and click Cancel.

Choosing a macro trigger

Here are some guidelines for choosing a macro trigger:

- The trigger can contain up to 15 keystrokes.
- A trigger can be any keyboard key, but shouldn't be one that already has a function assigned to it. For example, don't use the Tab key as the trigger, or you won't be able to insert a tab in text.
- A trigger can include any combination of the Control, Shift, and Meta keys—for example, Control+8 and Meta+Control+8 are both valid.
- A trigger shouldn't start with Esc or Control+r followed by the first letter of a menu name. This will disable all the shortcuts for that menu. For example, if you choose Esc e as a trigger, you can't use the shortcuts for Edit menu commands.
- A trigger shouldn't duplicate a built-in shortcut unless you don't mind losing the built-in shortcut. (For a list of built-in keyboard shortcuts, see online Help.)
- Certain keys and key combinations have special meanings when you're assigning a macro trigger.

Key sequence	Meaning
Backspace, Delete, and Control+h	Deletes the last trigger keystroke
Control+u	Deletes the whole trigger
Return, Control+]	Accepts the trigger (clicks OK)
Tab	Moves to the next setting
Shift+Tab	Moves to the previous setting
Control+Tab	Moves to the first setting
Control+c	Cancels the macro (clicks Cancel)

To use these keys in a trigger, precede them with a backslash. For example, to use Control+g Delete as a trigger, press Control+g, type a backslash, and then press Delete. The trigger appears as ^g/Delete.

- To include the backslash itself in a trigger, type it twice (\\).

Playing back macros

When you play back a macro, FrameMaker responds as if you were typing the keystrokes stored in the macro.

Depending on the purpose of the macro, you may need to select text or objects before playing back the macro. For example, if the macro changes the format of the current paragraph, put the insertion point in a paragraph before playing back the macro.

Note: *Macros may execute incorrectly when the insertion point is in an equation and you press the macro trigger from a dialog box.*

To play back a macro:

Press the macro's trigger.

To cancel a macro while it's playing:

Press Control+c.

Note: *If you choose File > Undo after playing back a macro, only the last action of the macro will be undone. To be able to undo the effect of the whole macro, you have to save your document before playing the macro and then choose File > Revert to Saved after the macro has finished.*

Saving UNIX macros

You save the macros currently in memory by adding them to a macro file. FrameMaker adds any macros you recorded since the last time you saved or cleared them.

If you save your macros in a file called fmMacros and store it in one of four locations, FrameMaker will load the macro file automatically when it starts. It loads the first fmMacros file it finds as it searches in the following locations in order:

- The fminit 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 create special macro files for specific tasks, reading them into FrameMaker as needed. For example, you could create a macro file for graphics tasks and a different macro file for working with text.

To save all current macros in a file in UNIX:

1 Choose File > Utilities > Keyboard Macros and do one of the following:

- To add the macros to your standard set of macros, make sure fmMacros is the filename in the Macros File text box.
- To add the macros to different macro file, use the scroll list to select a macro file.
- To create a new macro file, type a new filename in the Macros File text box.

2 Click Add New Macros to File and click Begin.

Reading macros into memory

Reading macros from a macro file 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.

If your system crashed before you could save your macros to a file of your choosing, you can reload them by reading in the file ~/fmMacrosLog.

To read a set of macros from a file in UNIX:

1 Choose File > Utilities > Keyboard Macros and use the scroll list to select a macro file.

2 Click Read Macros from File, and then click Begin.

Clearing macros from memory

When you record macros or read them from a file, the macros are stored in your workstation's memory. You can clear the current macros from memory at any time. (If you want to use the macros again, be sure you save them before you clear them from memory.)

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 *Customizing FrameMaker Products.*

To clear the current set of macros from memory:

Choose File > Utilities > Keyboard Macros, click Clear Current Macros, and then click OK.

Deleting UNIX macros and triggers

If you want to discard the macros that you just recorded—but haven't saved—you can clear the current macros (see the preceding section, "Clearing macros from memory"). But if you have other newly recorded macros you want to save, or if the macro has already been added to the file, delete the macro from the macro file.

To delete a trigger and use it in a different macro:

Record the new macro and give it the trigger you want. Even though FrameMaker has two macros with the same trigger, it uses only the most recent macro for the trigger.

