

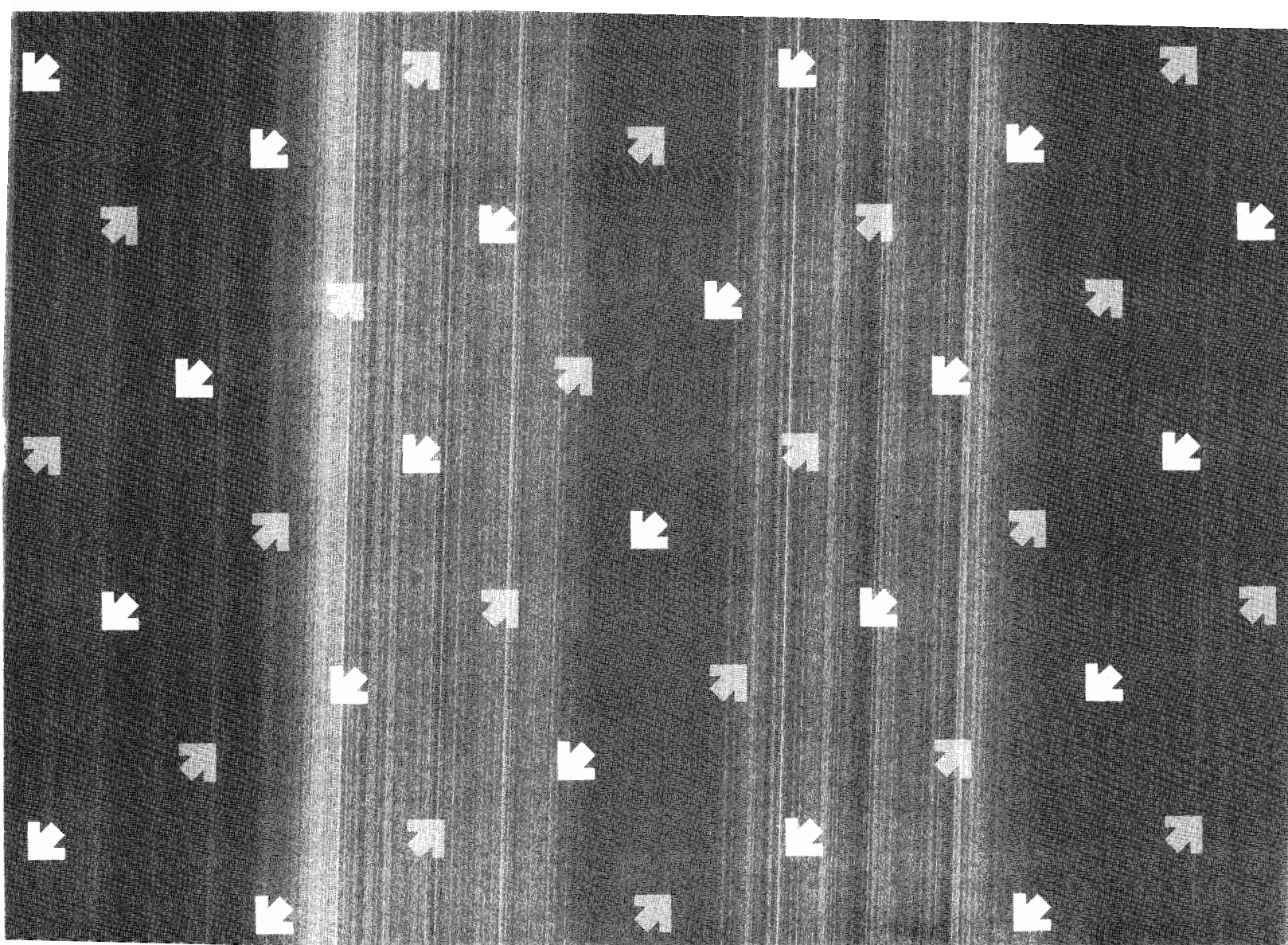
HP 3000: A GUIDED TOUR

MODULE 1

General Concepts

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MODULE 1

Preface



You are about to take a fascinating look at a remarkable data-handling tool — the Hewlett-Packard 3000 Computer System.

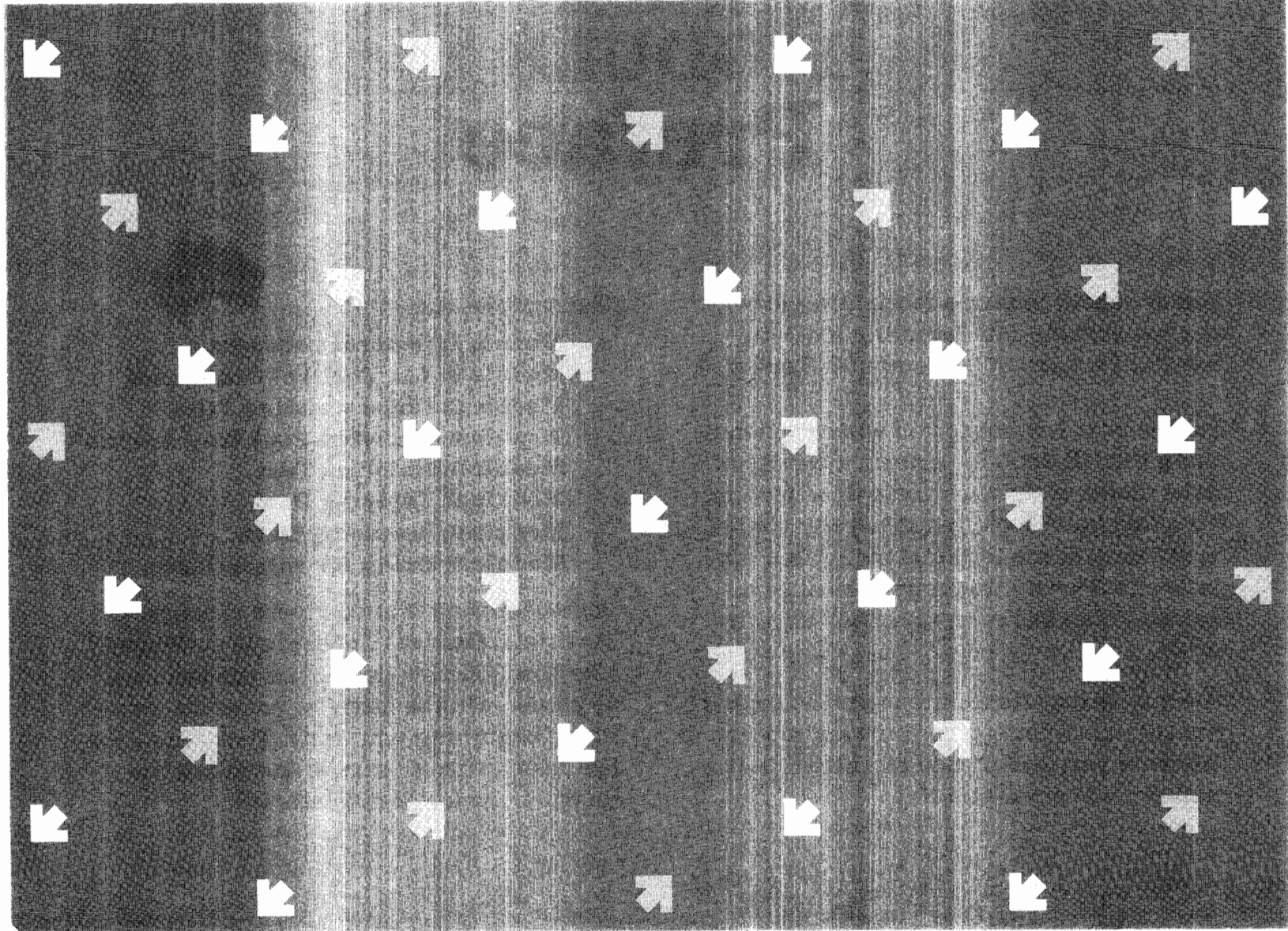
For the next few hours you will experience using the HP 3000 to perform a variety of tasks. Some of the time you will be reading from this guidebook, but generally you will be working at the terminal using the computer. That's why this course is called a Guided Tour. The computer itself is your guide.