To delete a macro from a saved macro file:

1 Save any newly recorded macros in a macro file (see "Saving UNIX macros" on page 497).

2 Open the macro file and delete the macro definition. (If you use FrameMaker to edit the file, save the file in Text Only format.) To identify the macro you want to delete, look for its trigger or its

comment. The comment immediately precedes the macro definition. Be sure to delete the whole definition, including the final angle bracket (>).

```
This is the comment for Macro15.
    <Macro Macro15
        <Label Macro15>
        <Trigger ^p>
        <TriggerLabel ^p>
<Definition \/usr\/doc\/Manual>
        <Mode NonMath>
    >
```

Sample macro and its comment

3 Clear the current macros (see "Clearing macros from memory" on page 498).

4 Read the edited macro file back in (see "Reading macros into memory" on page 498).

Creating UNIX macros that use dialog boxes

This procedure describes the general steps for creating a macro that uses a dialog box. The specific steps will depend on the dialog box you're using and what you want to accomplish in the macro.

To create a macro that uses a dialog box:

1 Start recording the macro, and use a keyboard shortcut to display the dialog box or to shift the focus to an already-open dialog box. (For a list of these shortcuts, see online Help.)

2 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 or field.

3 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. For a full list of dialog box shortcuts, refer to online Help.

4 Press Return to accept the settings and to close the dialog box. Pressing Return has the same effect as clicking the default command button. If you want the macro to click a different command button, tab to the button and then press Return.

5 Stop recording the macro.



To create a macro that starts or stops while a dialog box is open, display the dialog box as you usually do and then press Control+] to start or stop the macro recording.

Creating UNIX macros that repeat

This procedure describes the overall steps for creating a macro that repeats a set number of times or indefinitely, until you stop it by pressing Control+c.

To create a macro that repeats a set number of times:

1 Record the macro you want to repeat and assign it a trigger (see page 496).

2 Start recording a second macro, and while recording, press the first macro's trigger as many times as you want the macro to repeat.

3 Stop recording the macro.

To create a macro that repeats indefinitely:

Record the macro you want to repeat and make the last keystrokes you record the same as the macro's trigger.

Capturing UNIX screen images

You can capture an image of any rectangular area of the screen and store it as an X Windows Dump (xwd) file. You can edit the resulting file in any paint program that supports the xwd bitmap format. If you need to convert a color image to black and white before importing it, see "Converting color images to monochrome (UNIX)" on page 506. Once captured, you can import the image into FrameMaker (see page 381).


To capture the edges of an image cleanly, move it over an empty window or a blank page in a document. If the object is unmovable, you can edit the image in a paint program. You can also mask unwanted bits in FrameMaker by drawing objects with white fill and no pen pattern on top of the parts you want to hide (see page 222). Then recapture the masked image to make the edits permanent.

Screen captures that include colors may not be totally accurate. For example, a screen capture of a blue dialog box might have a darker shade of blue than the original.

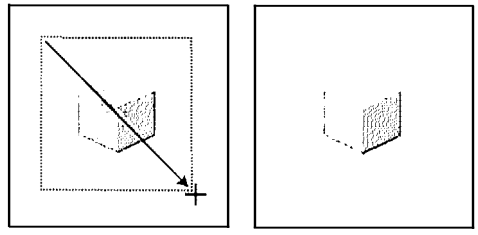
To capture an image in UNIX:

1 Position the image as needed.

2 Choose File > Utilities > Capture and specify a filename and location for the image.

3 Click Capture. After a short delay, the pointer changes to a cross hair (+).

4 Drag from one corner to the opposite corner until the capture border surrounds the image. When you release the mouse button, a message appears telling you the screen image has been captured.



Drag out a capture border and release to capture the image.

5 Click Continue.


If you capture an image in an application that uses a different color map, you can move the pointer to the application's window during the delay mentioned in step 3 of this procedure, thus switching to the appropriate color map. To change the delay period, edit the Maker.captureDelayTime resource, as described in the online manual *Customizing FrameMaker Products*.

Performing command-line operations with fmbatch (UNIX)

You can use fmbatch to open, print, reformat, and save FrameMaker files without actually displaying them. You can issue commands one at a time (interactively), or you can store commands in a text file—a batch file—and issue all the commands in a single command.