The tour is organized into modules, so that you can select the topics you want to learn in the order you prefer. You can also repeat modules whenever you like.

The modules are:

- Module 1: General Concepts**
- Module 2: The Thrill of Commands**
- Module 3: Understanding Files**
- Module 4: Knowing Your Way Around**
- Module 5: Entering Text**
- Module 6: Entering Data**
- Module 7: Accessing Data**
- Module 8: Using HP Inform/3000**

We recommend that you work through **Module 1: General Concepts** first. You will also need to know how to use the terminal, so please read the next few pages before actually beginning your tour. Then when you feel ready, turn to page 4 and follow the instructions for getting started.

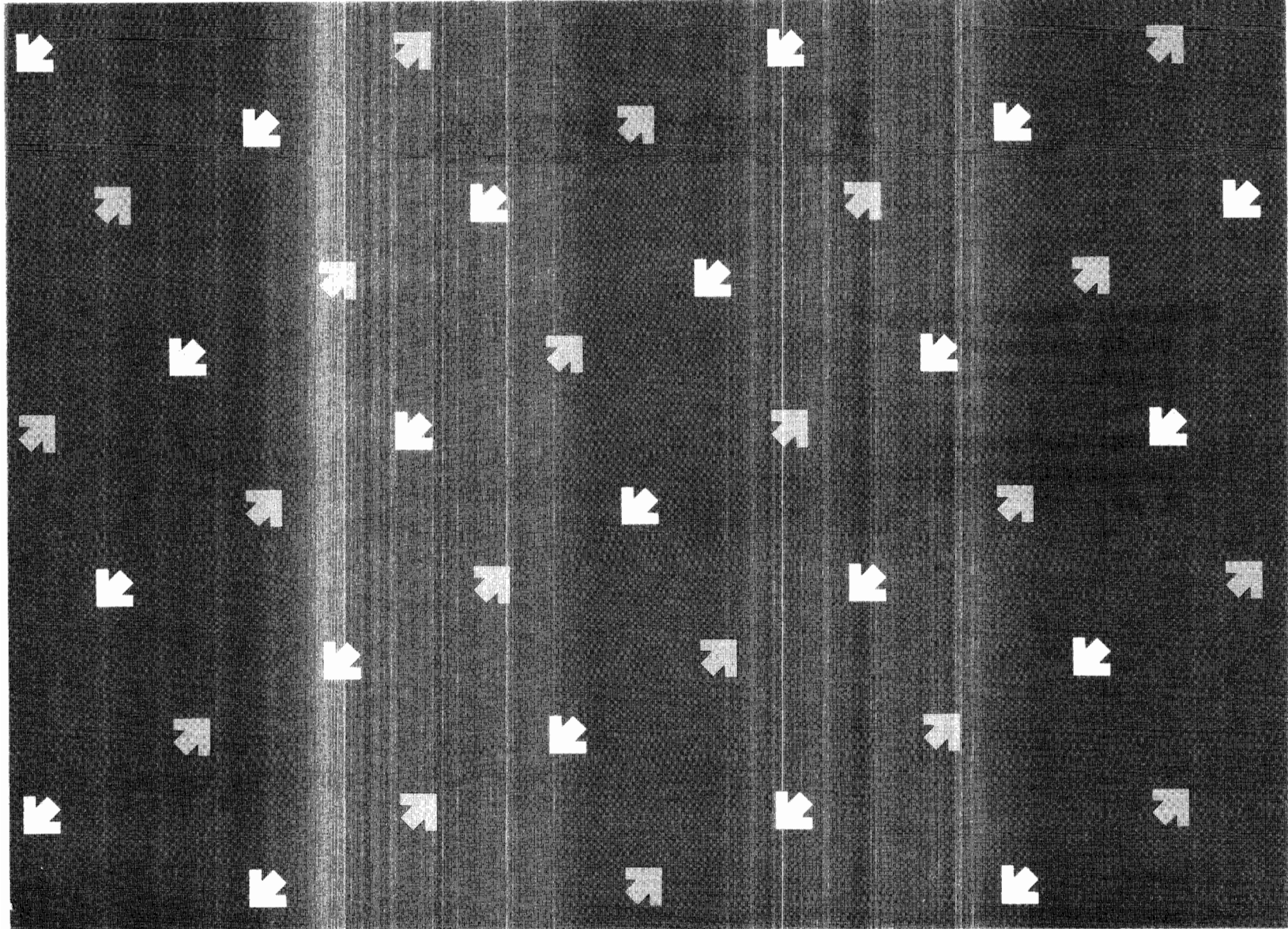


MODULE 1

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MODULE 1

General Concepts