Starting fmbatch

You start fmbatch by typing **fmbatch**, followed by optional start options, at a UNIX shell prompt (you may have to change to $FMHOME/bin).

Start option	Result
-makername maker	Starts FrameMaker
-makername makersgml	Starts FrameMaker+SGML (if available)
-noerrorquit	Starts FrameMaker and continues to run even if an error is encountered
-v	Turns echoing on
batch_file	Executes the commands in *batch_file* (omitting *batch_file* starts fmbatch in interactive mode)

For example, enter **fmbatch -v -makername maker MyCommands.txt** to start FrameMaker, have fmbatch execute the commands in the MyCommands.txt file, and echo those commands to the screen.

If you've set a language preference with the Maker.uiLanguage resource in your ~/.xdefaults file, fmbatch uses that language version as well.

Using fmbatch interactively

Use commands interactively (one at a time) for operations you perform infrequently.

To use fmbatch interactively:

1 Type **fmbatch** at a UNIX shell prompt.

2 Enter an fmbatch command (see "About fmbatch commands" on page 502) at the prompt.

Using fmbatch in batch mode

You can store fmbatch commands in a text file—a batch file—and issue all the commands in the file at once. Using batch files is convenient when you need to perform the same set of operations frequently. For example, you can create a batch file to open, print, and close a book file.

You can also create batch files from UNIX shell scripts. For more information, see "Creating batch files from scripts" on page 505.

When you store a batch file in the same location as the files you want to use, you don't have to use pathnames in your fmbatch commands. Otherwise, use either absolute or relative pathnames.

To create an fmbatch batch file:

1 Use any standard text editor to create a text file.

2 Type fmbatch commands in the order you want them executed with each command on a separate line. Be sure to include any needed options. (For a list of possible commands, see "About fmbatch commands," next. For details on the options for some commands, see the sections that follow.) Two special commands deserve special note:

- To enter a comment, type a number sign (#) at the beginning of the line.
- To display messages on-screen while the batch file is running, enter **echo *message***, where *message* is the text you want to display.

3 Save the file. If you're using FrameMaker to create the batch file, save it in Text Only format.

To use a batch file with fmbatch:

At a UNIX shell prompt, type **fmbatch -v *batch_file***. To suppress commands from appearing as they are run in the batch file, don't use the -v option.

For example, to have fmbatch run a batch file called PrintBook, type **fmbatch -v PrintBook**

About fmbatch commands

The following table lists all the commands you can use with fmbatch. You can use these commands in either interactive or batch mode.

Command	Result
echo	Prints messages to standard error output
help or ?	Displays a list of fmbatch commands
ImportFormats	Imports and 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	Runs a UNIX command
Update	Updates cross-references and generates all the generated files in an open book

All fmbatch commands are case-sensitive. Some commands are followed by filenames. A few commands also need options, as described in the sections that follow.

When using filenames with fmbatch commands, you may need to use single or double quotation marks to delimit them. (If the filename includes single quotation marks, enclose the filename in double quotation marks, or vice versa.) For example, to open a file that has single quotation marks in its name, type

Open "My 'Unquotable' Quotes File"

Opening, saving, and printing files with fmbatch

You can open any file with fmbatch that you can open with the FrameMaker File > Open command. You must use fmbatch to open a file before you can perform any other fmbatch operations on it.

You can save an open document or a book file with the current filename and format, or you can save it with a different name or format.

***Note:** When you save a document with fmbatch, it does not warn you about overwriting an existing file. The overwritten file is given a .backup suffix.*

You can print a file you opened with fmbatch using the file's print settings or using the print settings from a different FrameMaker document, which lets you, for example, specify one printer name for a group of documents.

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 can also use fmprint to print files. For details, see "Printing with fmprint (UNIX)" on page 506.

To open a file with fmbatch:

In a batch file or at the fmbatch prompt, do one of the following:

- To open a FrameMaker document, enter **Open *filename***. For example, enter **Open chapt1.fm**
- To open a text file, enter **OpenTextFile *type filename***. The *type* option is one of the following.

Type option	File type
a	A line-oriented text file (Each line is treated as a separate paragraph.)
t	A paragraph-oriented text file (Consecutive non-empty lines are considered part of a paragraph, and an empty line signifies a paragraph break.)

For example, to open MyData.txt, a line-oriented text file, enter **OpenTextFile a MyData.txt**

To save an open file with fmbatch:

In a batch file or at the fmbatch prompt, do one of the following:

- To save a file with its current name and format, enter **Save *filename*** (for example, enter **Save chapt1.fm**).
- To save a file with a different name or format, enter **SaveAs *format oldname newname***. The *format* option is one of the following.

Format option	Result
d	Saves in Document format
l (lowercase *L*)	Saves in View Only format
a	Saves in line-oriented text format
t	Saves in paragraph-oriented text format
m	Saves in MIF
- (hyphen)	Saves in the current format

Specify only one format option. If you don't specify a format option, fmbatch saves the file in its current format. You can't use the l, a, or t option when saving a book file. If a document is in View Only format, you can't save it in Document format with the SaveAs command.

For example, to save the FrameMaker document MyReport.fm as a MIF file, enter **SaveAs m MyReport.fm MyReport.mif**

To print an open file with fmbatch:

In a batch file or at the fmbatch prompt, do one of the following:

- To print a file with its own print settings, enter **Print *filename***
- To print a file with the print settings of another FrameMaker document, enter **Print *filename settings_file***. (To set up or change the print settings in the *settings_file* document, open a document—even a new, blank document—choose File > Print, specify the settings you want, and click Save Settings Only. Then save the document.)

For example, to print MyReport.fm with the print settings from the PrintToDuplex.fm document, enter **Print MyReport.fm PrintToDuplex.fm**

Updating files with fmbatch

You can update all cross-references in a document or book that you opened with fmbatch. When you update a book, fmbatch also regenerates all generated files in the book.

When you use a batch file (see "Using fmbatch in batch mode" on page 501) to update and generate files, fmbatch quits if it encounters an error such as an unresolved cross-reference or a missing file (unless you start fmbatch with the -noerrorquit option listed on page 501).

You can also import and update the formats in a document or in all files in a book. To do this, first use fmbatch to open both documents or the document and book (both the target and the source for the import format process).

To update and generate files with fmbatch:

In a batch file or at the fmbatch prompt, enter **Update *filename*** (for example, to update and generate the files in Reference.book, enter **Update Reference.book**).

To import formats with fmbatch:

In a batch file or at the fmbatch prompt, enter **ImportFormats *options filename filename_with_formats***. The *options* are any of the following.

Option	Result
p	Imports paragraph formats
f	Imports character formats
l (lowercase *L*)	Imports page layouts (master pages)
c	Imports cross-reference formats
v	Imports variable definitions
r	Imports reference pages
t	Imports table formats
x	Imports conditional text settings
k	Imports color definitions
m	Imports math definitions
i	Imports combined fonts (Japanese documents only)
d	Imports document properties
B	Preserves manual page breaks
O (uppercase *O*)	Preserves other format and layout overrides

If you don't specify options, fmbatch imports all formats. The options correspond to the settings available with File > Import > Formats. For information on the settings, see "About import and update settings" on page 296.

For example, to import the paragraph and character formats from Template.fm to Chapter2.fm while preserving the manual page breaks, enter **ImportFormats p f B Chapter2.fm Template.fm**

Closing files and exiting 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 or exit fmbatch:

In a batch file or at the fmbatch prompt, do one of the following:

- To close a file, enter **Quit** ***filename***. For example, to close Chapter2.fm, enter **Quit Chapter2.fm**
- To exit fmbatch, enter **Quit**

Using UNIX commands within fmbatch

You can use any UNIX command from within fmbatch. For example, you may want to copy or move files after you process them.

To use a UNIX command within fmbatch:

In a batch file or at the fmbatch prompt, enter **system "*command*"**. The command must be within single or double quotation marks.

For example, to copy MyFile.fm to /tmp, enter **system "cp MyFile /tmp/MyFile"**

Creating batch files from scripts

You can use fmbatch in shell scripts to automate some FrameMaker operations. For example, a shell script can use fmbatch to generate a book file, save all documents in MIF, edit the MIF files to set the document's window position and size, and convert the MIF files back to Document format.