This module of the Guided Tour introduces you to the HP 3000 Computer System. Work through the material presented at your own pace, and feel free to repeat the module as often as you like. Once you have mastered the concepts presented here you can go on to any of the other modules provided. Topics covered in this module include:

- Using the terminal components
- Initiating a session
- Dealing with an error
- A look at your system
- Learning the terminology
- Logging off

Using the Terminal

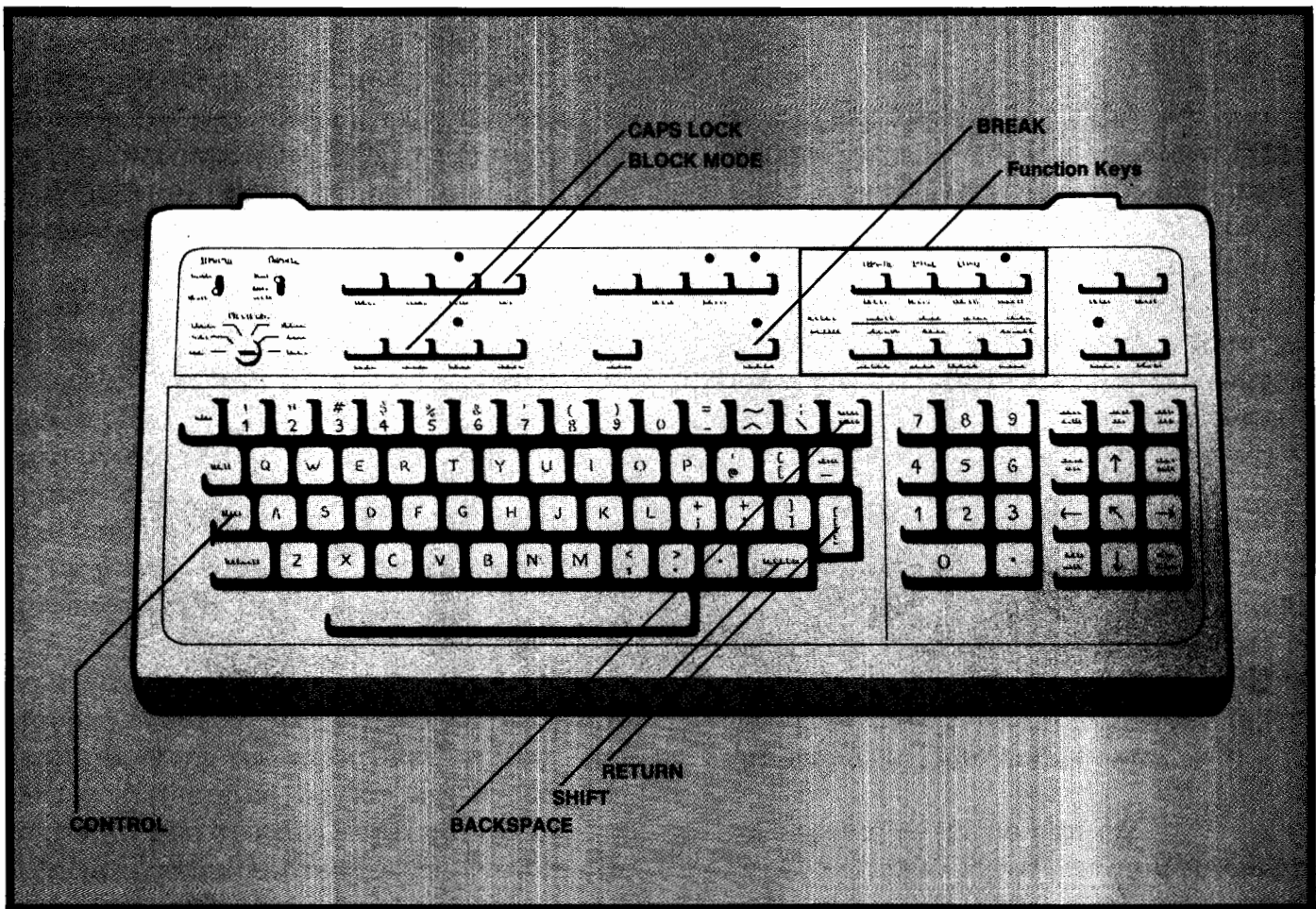
To take the Guided Tour, you must have at your disposal a terminal equipped with a video display screen and connected to an available HP 3000 computer system. We recommend that you use an HP 2645, 2647, 2648, or any other terminal which can support VPLUS/3000 for the tour. If you use any other model or terminal type, you may not be able to complete all of the sections offered.