You can also use UNIX scripts to generate fmbatch batch files. The following example is a C-shell script that builds a batch file to save all documents as MIF files. To use this script, type it 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 you can use with fmbatch at the current location.

```
#! /bin/csh -f
set scriptname = createbatch
set batchfile = commands.batch
rm -f $batchfile >& /dev/null
touch $batchfile
foreach f ( * )
 # don't add directories or the batch file itself
 if ( ! -d "$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."
```

Printing with fmprint (UNIX)

You use the fmprint script to print one or more FrameMaker documents or books without opening and displaying them. You can also use the print settings from a different FrameMaker document, just as you can when you use the fmbatch Print command (see "Opening, saving, and printing files with fmbatch" on page 502).

To print a file with fmprint:

At a UNIX shell prompt, do one of the following:

- To print a file using its own print settings, enter **fmprint** ***filename***
- To print a file using the print settings from another FrameMaker document, enter **fmprint -p** ***settings_file filename***. (To set up or change print settings in the *settings_file* document, open the document, choose File > Print, specify the settings you want, and click Save Settings Only. Then save the document.)

Copying file hierarchies with fmcopy (UNIX)

The fmcopy script copies a file hierarchy from one place to another, preserving symbolic links and permissions. Use it to copy FrameMaker installation files from one file system to another.

To copy a file hierarchy:

At a UNIX shell prompt, type **fmcopy** ***source_dir target_dir*** where *source_dir* is the directory you want to copy and *target_dir* is the directory you want to copy to.

For example, to copy FrameMaker installation files from /var/frame to /var/FrameMaker, type **fmcopy /var/frame /var/FrameMaker**

For on-screen instructions on fmcopy, type **fmcopy** at a UNIX shell prompt.

Inverting images with fminvert (UNIX)

You can use fminvert to invert a monochrome Sun rasterfile or X Windows Dump (xwd) 1-bit image so that portions previously black appear white and portions previously white appear black.

To invert an image:

At a UNIX shell prompt, type **fminvert** ***filename inverted_filename*** where *filename* is the file you want to invert and *inverted_filename* is the name of the inverted file.

Converting color images to monochrome (UNIX)

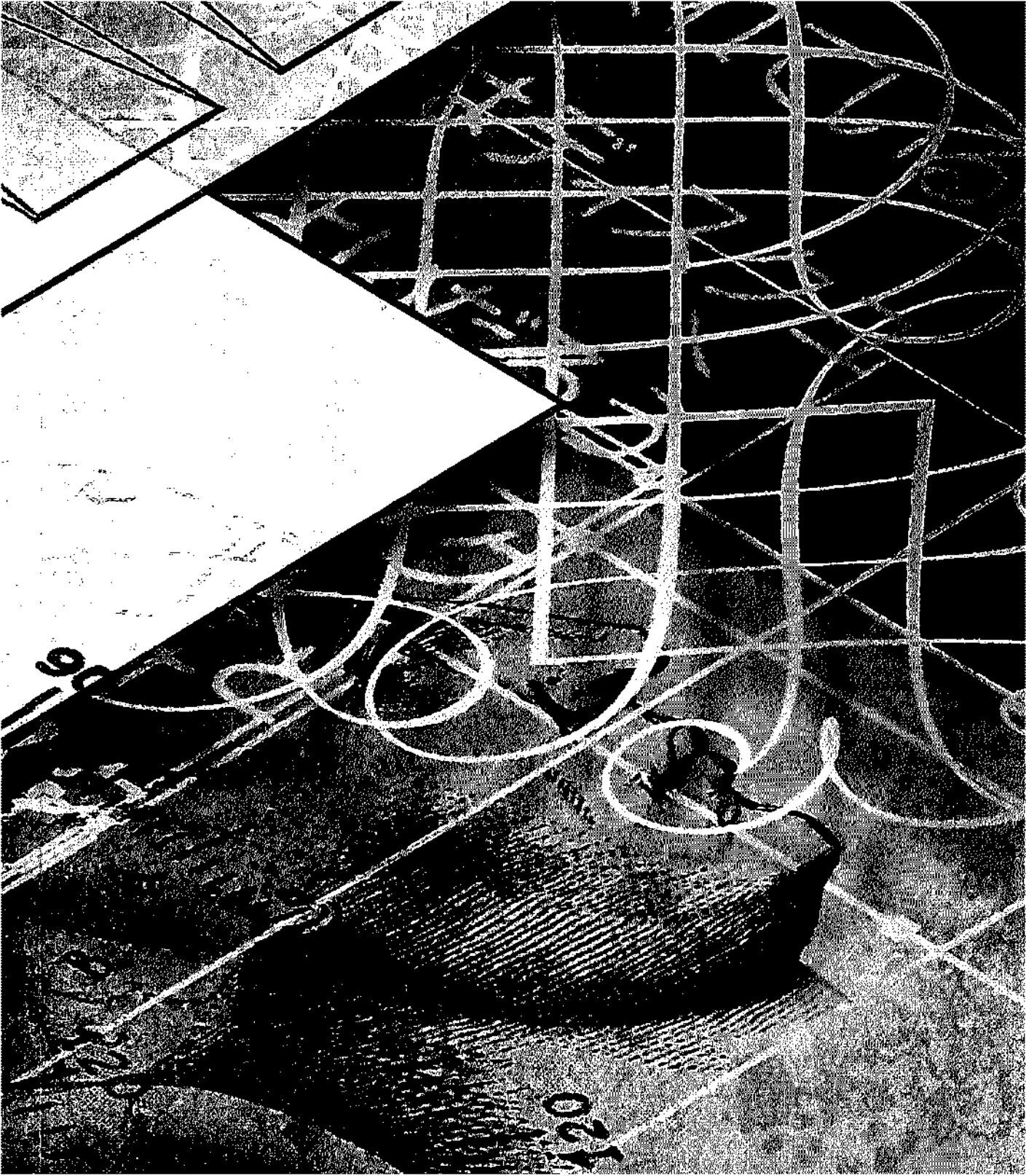
Use xwd8to1 to convert color X11 xwd images to monochrome images. (You can use the screen-capture feature to create xwd images; see page 500.)

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 cutoff value of 50.

To convert a color xwd image to monochrome:

At a UNIX shell prompt, type **xwd8to1 -i *cutoff filename filename.mono*** where *filename* is the name of the color image, *cutoff* is the cutoff value used to convert colors to black or white, and *filename.mono* is the name of the converted file.





Appendix A: Typing in Dialog Boxes

You can enter characters that don't appear on the keyboard (such as nonbreaking spaces, en dashes and em dashes, and special hyphens) in dialog boxes. These characters are handled differently on each platform, as follows:

- In Windows, you must enter a sequence of characters beginning with a backslash (\). The backslash sequences appear in the dialog box, but the characters they represent appear in the document.
- On the Macintosh, you enter these characters in dialog boxes in the same way that you type them in a document window, and the actual characters (not backslash sequences) appear in the dialog boxes. However, you can also enter a backslash sequence for a few of these characters.
- On UNIX systems, you can enter the characters in the same way that you type them in a document window, but the backslash sequences will appear in the dialog boxes.

In addition to the special characters described here, you can enter characters in the Find/Change dialog box that indicate a position rather than a specific character (for example, **\P** for end of paragraph). For a list of these characters, see "Searching for special characters and nonprinting symbols" on page 58.

For information on typing special characters in a document window, see "Typing special characters" on page 50, "Typing special spaces" on page 51, "Changing hyphenation and line breaks" on page 94, and the online manual *FrameMaker Character Sets*.

All key sequences described here begin with a backslash (\). To indicate a literal backslash in a dialog box, enter two backslashes (\\).

Windows

You can enter many characters in a dialog box by pressing the corresponding keys on the keyboard. If a character doesn't appear on the keyboard, you can usually enter the character by using its ANSI or hex code or the character's key sequence (see the online manual *FrameMaker Character Sets*).

In some cases, however, you must type a character sequence beginning with a backslash (\) to enter a character in a dialog box. The sequence appears in the dialog box, but the character appears correctly in the document. The following table shows the sequences to type in a dialog box. In a few cases, you can choose between two backslash sequences for a character. In these cases, the sequences are separated by a comma.