Since you use the terminal to communicate with the computer (and it with you), take a few moments here to familiarize yourself with the various parts of your terminal.

- The keyboard is where you will type your commands or instructions and enter your responses. It is patterned after that of a standard typewriter.
- The display screen is where the dialog between you and the computer will appear.
- The numeric pad on the right is used for typing numbers. (You may also use the numeric keys along the top of the standard keyboard.)
- The cursor control keys to the extreme right are used to move the cursor (that little flashing line which marks your place on the screen).
- The keys marked **F1** through **F8** are called function keys. These keys will be used only in modules 6 and 7 of the tour.

Look at the annotated illustration of the HP 2645 keyboard below. The keys you will be expected to use are noted. If you are not using an HP 2645 terminal, locate the keys on your keyboard which correspond to those noted in the illustration. They should be labeled:





HP 2645 Terminal Keyboard

The following exercises are designed to help you familiarize yourself with using the terminal. If you already know how to use a terminal, feel free to start with exercise number 5. On the other hand, if this whole subject is new to you, gather your courage and give it a try.

Exercise 1: Turn the terminal on.

Look for a switch at the back of the terminal. (On some models the switch is located on the side casing or even under the keyboard.) When you find the switch turn it to ON. In a few seconds, the cursor will appear at the top of the screen. The terminal is now ready to use. PS: Be sure to turn the switch to OFF when you have finished using the terminal.

Exercise 2: Find the REMOTE key.

The **REMOTE** key should be located along the top of the keyboard. The **REMOTE** key is used to connect the terminal with the computer. When the key is in the down position, the terminal is "on-line", and anything you type is sent directly to the computer. When the

key is up, the terminal is in "local mode" and what you type is displayed on the screen, but is not sent to the computer.

Exercise 3: Type your name.

For this exercise, set the **REMOTE** key in the local mode (up position) and depress the **AUTO IF** key. Using the terminal just like a regular typewriter, type your name. Next press the **RETURN** key to move the cursor back to the margin on the left.

Every time you type something for the computer you must end it by pressing the **RETURN** key. This key signals the computer that you have finished a line of input or data. The computer can respond by advancing the cursor to the next line permitting you to continue typing more data or by typing a message back to you. The important thing to remember is that you must press **RETURN** at the end of every entry you type.

Since you have put the terminal in local mode, only the terminal, not the computer, responded to what you typed.

Exercise 4: Make a correction.

It's easy to correct typing errors with the terminal in local mode. All you have to do is move the cursor back to the left and retype the line. Be sure you use the backspace key to move the cursor. Go ahead and retype your name — this time in capital letters. You may use either the **SHIFT** or **CAPS LOCK** key.

The procedure for correcting typing errors when the terminal is on-line to the computer depends upon when you detect the error. If you discover the error before you have finished the line and pressed **RETURN** you can use the **BACK SPACE** key to move the cursor back beneath the error and then retype the line from that point. If you have already pressed the **RETURN** key, the error must be corrected in other ways. Procedures for doing that vary according to the kind of error and are provided from time to time during the tour.

Exercise 5: Prepare the terminal for on-line operation.

The terminal should already be physically connected to the computer by a cable. To verify that it is, put the **REMOTE** key in the down position and press the **RETURN** key. If a colon is printed on the screen in response, the terminal is connected.

If no colon appears, make sure that the **AUTO LF** key is also down. Next verify that the duplex lever located under the plastic cover in the upper left of the keyboard is set to FULL, the parity lever to NONE, and the BAUD rate indicator is turned to 2400. If these switches are not part of your terminal, or you can't get the computer to respond with a colon when you press return, find someone who knows about your terminal to help you.

Relax. The Guided Tour contains lots of exercises for you to perform. As you do them you will become more confident in your ability to use the computer and its ability to withstand mistakes you may make.

Once the colon is printed, you are ready to initiate a session with the computer.

Initiating a Session

You initiate a session by performing a task which is known as logging on. Logging on is the way you begin any interaction with the computer. It's rather like beginning a conversation, really. All you do is say hello and identify yourself to the computer. Go ahead and try it. Here's what you must do:

1. Press the **RETURN** key.

2. When the colon appears, type the words HELLO GUIDED.TOUR right after the colon so that it looks like this on the screen:

:HELLO GUIDED.TOUR

Be sure to include the space after the word HELLO and the period between the words GUIDED and TOUR.

3. Now, press the **RETURN** key again.

A session begins at the moment you log on and ends when you log off. We will learn how to log off at the end of this module. (If you need to log off before reaching the end, just turn to page 12 for instructions.)

The HP 3000 is an interactive computer system. This means that what you type is acted upon immediately by the computer. When you log on, the computer responds by printing a message on the terminal screen which should look something like this:

```
HP3000 / MPE III. THU, MAY 8, 1980
2:50 PM
```

A brief message from your computer

operator may also be displayed. These messages are usually worthy of note, and at the very least, verify that you have successfully initiated a session. The last item displayed on the screen is a colon.

The colon is a prompt. The computer issues this prompt (prints the colon on the screen)

whenever it is ready for you to do something. During the Guided Tour you will learn a variety of things to do with the computer.

How to Deal with an Error

Since you are using an interactive system and to ensure your peace of mind, let's discuss what happens if you make an error. The first thing that will happen is that the computer will send you a message telling you about the error. The message may be specific enough that you can see just by reading it what you did wrong and how to correct it. Or the error message may be in code that you don't understand.

To illustrate, type:

:XXX

and press .



Notice that the error message is printed immediately below the error and that an arrow points to the exact place where the computer first perceived the error. Next the computer printed the message UNKNOWN COMMAND NAME and a parenthetical remark which contains the official error number (CIERR 975).

Lastly the computer printed a new colon. This means that no corrective action is necessary. The computer simply notified you that it didn't understand what you typed and is now ready for you to type something else.

The point of this exercise is to demonstrate that when you type something the computer perceives as an error, the computer tells you so immediately and you are then permitted to type something else.

But What if the Error is Really Confusing?

If the computer ever sends you an error message that you don't understand, the situation will be slightly different. In that

event there are three courses of action available to you:

1. You can look up the error message in the Error Message and Recovery Manual (if you happen to have one) and follow the recovery procedure recommended there.
 2. You can ask someone nearby who is familiar with the system to assist you.
 3. You can decide to give up and not use the entry you were trying to make.
- As long as the last thing printed by the computer is a colon, you may continue with the tour.