Character name	Graphic	Backslash sequence
Bullet	•	\b
Circumflex	ˆ	\@
Dagger	†	\d
Dagger (double)	‡	\Shift+d
Dash (em)	—	\m
Dash (en)	–	\=
Ellipsis	…	\e

Character name	Graphic	Backslash sequence
Florin	ƒ	\Shift+f
Forced return		\r
Fraction	/	\/
Grave	`	\[
Guilsingl left	‹	\(
Guilsingl right	›	\)
Hungarumlaut	˝	\&
Hyphen (discretionary)	-	\- (hyphen)
Hyphen (nonbreaking)	-	\+
OE ligature	Œ	\Shift+o Shift+e
oe ligature	œ	\oe
Per thousand	‰	\%
Quote (base single)	‚	\,
Quote (base double)	„	\g
Quote (double left)	“	\`
Quote (double right)	”	\'
Quote (single)	'	\"
Space (em)		\sm, \Shift+m
Space (en)		\sn, \Shift+n
Space (nonbreaking)		\space
Space (numeric)		\s#, \#
Space (thin)		\st, |
Suppress hyphenation		_ (underscore)
Tab		\t
Trademark serif	™	\Shift+t Shift+m
Y dieresis	Ÿ	\Shift+y :

Macintosh

You enter characters in Macintosh dialog boxes in the same way that you type them in a document window. The characters appear in the dialog boxes just as they do in a document window. However, you can also enter a backslash sequence for the following characters.

Character name	Backslash sequence
Dash (em)	\m
Dash (en)	\=
Forced return	\r
Hyphen (nonbreaking)	\+
Space (em)	\sm
Space (en)	\sn
Space (numeric)	\s#
Space (thin)	\st
Tab	\t

UNIX

To comply with the X Window System, FrameMaker uses X server fonts in dialog boxes. X server fonts use ISO Latin-1 encoding for characters in Western fonts, so not all characters in the character set have a corresponding character in the X server font.

The following table lists characters in the character set that don't have corresponding characters in the X server font. The rightmost column shows how these characters appear in dialog boxes. You can enter the characters with the key sequences shown

in the third column or type them directly as they appear in the rightmost column. In a few cases, you can choose between two backslash sequences for a character. In these cases, the sequences are separated by a comma.

Character name	Graphic	Press	Or type this backslash sequence
Breve	˘	Control+q y	\u
Bullet	•	Control+q %	\b
Circumflex	ˆ	Control+q b	\@
Dagger	†	Control+q space	\d
Dagger (double)	‡	Control+q `	\Shift+d
Dot accent	˙	Control+q z	\. (period)
Dotless i	ı	Control+q u	\l (lowercase *L*)
Ellipsis	…	Control+q Shift+i	\e
Dash (em)	—	Control+q Shift+q	\=
Dash (en)	–	Control+q Shift+p	
fi ligature	ﬁ	Control+q ^	\fi
fl ligature	ﬂ	Control+q _ (underscore)	\fl
Florin	*ƒ*	Control+q Shift+d	\Shift+f
Forced return		Control+j	\r
Fraction	⁄	Control+q Shift+z	\/
Grave	`	Control+`	\{
Guilsingl left	‹	Control+q \	\(
Guilsingl right	›	Control+q]	\)
Hungarumlaut	˝	Control+q }	\&
Hyphen (discretionary)	-	Control+- (hyphen)	\- (hyphen)
Hyphen (nonbreaking)	-	Meta+- (hyphen)	\¬
OE ligature	Œ	Control+q Shift+n	\Shift+o Shift+e
oe ligature	œ	Control+q Shift+o	\oe

Character name	Graphic	Press	Or type this backslash sequence
Ogonek	˛	Control+q ~	\k
Per thousand	‰	Control+q d	\%
Quote (base single)	‚	Control+q b	\,
Quote (base double)	„	Control+q c	\g
Quote (double left)	“	Control+q Shift+r	\‘
Quote (double right)	”	Control+q Shift+s	\’
Quote (single)	'	Control+'	\"
Space (em)		Esc space m (*space=press spacebar*)	\sm, \Shift+m
Space (en)		Esc space n	\sn, \Shift+n
Space (nonbreaking)		Control+space	\space (*space=press spacebar*)
Space (numeric)		Esc space 1 (one)	\s#, \#
Space (thin)		Esc space t	\st, \i
Tab		Tab	\t
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