If All Else Fails

If the last thing printed on the screen is not a colon, you can still deal with an error by using the following procedure.

- Press the **BREAK** key.
- A colon will be printed and you can continue with the tour.

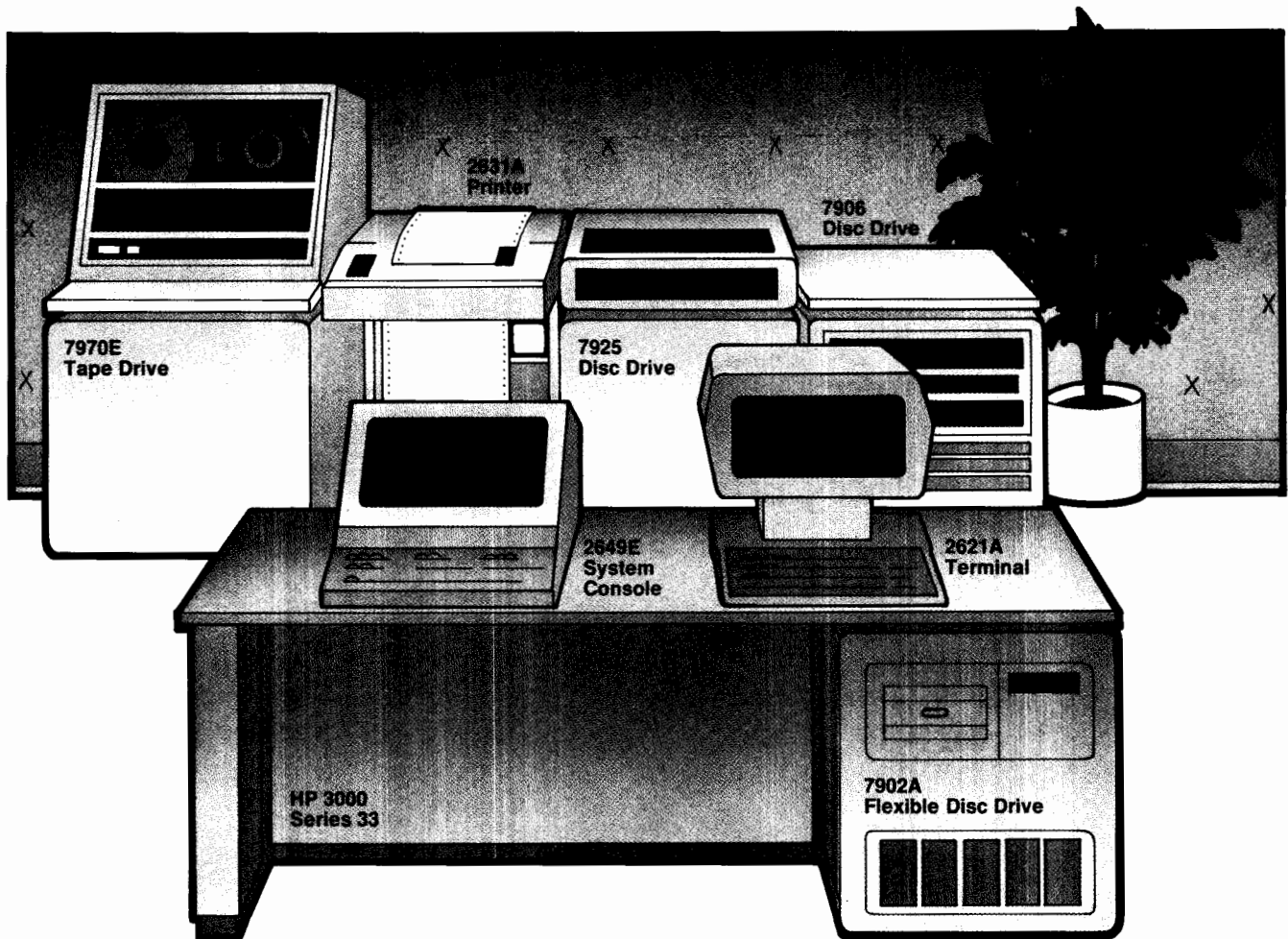
It should comfort you to know that the Guided Tour is designed in such a way that it is highly unlikely you will get an error message which is not explained in the guidebook. But if you do, just select from the options listed above.

System Components

So much for generalities, now let's get down to business, the first order of which is getting to know more about the HP 3000 computer and the tools it has to offer. Type the words RUN BEGIN like so:

:RUN BEGIN

Then press the **RETURN** key and watch what happens.



Typical HP 3000 Hardware

Typical HP 3000 Software

- Facilities to execute programs (such as the one called BEGIN you are using now)

Programs can be executed in any of six common computer languages:

- COBOL II/3000
- FORTRAN/3000
- APL/3000
- RPG/3000
- BASIC/3000
- SPL/3000 — the HP 3000's own unique language

OTHER HP Software:

- DSG/3000: an interactive graphics system which facilitates the creation of graphs, charts and scattergrams.

Every HP 3000 is provided with Fundamental Operating Software which consists of:

- MPE operating system and file system
- IMAGE/3000: a set of programs and procedures used to define, create, access, maintain, and organize data
- QUERY/3000: a program that uses simple English to enter, modify, delete, retrieve, or report on data in IMAGE
- KSAM/3000 (Keyed Sequential Access Method): a program for organizing and accessing data records
- VPLUS/3000: a program used to design forms and enter data in the forms
- Utilities for system administration and control

Speaking Our Language

An important part of using a computer is understanding the jargon that has grown up around data processing. You are probably already familiar with such terms as input and output, but there is a veritable dictionary of other terminology whose meaning is often less well known.

1. Type

: DEFINE

then press the **RETURN** key.

2. When the computer asks you what term you want defined, respond by selecting a term from the list below and typing it. (Don't forget to press **RETURN**.)

You may repeat step two as often as you like. When you have satisfied your curiosity about terminology, type the word

: STOP

and go on to the next page.

List of Terms

APL	FORTRAN
BACKUP	LOG ON
COMMAND	OUTPUT
CPU	PROMPT
DISC	RPG
FILE	SUBSYSTEM
JOB	TERMINAL
MPE	BATCH
PROGRAM	COBOL
RECORD	CONSOLE
SPL	DATA BASE
TAPE DRIVE	ENTRY
BASIC	INPUT
CARD READER	MEMORY
COMPUTER	PERIPHERALS
DATA	PRINTER
DISTRIBUTED	SESSION
SYSTEM	TAPE

Logging Off

When you are ready to end your interaction with the HP 3000, you must log off. Logging off terminates a session, just as logging on begins a session. Here is how to log off:

1. Type the word

:BYE

and press the **RETURN** key.

In response, the computer prints a message which contains some statistics about the session. The computer then disconnects from your terminal. Go ahead and log off and see what happens.

The information provided has to do mainly with time:

- CPU=nn means that your session used nn seconds of computer processing time.

- CONNECT=nn means that the actual time which elapsed between logging on and logging off was nn minutes.
 - The remainder of the message is, of course, today's date and the current time.
- That's all there is to it. Now that you have logged off, the next command you enter must be the :HELLO command to start a new interactive session.

You now have a good idea of what the HP 3000 Computer System is and a firm grasp on how to interact with it. Why not round out your education at this point by taking a walk through your computer facility? While you're there, fill out the Components Worksheet on the next two pages. Ask someone who knows the system to help you with the software section.

There's also a lot more to learn about using your HP 3000. So, when you're ready to continue with the tour, log on again and select another module.

Components Worksheet

Our system is an HP 3000 _____ Computer System which is equipped with the following hardware:

Line printer, model _____ Console/terminal model _____

Disc drive, model _____ Magnetic tape drive, model _____

Other devices: _____

Software available on our HP 3000 includes the Multiprogramming Executive Operating System (MPE) and:

Languages:

Subsystems:

Application Programs:
