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Microsoft Windows User's Guide

Order Number: AA-MF86A-TH

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# **Microsoft® Windows User's Guide**

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## **Microsoft Windows Desktop Applications User's Guide**

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### **Microsoft Windows Paint User's Guide**

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### **Microsoft Windows Write User's Guide**

Version 2.0

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# **Microsoft Windows**

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# Microsoft® Windows User's Guide

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Version 2.0

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# Welcome

Microsoft® Windows is an extension of the DOS operating system. Windows allows you to integrate the different tasks you perform on your personal computer, increasing your efficiency.

With Windows, you can work with several programs at once. You can switch between programs with a couple of keystrokes or a click of a mouse, reducing the time required to move from one application to another. And since you never have to quit a program, you can continue from where you left off.

Windows provides an easy way to transfer information between applications. You can transfer text and even graphics between applications designed especially for Windows. You can also transfer information to your Windows applications from your standard DOS applications, such as Microsoft Word and Multiplan®.

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**Windows is powerful**

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**Windows is versatile**

*Microsoft® Windows*

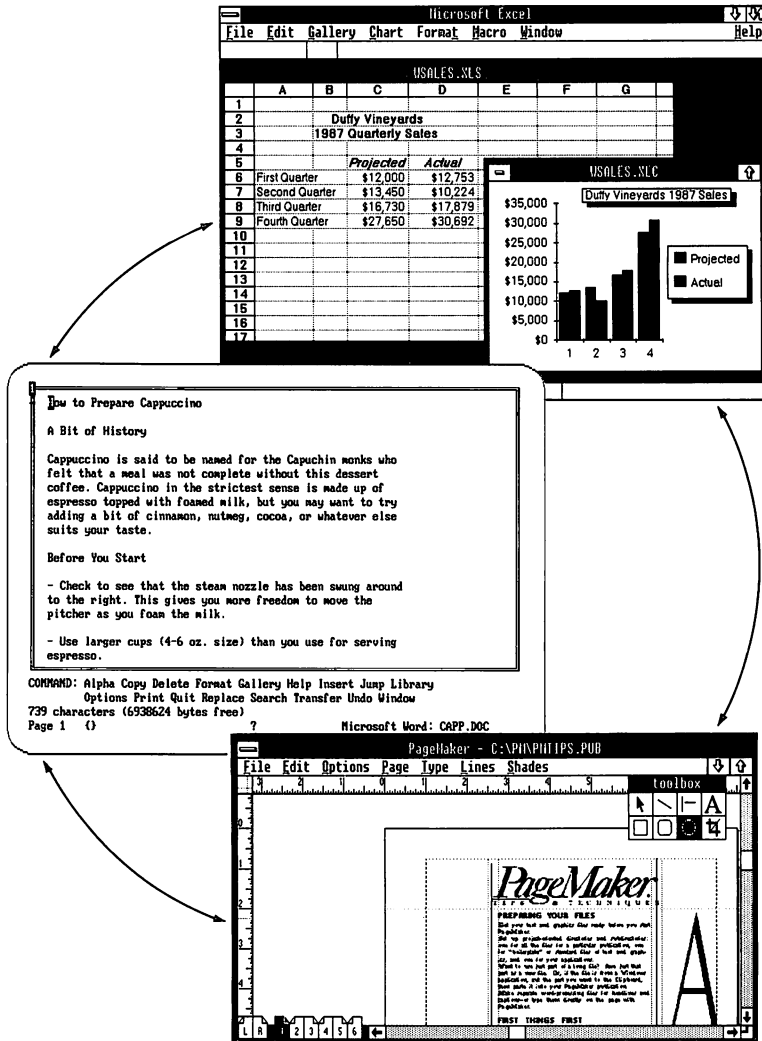
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**Microsoft**

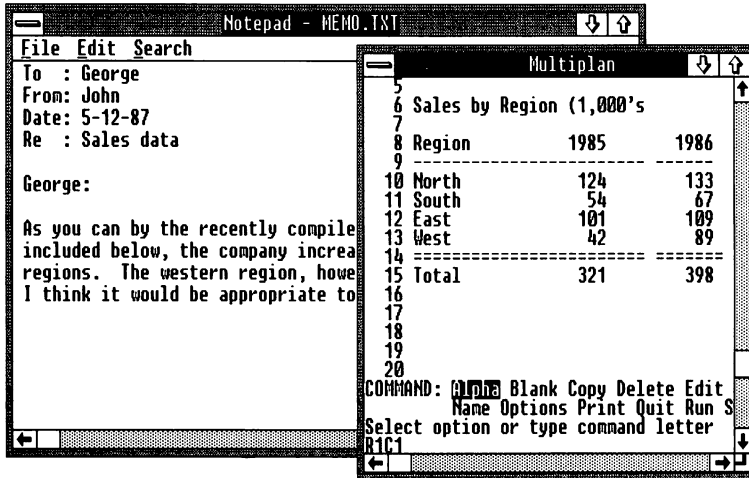


## About Windows

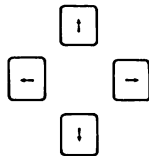
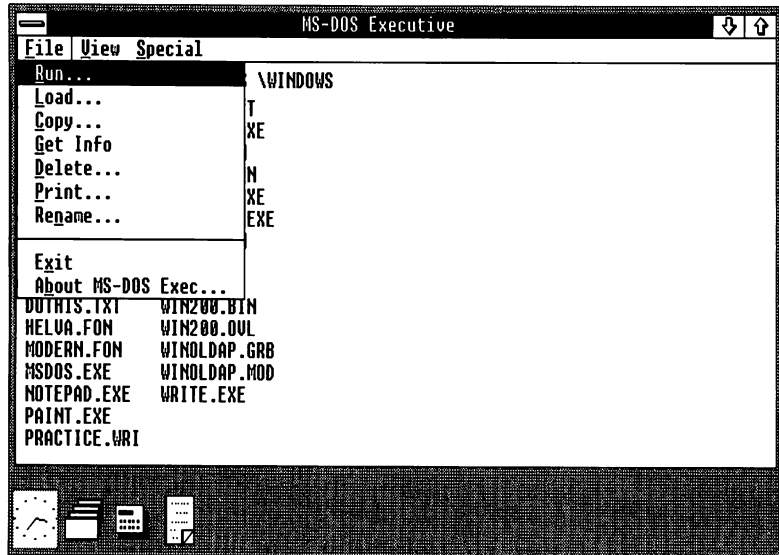
With Windows, you can run several different applications at once, and switch from one to another without quitting any of them.



Microsoft Windows gives you a new and more visual way of working by organizing your work in windows—rectangular areas on your screen in which you use applications. Many standard applications and all Windows applications can appear in windows on the screen at the same time.



Windows provides an easy method for running your applications, including drop-down menus, icons, and the choice of using your keyboard, a mouse, or both together.

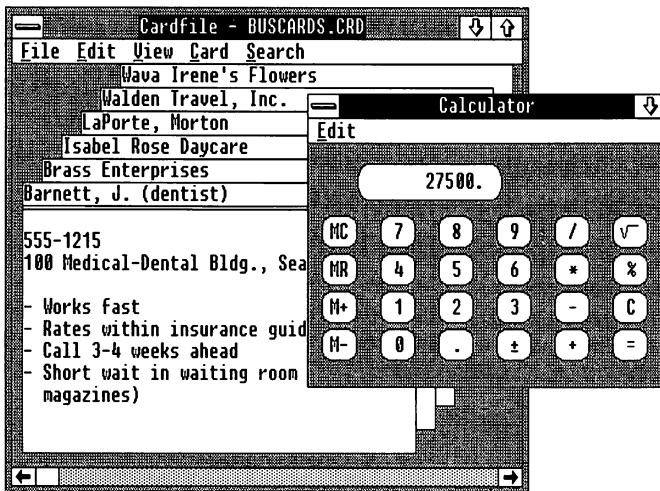


You can use the DIRECTION keys (UP, DOWN, RIGHT, LEFT) to move around the window.

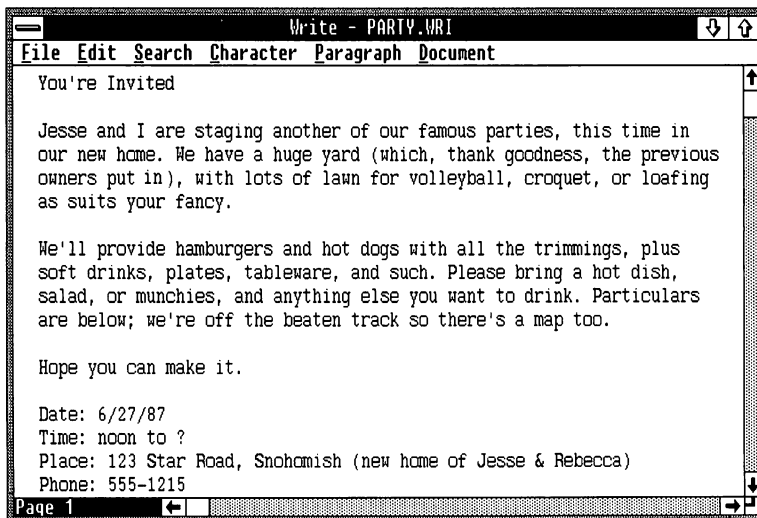
Or just point with the mouse and click.



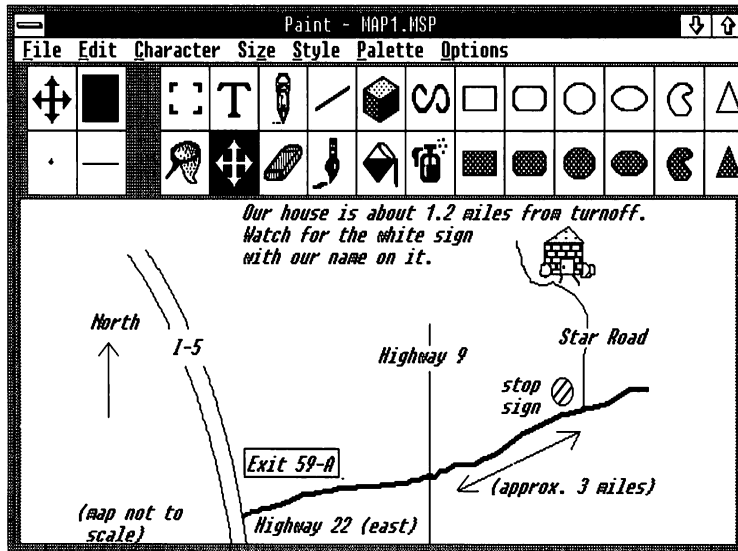
Windows provides several useful Desktop applications.



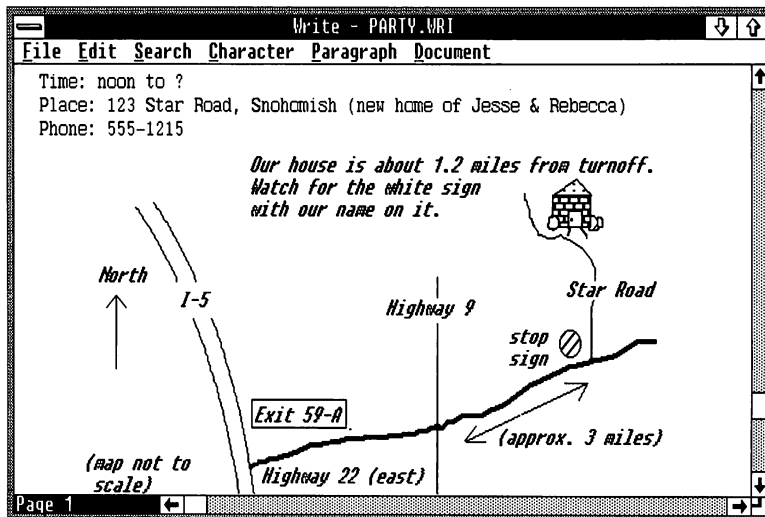
Windows makes it easy to combine information from several applications. You can work in one application,



then you can open another application and work in it,



and finally, you can integrate the information from one application into the other.



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## The Microsoft Windows Package

The Microsoft Windows package includes the following items:

- The Microsoft Windows Setup disk
- The Microsoft Windows Build disk
- Microsoft Windows Displays disk
- The Microsoft Windows Utilities disk(s), which contain printer device drivers
- The Microsoft Windows Fonts disk(s), which contain font files for a variety of printers and graphics adapters
- The Microsoft Windows Desktop Applications disk, which contains Windows applications
- The Microsoft Windows Write Program disk, which contains the Windows Write writing program files
- *The Microsoft Windows User's Guide*
- *The Microsoft Windows Desktop Applications User's Guide*
- *The Microsoft Windows Paint User's Guide*
- *The Microsoft Windows Write User's Guide*
- *The Microsoft Windows Quick Reference Guide*

Program information (PIF) files for a number of DOS applications are included on your Windows disks.

**Note** The number and names of disks included in your Windows package may vary depending on the type of disk drives on your computer.

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## What You Need

To use Microsoft Windows, you need the following:

- A personal computer running the DOS operating system with two double-sided disk drives or a hard disk (recommended)
- At least 512 kilobytes (K) of memory (to run multiple applications, 640K of memory is recommended)
- DOS 2.0 or later version
- A monochrome graphics monitor or color monitor
- A graphics adapter card. Windows supports many different graphics adapter cards; however, not all graphics adapter cards

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## What's in the Microsoft Windows package?

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## What you need to use Microsoft Windows

display Windows in color. For example, the IBM Color Graphics Adapter (CGA) card does not display color in the high-resolution mode required for Windows.

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### Using pointing devices and printers

Windows supports a number of optional pointing devices (including the Microsoft Serial Mouse and Bus Mouse) and printers. The Setup program will list the available options. See the hardware manual for your device for instructions on how to install it on your microcomputer.

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### Using the README.TXT file

**Note** Be sure to read the README.TXT file on the Microsoft Windows Write Program disk. README.TXT contains updated Windows information unavailable in this guide.

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## About This Guide

This guide is designed to help you explore and use Microsoft Windows. The following list outlines the chapters in this guide and their contents.

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### Chapter outline

- Chapter 1, "Getting Started," tells you how to set up and start Windows on your computer. This chapter also explains the parts of a window, and gives you some basic pointers on using a mouse.
- Chapter 2, "Learning Windows," gives you a step-by-step, hands-on introduction to using Windows with the keyboard.
- Chapter 3, "Learning Windows with the Mouse," gives you a step-by-step, hands-on introduction to using Windows with the mouse.
- Chapter 4, "Techniques," outlines the way Windows functions and describes the basic techniques you'll use in working with Windows.
- Chapter 5, "Using MS-DOS Executive," describes how you can work in the MS-DOS Executive window to run applications; copy, print, or delete files; create directories; make a Windows system disk; and have access to other DOS commands.
- Chapter 6, "Using Clipboard," explains how Clipboard lets you move or copy information within an application or between applications.

- Chapter 7, “Using Control Panel,” provides information on how you can use Control Panel to adjust Windows system settings such as date and time, printer assignments, and screen colors.
- Chapter 8, “Using Spooler,” describes how Spooler allows you to print files and to view and control the jobs in the print queue.
- Chapter 9, “Using Standard Applications,” provides information on how to run applications that were not designed specifically for Windows, such as Microsoft Word and Lotus 1-2-3.
- Chapter 10, “Using PIF Editor,” describes how to use PIF Editor to create or revise program information (PIF) files so that you can run standard applications with Windows in the most efficient way.
- Chapter 11, “Commands,” describes some of the commands you’ll use most often in working with Windows.
- Appendix A, “Customizing Your WIN.INI File,” explains how to work directly in your WIN.INI file to change system settings.
- Appendix B, “System Messages,” lists the messages that may appear in the middle of your window to indicate that Windows is having a problem in carrying out a specific action. A diagnosis of each message is given along with suggestions for solving the problem.
- Appendix C, “Speeding Up Windows with SMARTDrive,” describes how to use the SMARTDrive disk-caching program with your computer’s expanded or extended memory to help Windows work more efficiently.
- Appendix D, “Using Special Characters,” provides information on how to use special characters such as fractions, accented letters, or foreign currency symbols in the documents you create with Windows.
- Appendix E, “Special Notes on Running Windows,” contains additional information on using certain hardware and standard applications, expanded memory, the CHKDSK program, and SHIFT+PRINTSCREEN with Windows.
- “Terms” contains definitions of some of the Windows, DOS, and general computer terms used in this guide.

---

## Understanding terms and typography

### Notational Conventions

Here are a few notes about the terms and typographic conventions used in this manual.

#### Keynames

The names of keys are spelled out in this guide (for example, ESCAPE, ENTER, CONTROL) and appear in small capital letters. On your keyboard the key caps may abbreviate the names or represent them a little differently.

#### Key Combinations and Sequences

A plus sign ( + ) used between two keynames indicates that those keys must be pressed at the same time. For example, “Press ALT+ESCAPE” means that you should press the ALT key and hold it down while you press the ESCAPE key and release it. Then release the ALT key.

A comma between two keynames indicates that those keys must be pressed sequentially. For example, “Press ALT, SPACEBAR” means that you should press the ALT key and release it, then press the SPACEBAR and release it.

#### DIRECTION Keys

The DIRECTION keys are the four arrow keys on your computer's keypad. The name of the individual DIRECTION key refers to the direction the arrow points: the UP key, the DOWN key, the RIGHT key, or the LEFT key. You use the DIRECTION keys to move the selection, the pointer, or the insertion point on your screen.

#### What You Type

In this guide, anything that you should type verbatim is printed in italic. For example, in a procedure, if you're asked to type a file called MYLIST.TXT, what you actually type is shown in italic: *mylist.txt*. (This filename is also shown in lowercase letters since it doesn't matter whether you type the letters in capitals or not.)

#### Syntax Statements

In later chapters you'll find examples of syntax statements, which show you the format to use when you type a particular command line. There are two kinds of information in a syntax statement, and they're printed in this guide in two kinds of type. Everything that's literal—that is, exactly as you would use it in a specific command—is printed in italic. Everything that is a placeholder—a generic word where a specific word would appear in an actual command line (for example, the word “filename” instead of an actual, specific filename)—is printed in bold.

*c: \directory\memo.txt*

The preceding example designates a pathname for the MEMO.TXT file on a hard-disk drive (C:). Since **directory** is in bold, you would need to provide your own name for the directory that you want the MEMO.TXT file to be in; everything else is in italic, so you would type it literally.

### Mouse Procedures

In this guide, the mouse procedure for a particular task follows the keyboard procedure. Mouse procedures are generally indicated by a mouse icon that appears in the margin.

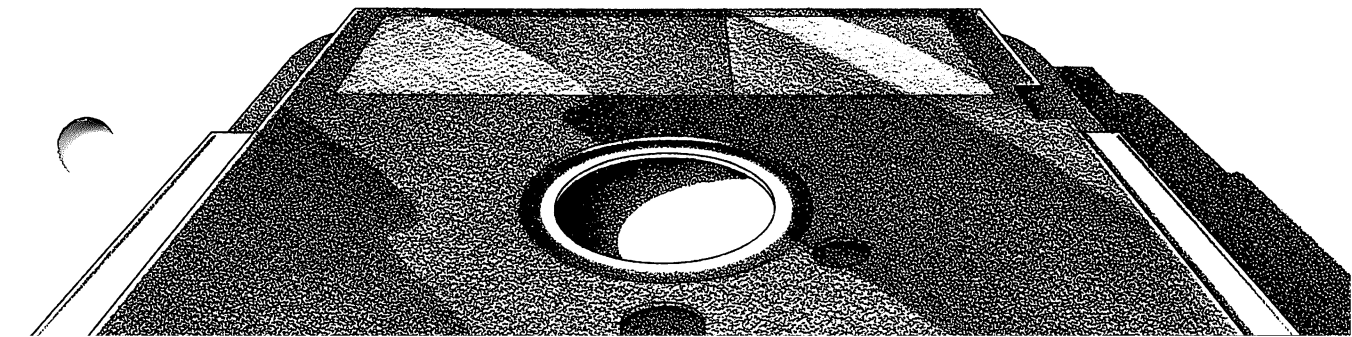
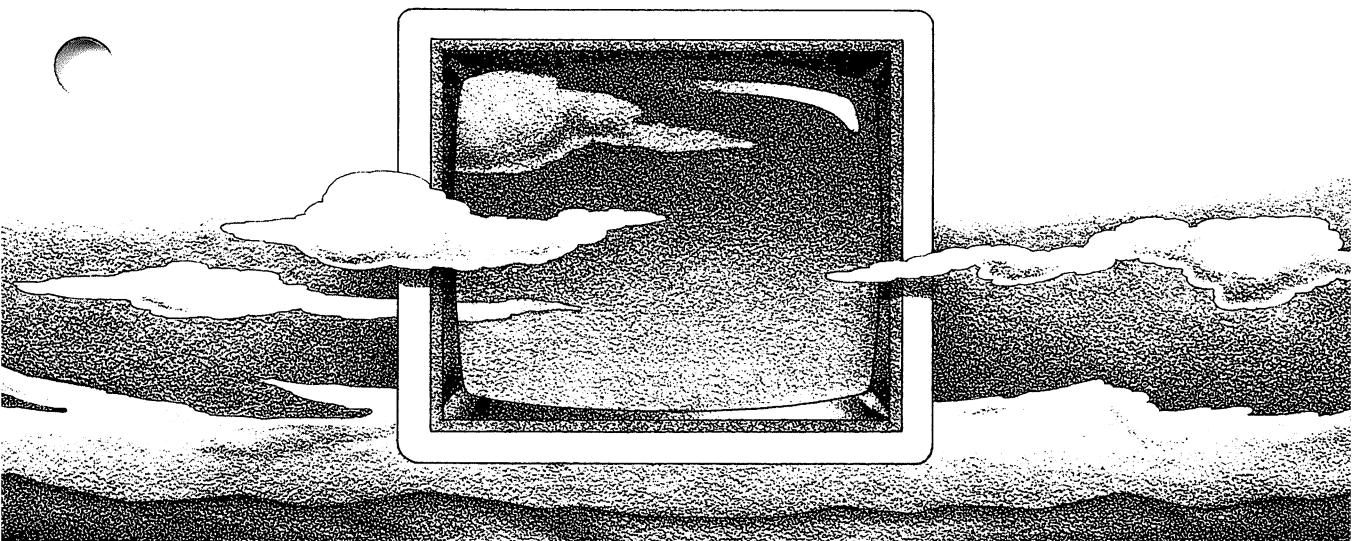


### Terms

Many of the Windows, DOS, and general computer terms used in this guide are defined in "Terms," which follows the appendixes.

# 1 Getting Started

Before you start using Microsoft® Windows, you should be familiar with your computer and its user's manual. You need to know how to turn the computer on, which disk drive is drive A, and what keys you press to reset, or "boot," your computer.



---

## Setting Up Windows

You will use the Setup program to create a version of Windows tailored to your computer. If you have a hard disk, Setup will put this version of Windows in the directory you specify. If you have two floppy-disk drives, Setup will put Windows on the floppy disks you supply.

### To Set Up Windows on a Two-Drive System

---

#### Setting up Windows on a two-drive system

To set up Windows on a system with two floppy-disk drives, you will need the following:

- Two blank, unformatted disks
- Microsoft Windows Setup disk
- Microsoft Windows Build disk
- Microsoft Windows Displays disk
- Microsoft Windows Utilities disk(s)
- Microsoft Windows Fonts disk(s)

To set up Windows, follow these steps:

- 1 Put the DOS disk in drive A and close the door.
- 2 Turn on the computer. (If your computer is already on, you can simply reboot it.)
- 3 Enter the date and time if DOS prompts for them.
- 4 Replace the DOS disk with the Windows Setup disk. Close the door.
- 5 Type *setup* and press the ENTER key.
- 6 Follow the instructions on the screen.

The Setup program creates two disks, the startup disk and the system disk. You'll use these disks to start and run Windows on your two-drive system.

Setup also copies DOS to your startup disk. You may want to copy other startup files, such as AUTOEXEC.BAT and CONFIG.SYS, to this disk as well.

---

#### Making work disks

The Windows Desktop Applications disk contains applications for you to use with Windows. When you start working in Windows, you may want to have a work disk for each application that you use (for example, Paint, Notepad, or Cardfile). A work disk contains a copy of a single application; you can create and save files

for that application on the work disk. This gives you more room to save files in each application. See Chapter 5, "Using MS-DOS® Executive," for information on copying files.

## To Set Up Windows on a Hard-Disk System

To set up Windows on a hard disk, you will need the following:

- Microsoft Windows Setup disk
- Microsoft Windows Build disk
- Microsoft Windows Displays disk
- Microsoft Windows Utilities disk(s)
- Microsoft Windows Fonts disk(s)
- Microsoft Windows Desktop Applications disk
- Microsoft Windows Write Program disk

Here's how to set up Windows on a hard-disk system:

- 1 Turn on the computer.
- 2 Enter the date and time if DOS prompts for them.
- 3 Put the Windows Setup disk in drive A and close the door.
- 4 Type *a:* and press the ENTER key.
- 5 Type *setup* and press the ENTER key.
- 6 Follow the instructions on the screen.

After running Setup, store your original Windows disks in a safe place; if Windows is ever damaged, you'll need to copy the disks again.

**Note** Windows requires approximately 1.5 megabytes of space on your hard disk. Before you install Windows, use the DOS CHKDSK command to see how many bytes of memory are available on your hard disk. (It is recommended that you not use CHKDSK in Windows. See Appendix E, "Special Notes on Running Windows," for more information on CHKDSK.)

If you make a mistake when you run Setup, such as selecting the wrong graphics adapter, just start Setup again and repeat the procedure.

---

### Setting up Windows on a hard disk

---

### If you make a mistake

You need to run the Setup program whenever you add new hardware, such as a mouse card or a new graphics card, to your computer system.

## Setting Up Expanded Memory for Windows

If your computer has expanded memory, you may be able to use it to store and run Windows and Windows applications. You can use your computer's expanded memory with Windows if you have an expanded memory manager that supports Windows. For more information about expanded memory and how to use it with Windows, see the section called "Using Expanded Memory with Windows" in Appendix E, "Special Notes on Running Windows."

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## Starting Windows

Once you have set up Microsoft Windows on your computer, you can start learning to use Windows.

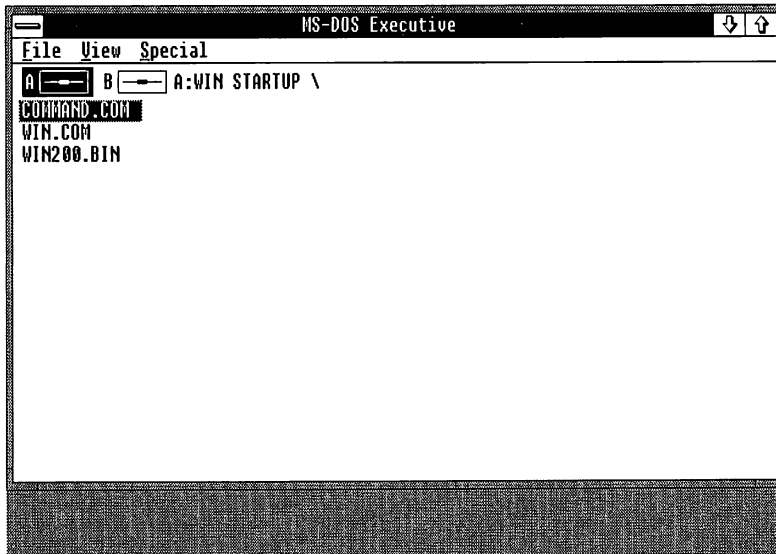
To start Windows on a two-drive system, follow these steps:

- 1 Insert your Windows startup disk in drive A.
- 2 Insert your Windows system disk in drive B.  
(Both disks are created with the Setup program.)
- 3 Turn on your computer.
- 4 Enter the date and time if you are prompted.
- 5 Type *win* and press the ENTER key.

When you first start Windows on your two-drive system, your screen should look something like this:

---

### Starting Windows on a two-drive system



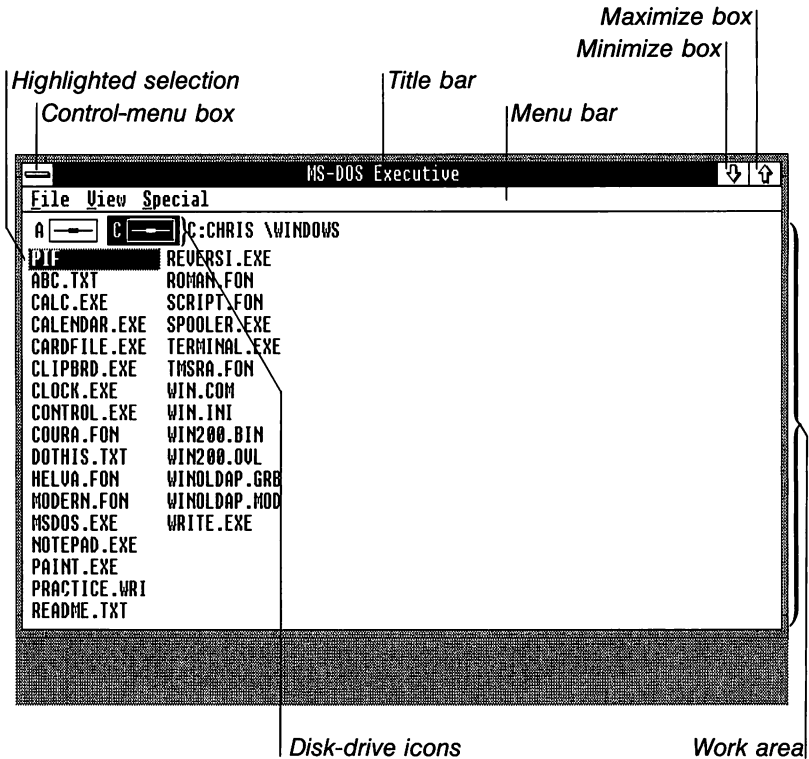
To start Windows on a hard-disk system, do the following:

- 1 Turn your computer on.
- 2 Enter the date and time if you are prompted.
- 3 At the system prompt, type *cd* and a space followed by the pathname of the directory where you have set up your Windows files, and press the ENTER key.
- 4 Type *win* and press the ENTER key.

Your computer starts running Windows. Your screen will look something like the following:

---

**Starting Windows on  
a hard disk**



## Definitions

Here are some terms that will help you learn about and use Windows:

- The **highlighted selection** shows where you are on the screen. If you have a mouse installed, you will also see an arrow pointer.
- The **work area** displays the contents of a file, such as an application, document, or drawing. The MS-DOS Executive window runs automatically when you start Windows.
- The **title bar** displays the name of the application in that window.
- The **menu bar** contains the names of the command menus in an application.
- The **Control-menu box** can be used to display the Control menu. This menu is common to all Windows applications.
- The **Maximize box** can enlarge your window if you have a mouse. If you don't have a mouse, you use the Maximize command from the Control menu to do the same thing.

- The **Minimize box** can shrink your window to an icon if you have a mouse. If you don't have a mouse, you use the Minimize command from the Control menu to do the same thing.
- The **disk-drive icons** represent your disk drives. The icon of the currently-selected drive is highlighted.
- **Scroll bars** may appear in windows that have more information than can be displayed in the window. (See Chapter 4, "Techniques," for an example of scroll bars and an explanation of how to use them.)

You can find information on other Windows terms in "Terms" at the end of this manual.

Your screens may look slightly different from those in the illustrations, because Windows adapts to your computer system when you run the Setup program.

When you start Windows for the first time, all files in your MS-DOS Executive window will be part of Microsoft Windows. Do not delete or rename any of them. The files you need for the following exercises may appear in slightly different places on your screen than they do in the illustrations.

**Note** As you run Windows, some applications may create temporary files. These filenames generally begin with a tilde character (~) and end with the .TMP extension. Do not delete these files while Windows is running, because an application may be using them. If you quit Windows using the End Session command, any temporary files are automatically deleted. (They are also deleted if you quit Windows by double-clicking the Control-menu box.) If you quit Windows without using this command (for example, turning off your computer while Windows is running), some temporary files may remain; you can safely delete these files.

You can change your DOS AUTOEXEC.BAT file so that these temporary files are stored in a special directory. See Chapter 5, "Using MS-DOS Executive," for more information on creating a directory for temporary files.

---

## Temporary files

## Going On from Here

To learn how to work with Windows using the keyboard, go on to Chapter 2, "Learning Windows." To learn how to work with Windows using the mouse, read the next section, "Using a Mouse with Windows," then go on to Chapter 3, "Learning Windows with the Mouse." If you just want a summary of the basic techniques and features of Windows, see Chapter 4, "Techniques."

---

## Using a Mouse with Windows

A mouse is a small pointing device designed to fit comfortably under your hand. You use the mouse to move icons, expand and shrink windows, and choose commands. Using the mouse is as easy as pointing and clicking.

---

### Which button to press?

Microsoft Windows can be used with either a single-button or a multiple-button mouse. If you have a mouse with more than one button, use the *leftmost* button. The applications you use may respond to the other buttons, but Windows uses only the leftmost button. (You can change which button you use with Windows. See Chapter 7, "Using Control Panel.")

---

### Moving the mouse

Moving the mouse across a flat surface moves the pointer, which is the arrow on the screen.

If you run out of room for the mouse—by going off the edge of the table, for instance—lift the mouse and put it back down where you have more room. Lifting the mouse does not move the pointer.

The following definitions will help you begin to use your mouse:

---

### Mouse techniques

To	Do this
Point	Move the mouse until the tip of the pointer rests on what you want to point to.
Click	Quickly press and release the mouse button.
Drag	Press the mouse button and hold it down while moving the mouse.
Double-click	Click the mouse button twice in rapid succession.

To click an object means to point to that object on the screen (an icon or a menu name, for instance) and click the mouse button.

---

### Mouse icon



In this manual, wherever procedures are given for both the keyboard and the mouse, the keyboard procedure comes first. The mouse procedure comes second, and you'll find a mouse icon in the margin next to the beginning of the mouse procedure.

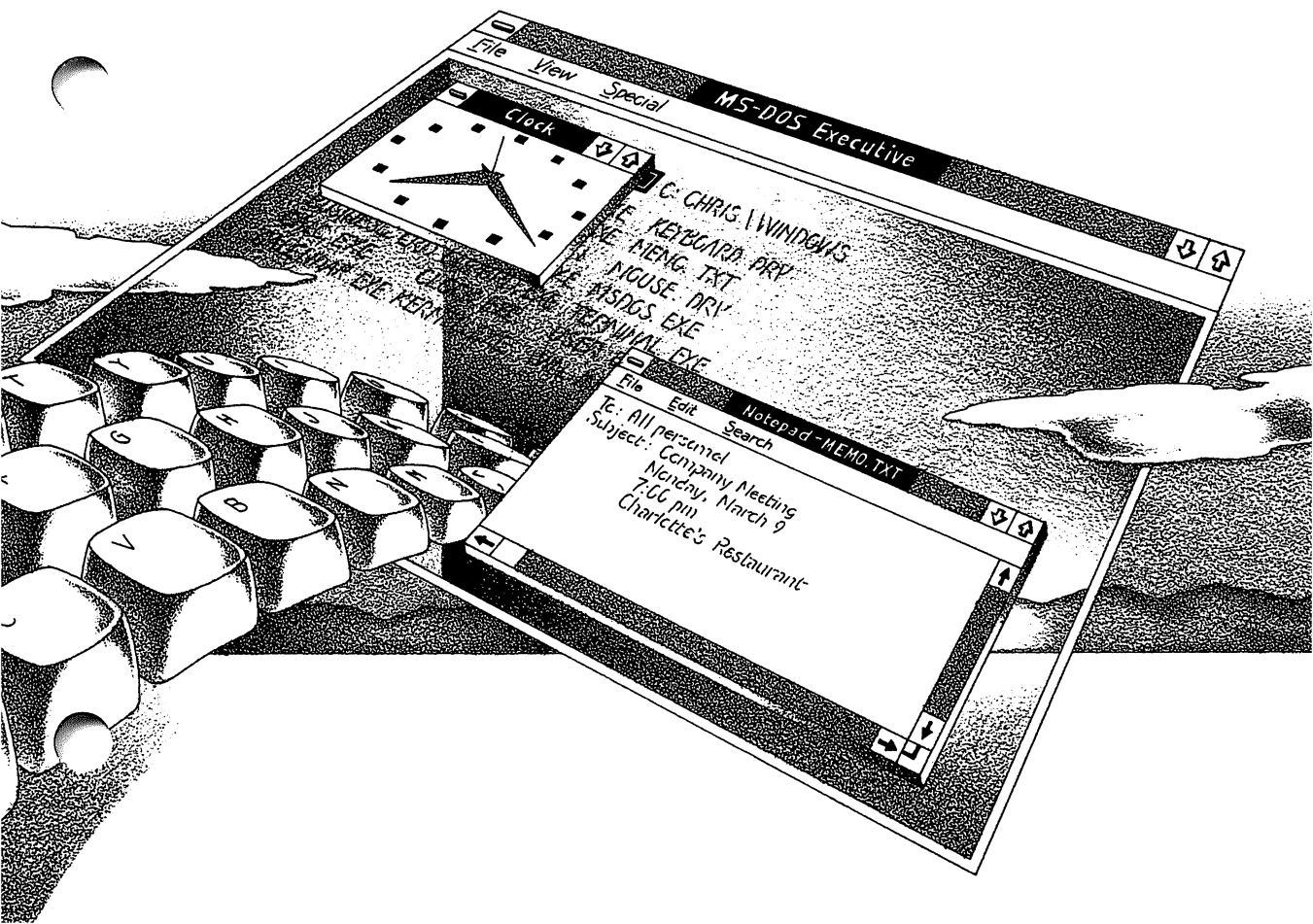
Now go on to Chapter 3, "Learning Windows with the Mouse," for an introduction to working with Windows using your mouse.

## 2 Learning Windows

The exercises in this chapter will give you hands-on experience using Microsoft Windows with a keyboard.

If you are a new user, you will find this chapter especially helpful. The step-by-step instructions and the illustrations will tell you exactly what to do. The chapter is divided into three exercises, which you can complete all at once or one at a time. (If you have a mouse, see Chapter 3, "Learning Windows with the Mouse," for exercises designed for mouse users.)

If you're an experienced user, you'll probably want to read this chapter to learn the new direct-access technique for selecting menus and choosing commands with the keyboard.



In this chapter, you will learn and practice the following skills:

- Selecting command menus
- Choosing commands from menus
- Starting a Windows application
- Opening a file in Windows
- Using dialog boxes
- Saving an application document
- Quitting an application
- Moving between windows
- Changing the size of a window
- Moving windows on the screen
- Shrinking a window to an icon
- Ending your Windows session

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## Exercise 1: Beginning a Windows Session

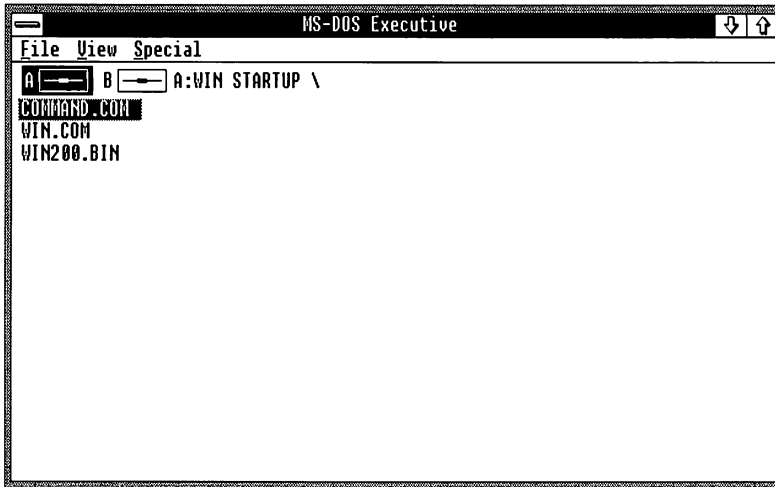
In this exercise, you'll learn the basics of how to select menus and choose commands in any Windows application. Then you'll learn the direct-access method that you can use with some Windows applications.

First, start Windows. (If you need to review how to get started on your system, see Chapter 1, "Getting Started.")

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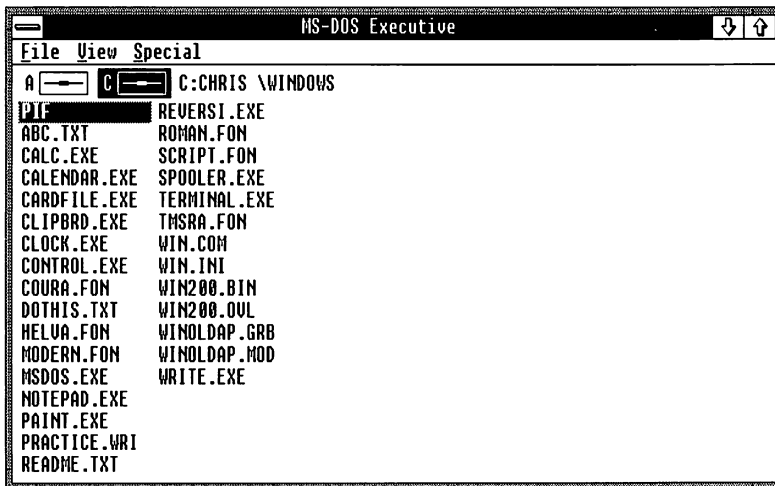
**If you have a  
two-drive system**

On a two-drive system, the files you need for the first exercise are on the Windows startup disk that you created, and they appear in your MS-DOS Executive window when you start Windows. Your screen will look something like this:



On a hard-disk system, the files you need for these exercises are on your hard disk, and they appear in your MS-DOS Executive window when you start Windows. After you start Windows, your screen will look something like this:

**If you have a hard-disk system**

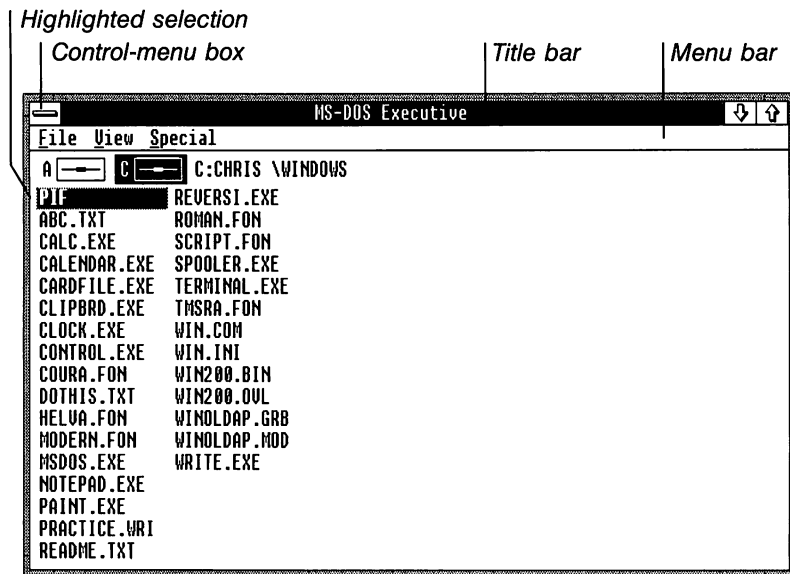


The first window you see is the MS-DOS Executive window. MS-DOS Executive is the application program that you'll use to start other applications, to organize your files and windows, and to do things like change directories and format disks.

All Windows commands are organized in menus on the menu bar. A menu shows the names of a group of commands. Each application has its own menus, but one, the Control menu, is common to all applications. The action of picking a menu is called selecting the menu. In Windows, you select the items that commands will affect — for example, a filename or an area of the screen — and you choose the commands that carry out the action.

## Selecting the Control Menu

The Control menu is represented by a box in the upper-left corner of every window. You use the Control menu's commands to arrange windows on the screen. The commands allow you to move the windows, change their size, and close them.

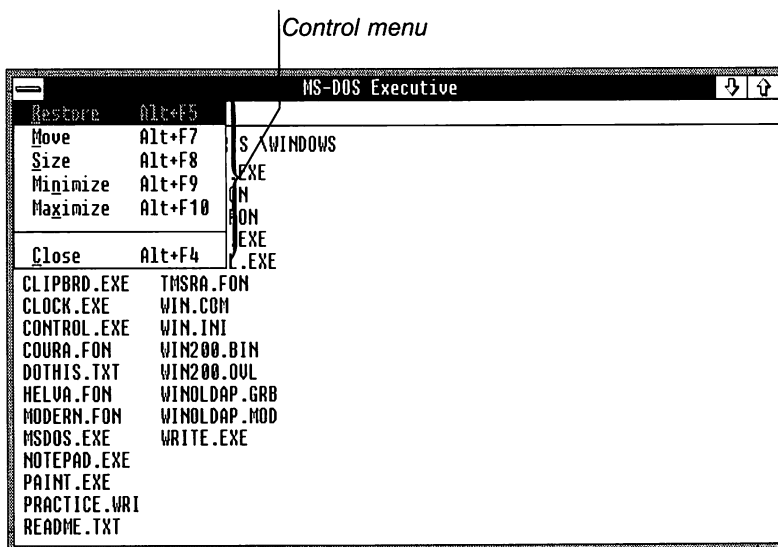


### The Control menu

The first step in selecting a menu is to press the ALT key. ALT is the menu-access key — it lets Windows know that you are about to select a menu. Selecting the Control menu is simple — just press the SPACEBAR. Try it now:

- 1 Press the ALT key.
- 2 Press the SPACEBAR.

The Control menu appears on your screen. The first command in the list, Restore, is highlighted, to show that this command is selected.



Here's how to cancel the Control menu, or any menu:

- Press the ESCAPE key.

The menu disappears.

## Selecting Menus and Choosing Commands

There are two ways to use the keyboard to select menus on the menu bar and choose commands from the menus. First you'll be introduced to the basic method that works with any Windows application. Once you're familiar with the basic method, you'll learn the direct-access method, which uses the underlined letters you see in the command and menu names. You don't need to memorize anything. Chapter 4, "Techniques," provides a reference to both methods.

The basic method of selecting menus and choosing commands uses the DIRECTION keys to move across the Windows menu bar and up and down the menus.

The first step is always the same: press the ALT key. Then press the RIGHT or LEFT keys to select a menu on the menu bar. Try this now:

---

### Canceling the Control menu

---

### The basic method

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### Moving across the menu bar

- 1 Press the ALT key.
- 2 Press the RIGHT key to select each menu on the menu bar.
- 3 Press the LEFT key to select the menus in reverse order.

---

### Moving within a command list

To choose commands, you use the UP and DOWN keys. Try selecting a menu and using the UP and DOWN keys to move up and down the command list:

- 1 Press the ALT key.
- 2 Press the RIGHT or LEFT keys to select a menu on the menu bar.
- 3 Press the ENTER key to display the menu.
- 4 Press the UP or DOWN keys to move up or down the command list.
- 5 Press the ESCAPE key to cancel the menu selection.

To choose a command from a menu, first you use the UP or DOWN keys to select the command name, then you press the ENTER key.

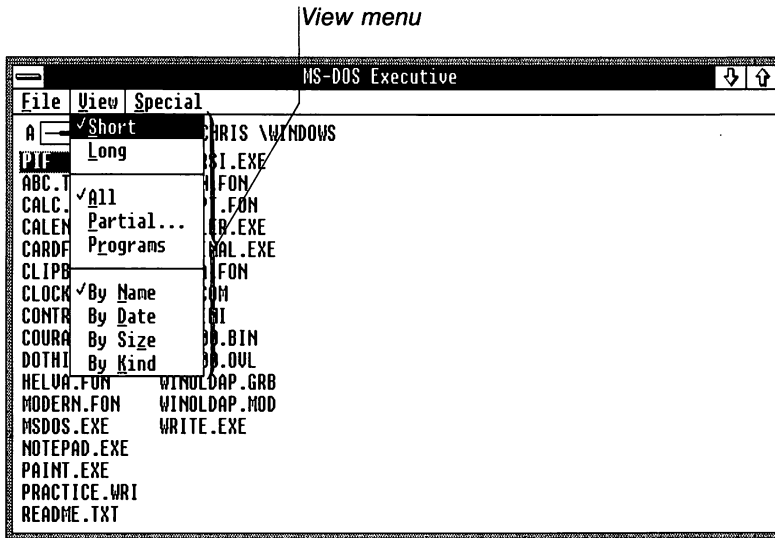
Try using the View menu's Programs command. The commands on the View menu let you change the way MS-DOS Executive displays the files in your current directory. The viewing options are divided into three groups, and the checkmarks show which option in each group is in effect now. You can change an option by choosing it from the menu.

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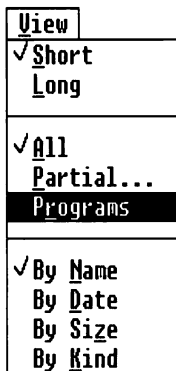
### Choosing commands

Here's what to do:

- 1 Press the ALT key.
- 2 Press the RIGHT key until you select the View menu.
- 3 Press the ENTER key to display the menu.



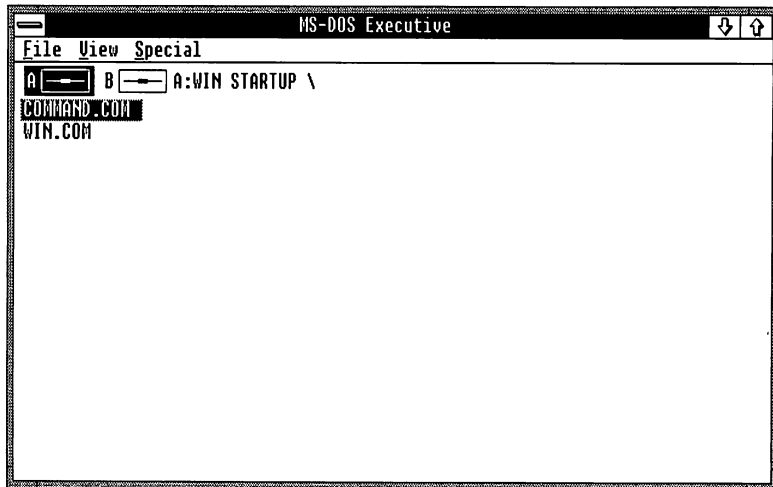
- 4 Press the DOWN key until the Programs command is selected.



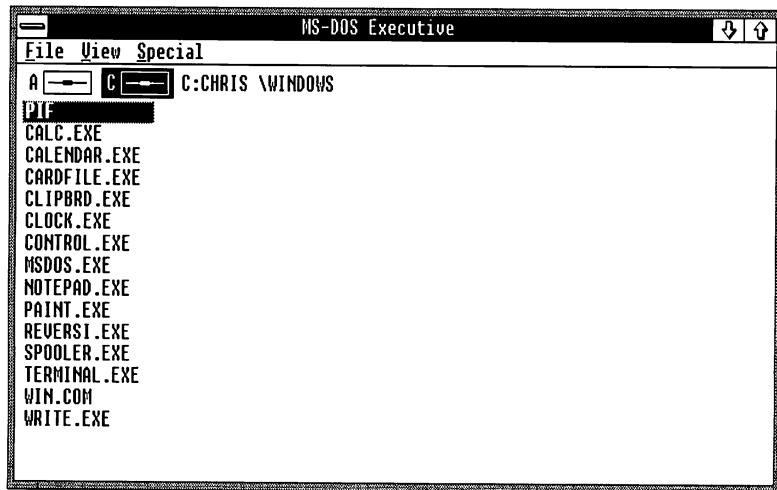
- 5 To choose the Programs command, press the ENTER key.

The file listing in your MS-DOS Executive window changes, and only files with a .EXE, .COM, or .BAT extension are displayed.

If you have a two-drive system, your screen should look something like the following:



If you have a hard-disk system, your screen should look something like this:



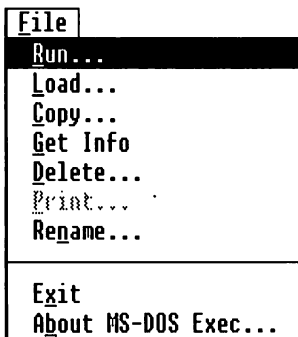
The DIRECTION-key method works with any Windows application.

Now you'll learn the direct-access method for choosing commands. This technique works with any Windows application that shows the underlined letters in menu and command names.

With the direct-access method, you can select any of the menus on the menu bar by using the ALT key with the underlined letter in the menu name. (You select the Control menu the same way as before.) For example, take a look at the File menu:

- 1 Press the ALT key.
- 2 Press the F key, the underlined letter in the File-menu name.

The File menu drops down from the menu bar.



Take a look at the other menus listed in the menu bar. Remember to press the ESCAPE key to clear a menu from your screen.

Now try using the commands in the menus. After you have selected a menu, just press the letter that is underlined in the command's name. To try this out, choose the All command from the View menu to show all your files once again in the MS-DOS Executive window:

- 1 Press the ALT key.
- 2 Press the underlined letter, V, to select the View menu.

---

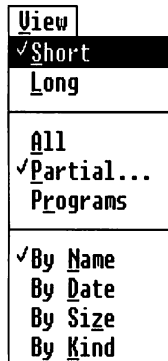
## The direct-access method

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### Selecting a menu

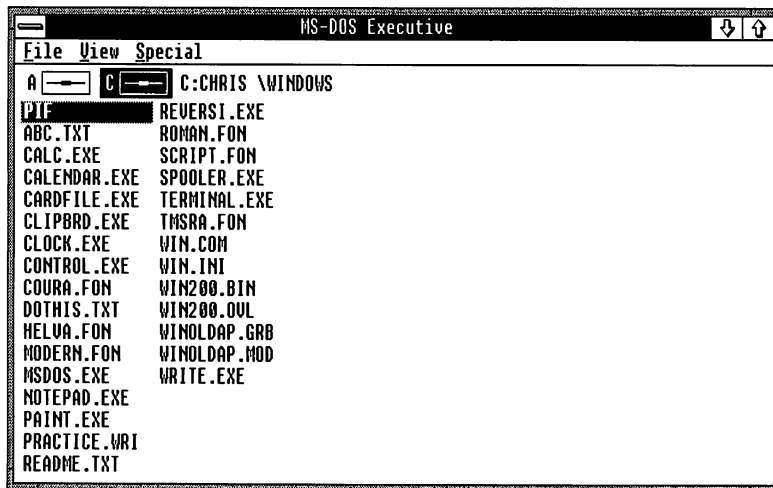
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## Using commands in menus



3 Press the underlined letter, A, to choose the All command.

MS-DOS Executive now shows all your files, not just the program files.

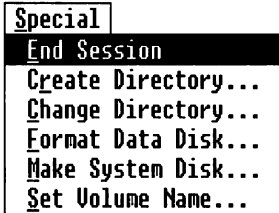


With the direct-access method, you press the underlined letter in the menu name to select the menu, then you press the underlined letter in the command name to choose the command. Your commands are started right away. You don't need to press the ENTER key.

## Ending Your Windows Session

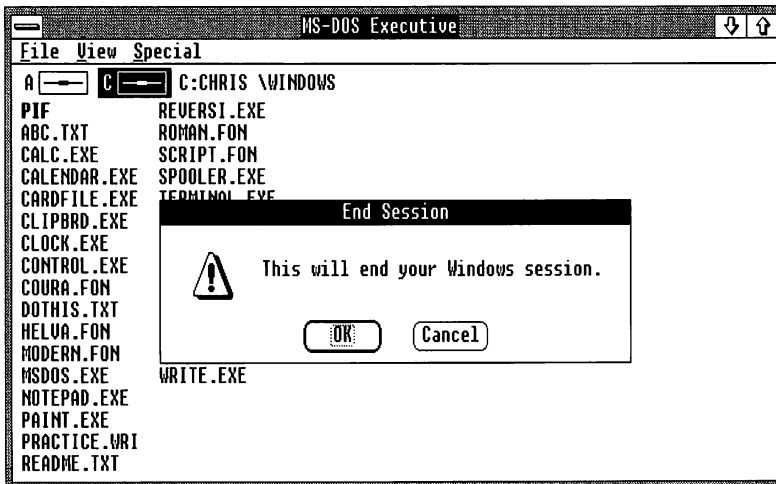
You can end your Windows session now or go on to the next exercise. Ending your session is as easy as choosing a command:

- 1 Press the ALT key.
- 2 Press the S key to select the Special menu.



- 3 The End Session command is already selected. You can press E or just press the ENTER key to choose it.

A message appears on your screen asking if you want to end the session. The OK button is already selected.



## Quitting Windows

If you want to end your Windows session now, here's what to do:

- Press the ENTER key to choose the OK button.

If you want to go on to the next exercise, do this:

- Press the ESCAPE key to cancel the command.

In this exercise, you've covered the basics of selecting menus and choosing commands. In the next exercise, you'll sharpen these skills, and you'll learn to start a Windows application, open a file, use dialog boxes, and save a document.

---

## Exercise 2: Using Notepad

In this exercise, you'll start a Windows application, Notepad, and use it to edit a sample file included on your Windows Desktop Applications disk.

First start Windows, if you need to. (If you need a refresher, see Chapter 1, "Getting Started.")

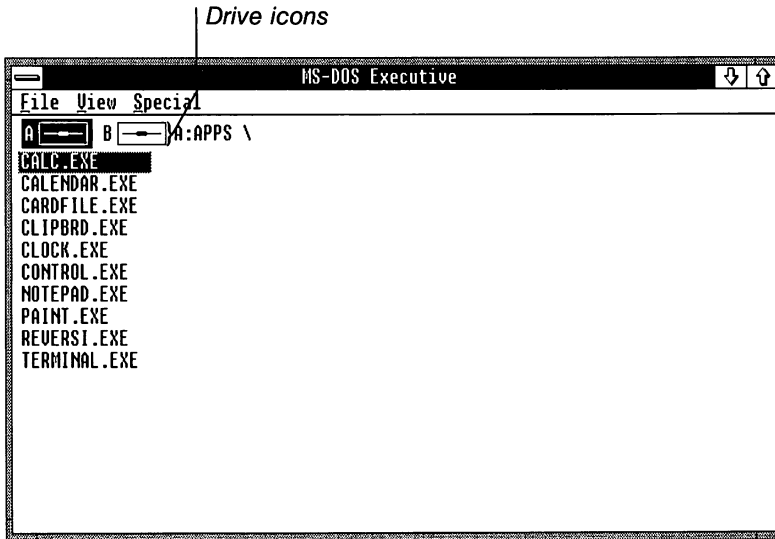
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### Two-drive system

If you have a two-drive system, you need to insert another disk and select drive A to do this exercise:

- 1 Remove the startup disk from drive A.
- 2 Insert the Windows Desktop Applications disk in drive A.
- 3 Press and hold down the CONTROL key.
- 4 Press the A key.
- 5 Release the CONTROL key.

The drive A icon is highlighted, which shows that this drive is selected. MS-DOS Executive lists the files for the Desktop Applications disk.



If you have a hard-disk system, the application file for Notepad (and all the Windows applications) is on your hard disk and appears in the MS-DOS Executive window.

Now you're ready to begin. Remember, if you select the wrong menu or decide you don't want to choose a command, just press the ESCAPE key and start over again.

## Starting Notepad

You always start applications from the MS-DOS Executive window. To start an application, you need to select the application file—in this case, NOTEPAD.EXE. When you first start Windows, the first file listed in the MS-DOS Executive window is highlighted, which shows that this file is selected. You use the DIRECTION keys—RIGHT, LEFT, DOWN, and UP—to select the filename you want. Try starting Notepad:

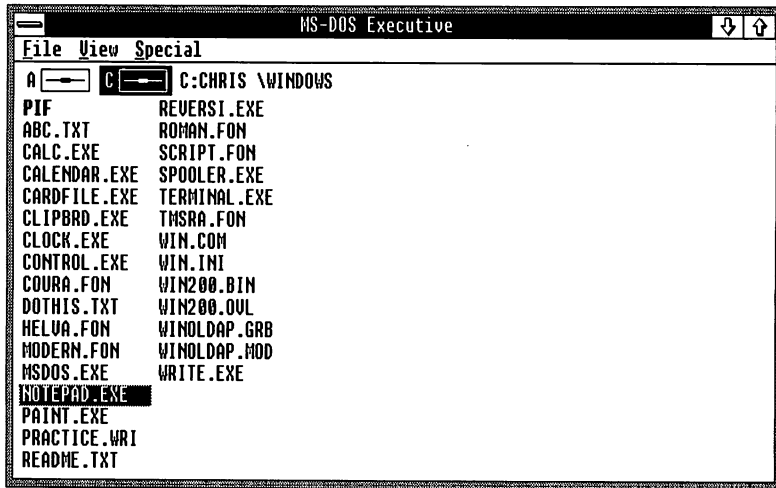
- 1 Press the DIRECTION keys until the filename NOTEPAD.EXE is selected.

---

### Hard-disk system

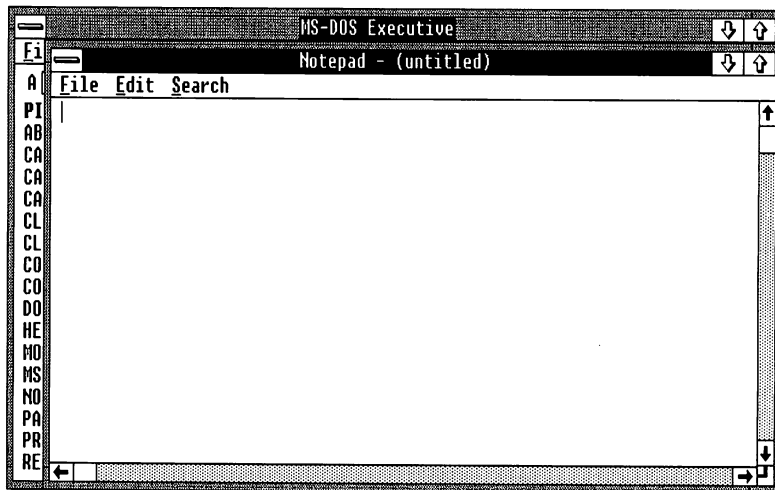
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### Starting an application



2 Press the ENTER key.

Notepad appears in front of the MS-DOS Executive window.



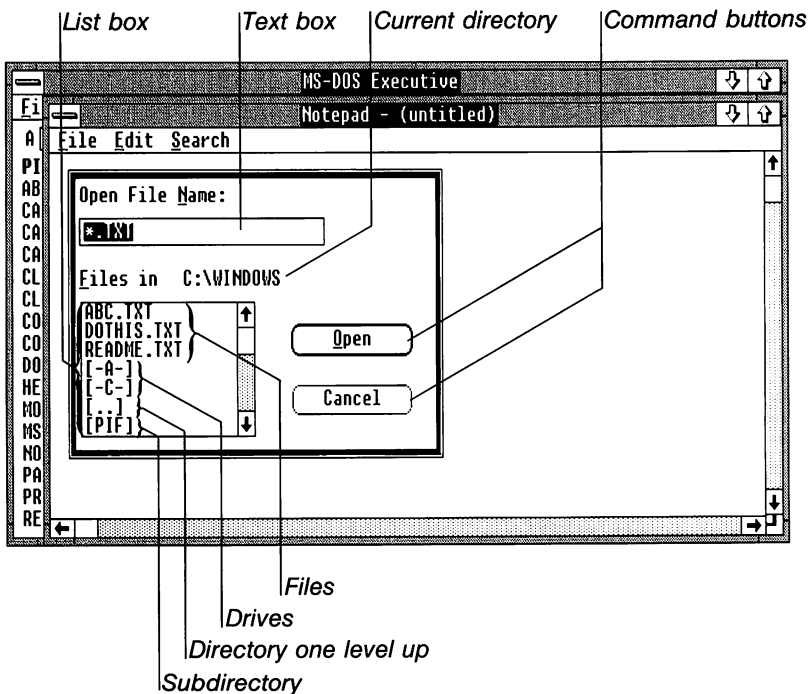
## Opening a File

To open files for editing with Notepad, you choose the Open command from the File menu:

- 1 Press the ALT key.
- 2 Press F, the underlined letter in File, to select the File menu.
- 3 Press the underlined letter, O, to choose the Open command.

The Open command's dialog box is displayed on your screen. Windows uses dialog boxes to give you messages and to ask you for any additional information — in this case, a filename — needed to carry out a command. You can type the name of the file you want to open in the text box, or you can select the filename from the list box.

The list box contains a list of all the Notepad files (files with a .TXT extension). It also shows the disk drives, the directory one level up from your current directory (symbolized by [..]), and any subdirectories (directories in your current directory). You use the Open button or the Cancel button to complete the Open command.



## Opening files

## The Open dialog box

As with menus and commands, there are two ways to move and select in dialog boxes: the basic keyboard method (which works with any Windows application) and the direct-access method (which works with applications that have underlined letters in the names of the items in the dialog box).

---

**If you make a mistake**

If you make a mistake while completing the information in a dialog box, press the ESCAPE key, just as you would to cancel a menu. The ESCAPE key cancels the dialog box and you can start over again.

---

**Using the basic method**

First, experiment with using the basic keyboard method:

- Press the TAB key several times to move from area to area in the dialog box.

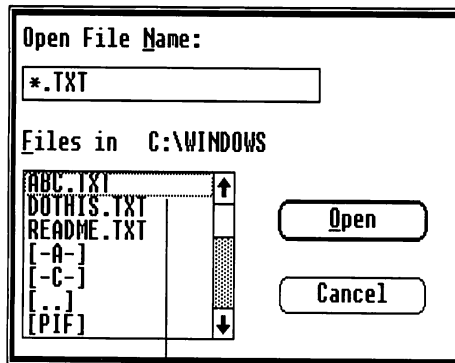
Note that the area you select with the TAB key is always marked — usually with a dotted box. The text box is marked by a flashing vertical line. This is the insertion point, and it shows you where you can begin typing text. The text box shows the filename extension for a Notepad file, .TXT.

---

**Using the direct-access method**

Now try the direct-access method:

- 1 Press and hold down the ALT key.
- 2 Press F, the underlined letter in the list-box title.



*Dotted box*

- 3 Press N, the underlined letter in the text-box title.
- 4 Release the ALT key.

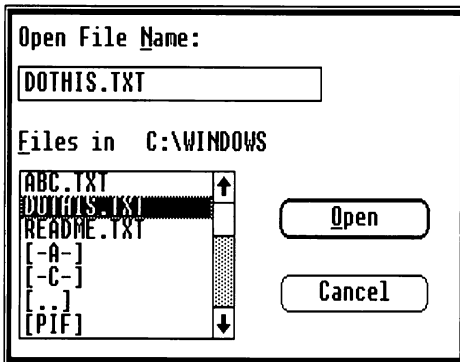
As you press the underlined letters, each area in turn is selected. The direct-access method works with applications that show underlined letters in names of the items in the dialog box.

You can use either method to move in dialog boxes. The examples in this exercise use the direct-access method, but you can also use the TAB key. Don't worry about learning exact key sequences now. You can refer to Chapter 4, "Techniques," if you need a review later.

Now use the File menu's Open dialog box to open a sample file, DOTHIS.TXT:

### Opening a sample file

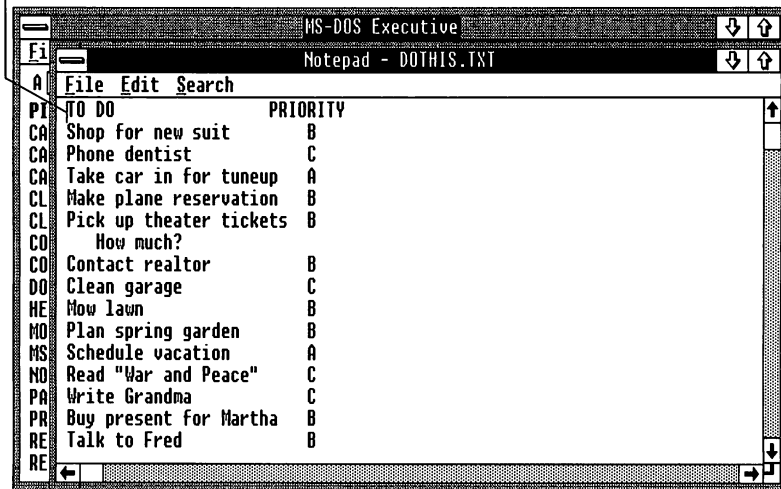
- 1 Press and hold down the ALT key.
- 2 Press F to move to the list box, which shows the files in your directory.
- 3 Release the ALT key.
- 4 Press the DOWN key to select DOTHIS.TXT. When you select a filename in the list box, the filename is highlighted, and it also appears in the text box.



- 5 Press and hold down the ALT key.
- 6 Press O, to choose the Open button.
- 7 Release the ALT key.

The sample text file, DOTHIS.TXT, appears in the Notepad window, and you're ready to edit it with Notepad.

Insertion point



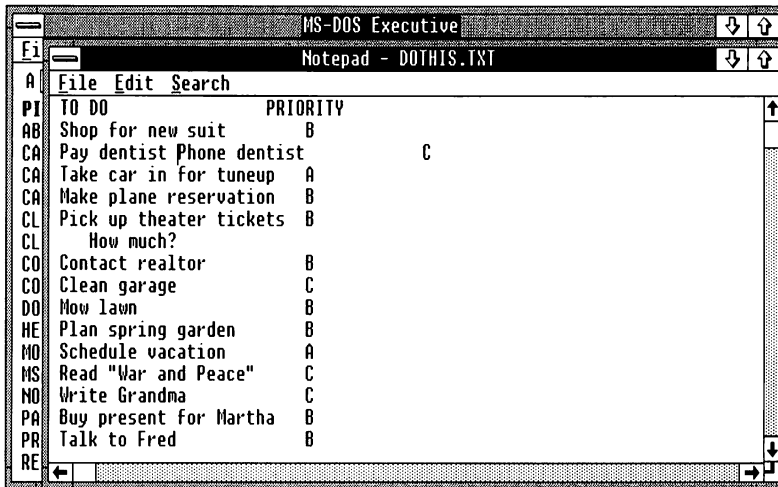
## Working in a File

### Inserting text

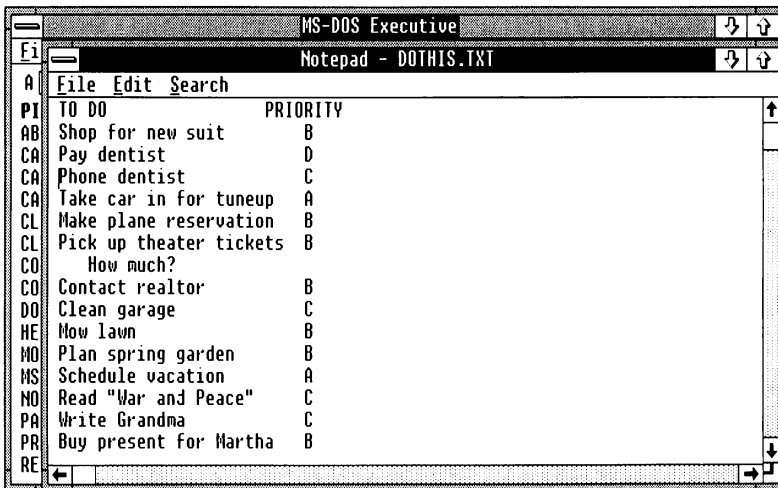
The insertion point shows where you can start working in the file. When you start Notepad, the insertion point is at the top of the file. To move the insertion point, use the **DIRECTION** keys. You can move to any point in the file and start typing.

For example, move the insertion point to the third line in the file and add another item to your list:

- 1 Press the **DOWN** key twice to move the insertion point to the line beginning "Phone dentist."
- 2 Type your new item, *Pay dentist*.



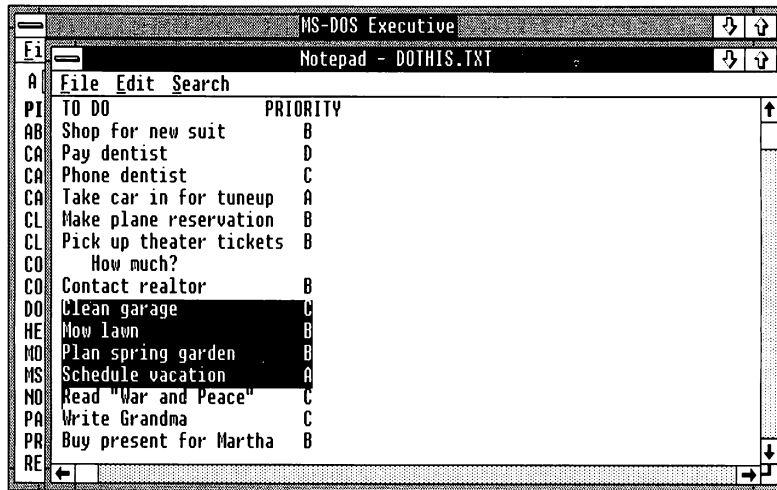
- 3 Use the SPACEBAR to move the insertion point over to the right-hand column, and give the new item a priority of D.
- 4 Press the ENTER key to move the line beginning "Phone dentist" to the next line.



## Selecting text to delete

Now delete some of the tasks on your list. To do this, you need to select the text that you want your command to affect. Try selecting and deleting the next four items on your list:

- 1 Use the DIRECTION keys to move the insertion point to the line beginning "Clean garage."
- 2 Press and hold down the SHIFT key.
- 3 Use the DIRECTION keys to move the insertion point up and down and to the right and left.  
As you move the insertion point, the selected text is highlighted.
- 4 After you have selected all the text you want to delete, release the SHIFT key.



## If you make a mistake

If you make a mistake in selecting the right text, it's easy to correct:

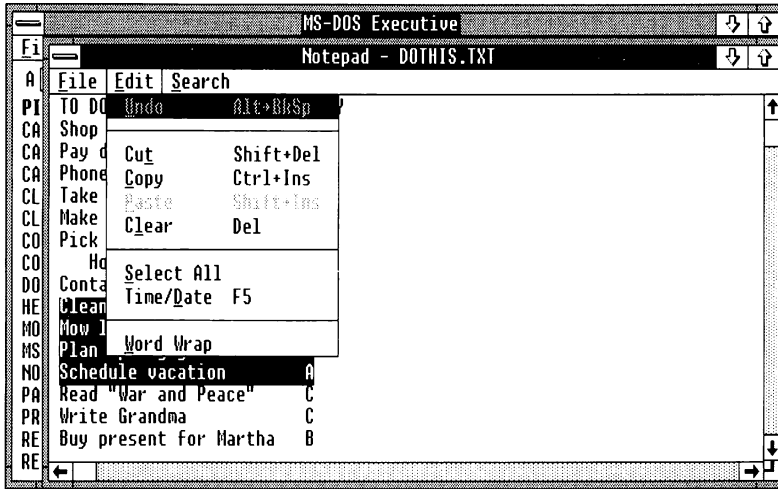
- After you release the SHIFT key, press any DIRECTION key.

The text is no longer selected.

## Deleting selected text

Once you have selected the lines, delete them by choosing the Edit menu's Cut command:

- 1 Press the ALT key.
- 2 Press the underlined letter, E, to select the Edit menu.



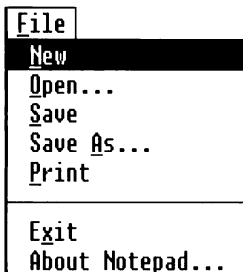
- 3 Press the underlined letter, T, to choose the Cut command.

The selected lines are deleted from your file.

After you complete your changes to the Notepad file, you need to save your edited document. Notepad has two commands for saving files: Save and Save As. The Save command saves your edited document under the existing filename. The Save As command saves your version under a new name that you supply, while the original version remains unchanged. (Windows uses the DOS file-naming convention that limits filenames to eight characters.)

In this exercise, use the Save As command from the File menu:

- 1 Press the ALT key.
- 2 Press F to select the File menu.



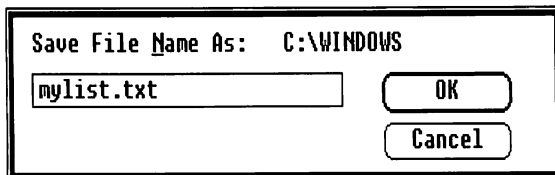

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## Saving your changes

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### Using the Save As command

- 3 To choose the Save As command, press the underlined letter, A.  
A dialog box appears. The current name of the file, DOTHIS.TXT, is in the text box.
- 4 Type the new filename, *mylist.txt*, in the text box.



- 5 Press the ENTER key.

Windows saves the revised file under the new name. The original DOTHIS.TXT remains intact.

---

## Quitting an application

After you're finished working with an application, you can use the Exit command to quit the application and return to MS-DOS Executive. Use this command to quit Notepad:

- 1 Press the ALT key.
- 2 Press F to select the File menu.
- 3 Press X, the underlined letter, to choose the Exit command.

The Notepad window closes and you can once again see the entire MS-DOS Executive window.

In this exercise, you learned to start a Windows application, Notepad, and you used it to edit and save a file. You also learned how to use a dialog box and how to quit an application, and you reviewed selecting menus and choosing commands.

You can end your Windows session now or go on to the final exercise, in which you'll learn to move windows and change their size.

## Exercise 3: Using Clock

In this exercise, you'll start another Windows application, Clock, and learn to arrange and manipulate the windows on your screen.

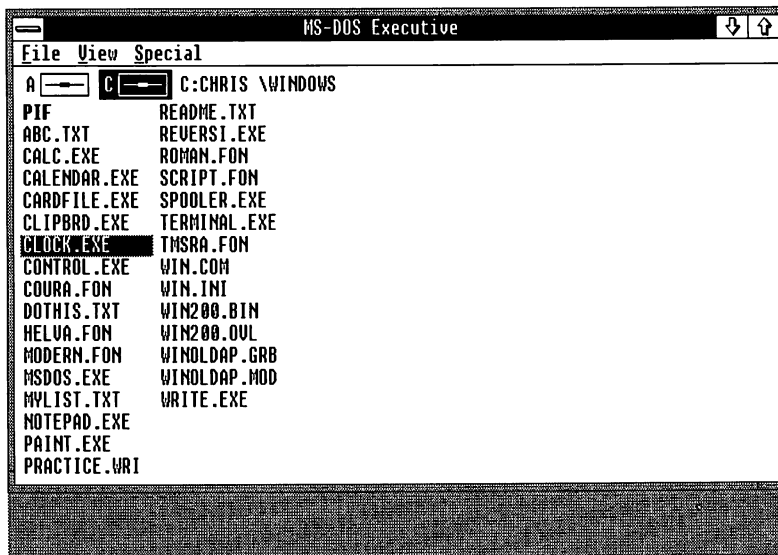
If you quit Windows at the end of the last exercise, start Windows again.

If you have a two-drive system, insert the Desktop Applications disk in drive A, then press **CONTROL+A** to select drive A. (In this manual, a plus sign (+) used with two or more keynames indicates a key combination: you should press and hold down the first key, then press the next key or keys. After pressing all the keys, release the first key.)

If you have a hard-disk system, the file for Clock, **CLOCK.EXE**, is on your hard disk and appears in your Windows directory in the MS-DOS Executive window.

First, start Clock:

- 1 Use the **DOWN** key to select **CLOCK.EXE** in the MS-DOS Executive window.



- 2 Press the **ENTER** key.

Clock appears on your screen.

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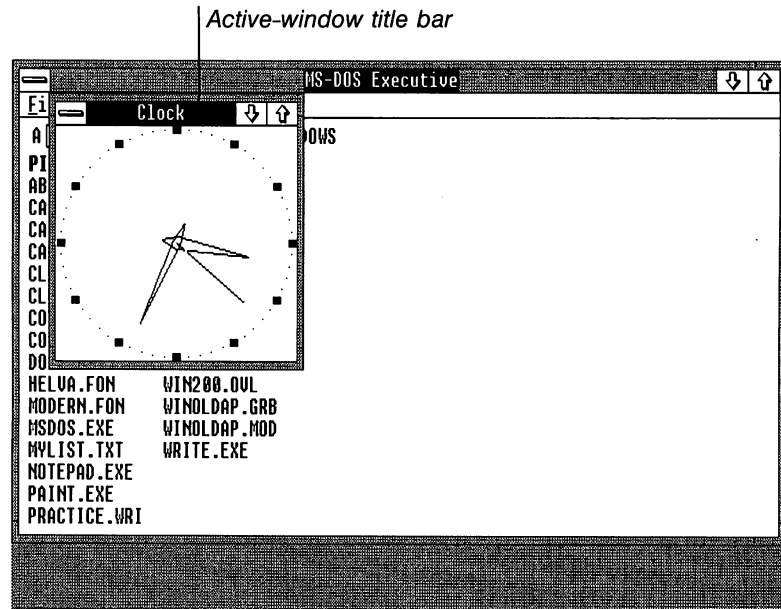
**Two-drive system**

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**Hard-disk system**

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**Starting Clock**



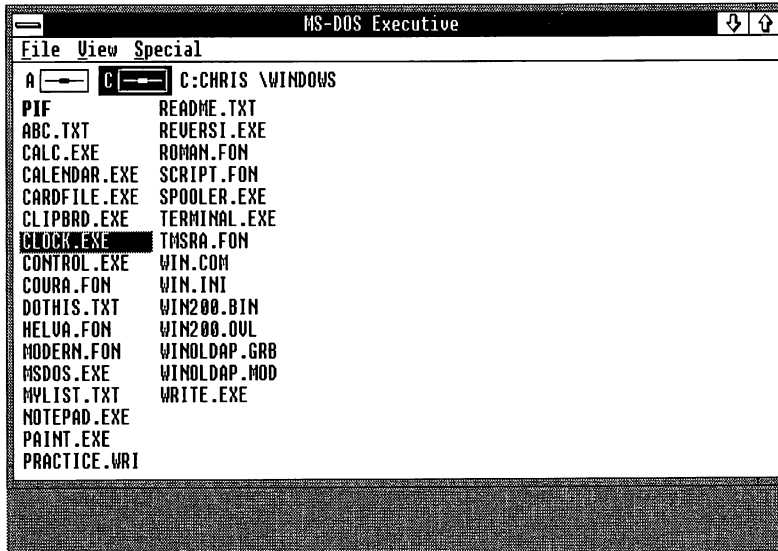
Notice that the title bar of Clock is darkened. This shows that Clock is the active window—the window that your commands will affect. The title bar of the MS-DOS Executive window is gray, showing that it is no longer active. When you have more than one window open, you need to select one of them as your active window.

## Changing Active Windows

### Selecting a window

Try changing your active window to MS-DOS Executive:

- Press ALT + ESCAPE.



MS-DOS Executive appears in front of Clock, and its title bar is darkened.

Each time you press ALT+ESCAPE, the next open window is brought to the front. If you have several applications started, pressing ALT+ESCAPE brings windows to the front in the order that they were started in. The window that was active goes to the back.

If you have several windows sharing the screen, check the title bar to see which one is dark. That's your active window.

Try switching back and forth several times between Clock and MS-DOS Executive.

## Changing a Window's Size

You can change the size of a window in several ways. First, bring MS-DOS Executive to the front if it's not your active window:

- Press ALT+ESCAPE.

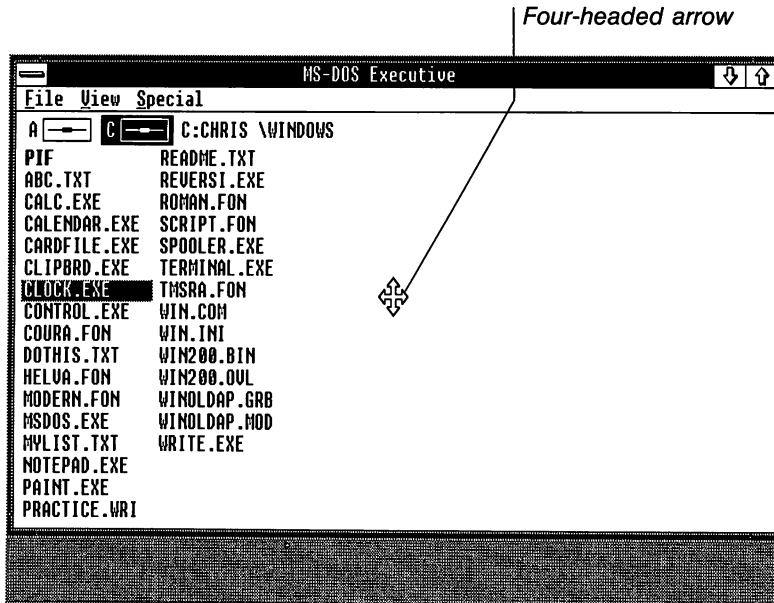
MS-DOS Executive appears in front of Clock, and its title bar is darkened.

## Using the Size command

One way to change the size of a window is by using the Size command on the Control menu. Try this:

- 1 Press the ALT key and then the SPACEBAR.
- 2 Press S to choose the Size command.

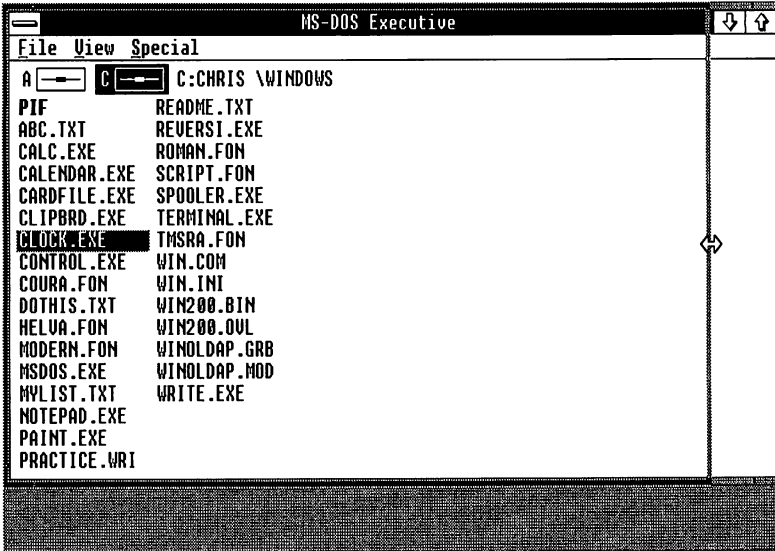
The MS-DOS Executive borders darken and a four-headed arrow appears in the middle of the window.



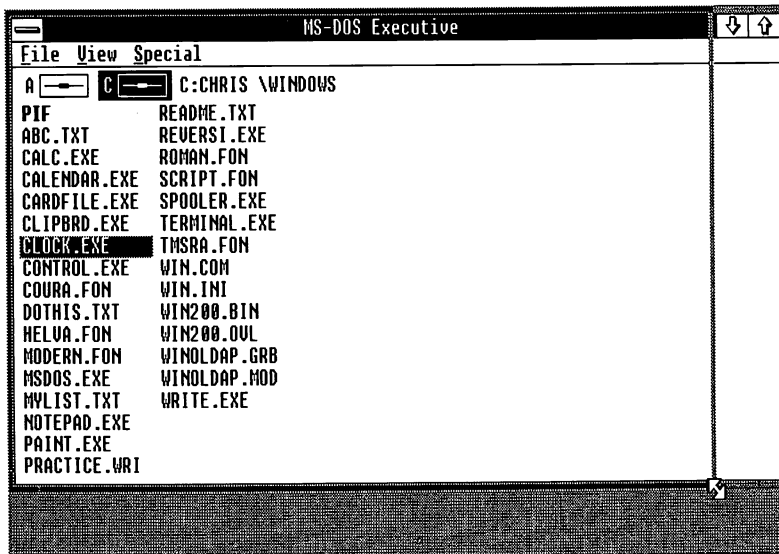
## Moving a border

Now use the DIRECTION keys to change the size of your window. The first DIRECTION key you press selects the border you will move. The DIRECTION keys move the selected border up and down, to the right or to the left. Try moving the right border of MS-DOS Executive:

- 1 Select the right border by pressing the RIGHT key.
- 2 Make the window narrower by pressing the LEFT key a few times.



- 3 Now press the DOWN key. The arrow pointer moves to the lower-right corner.



You can now move the corner up and down or to the right and to the left. (If, after you select a border, you decide that you don't want to change your window size, it's easy to cancel the Size command by pressing the ESCAPE key.)

- 4 Use the UP key to move the corner up.
- 5 When you finish moving the borders, press the ENTER key to choose the new size.

Your window assumes the new size.

Experiment with the Size command to see how you can use it to adjust the size of your window.

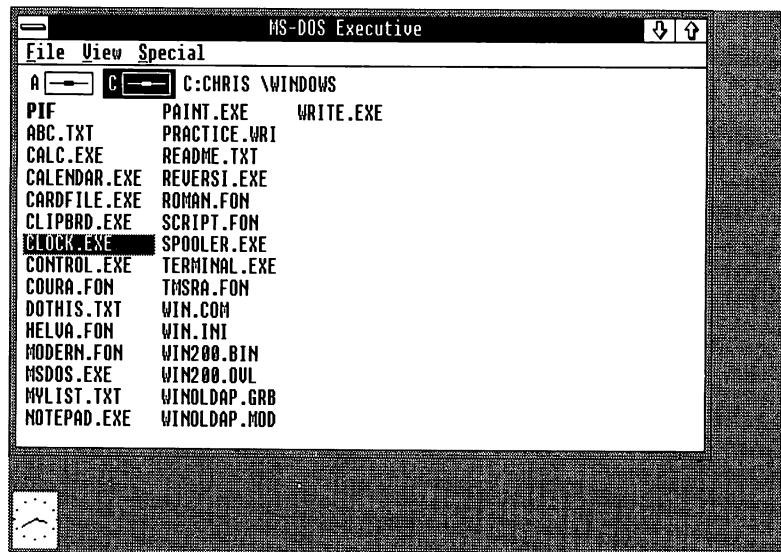
## Shrinking a Window to an Icon

### Using the Minimize command

Another way you can change the size of a window is by using the Minimize command. This command shrinks a window and turns it into an icon. The application is still running but it doesn't take up as much space on the screen. Try using the Minimize command on Clock:

- 1 Press ALT+ESCAPE to select Clock as your active window.
- 2 Press ALT and then the SPACEBAR to select Clock's Control menu.
- 3 Press N, the underlined letter in the Minimize command.

Clock becomes an icon in the lower-left corner of your screen.

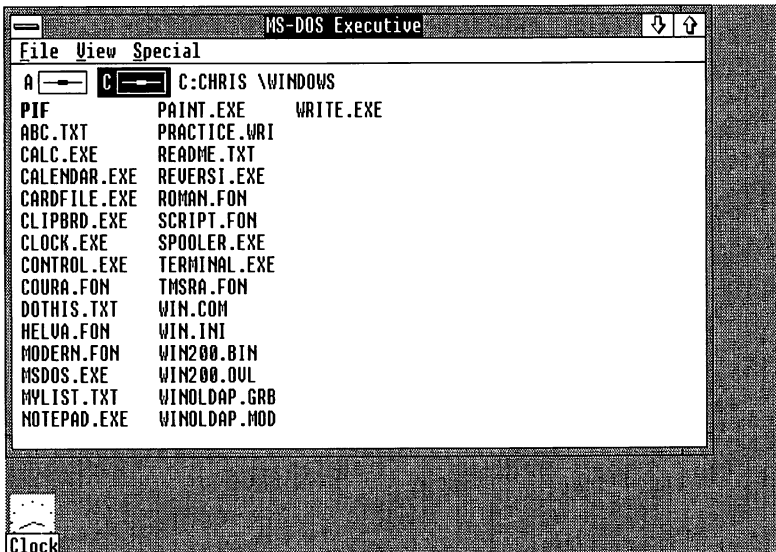


Windows puts applications in the lower portion of the screen when they have been shrunk to icons. Clock continues to run, and the time is still visible.

You can select icons the same way you select windows, and you can display the icons' menus as well. MS-DOS Executive is your active window now. Select Clock:

- Press ALT+ESCAPE.

The icon's title appears.



## Moving a Window or an Icon

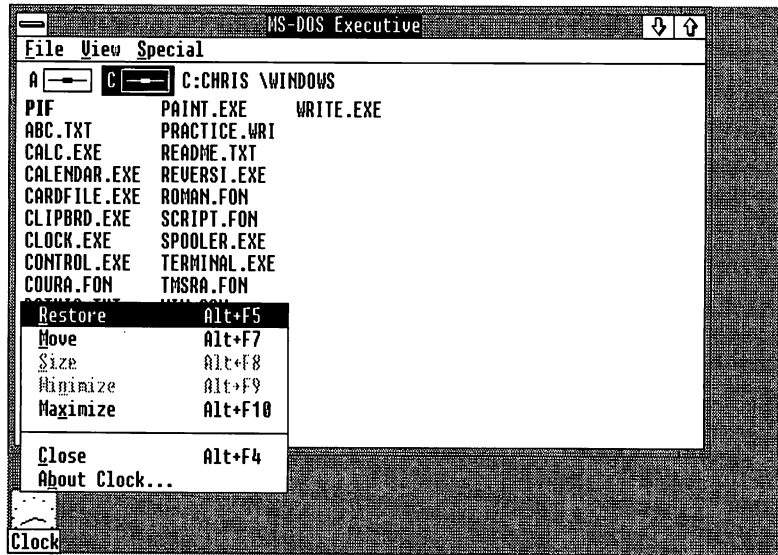
Another command in the Control menu, Move, lets you move windows or icons on your screen.

Try using the Move command to move the Clock icon:

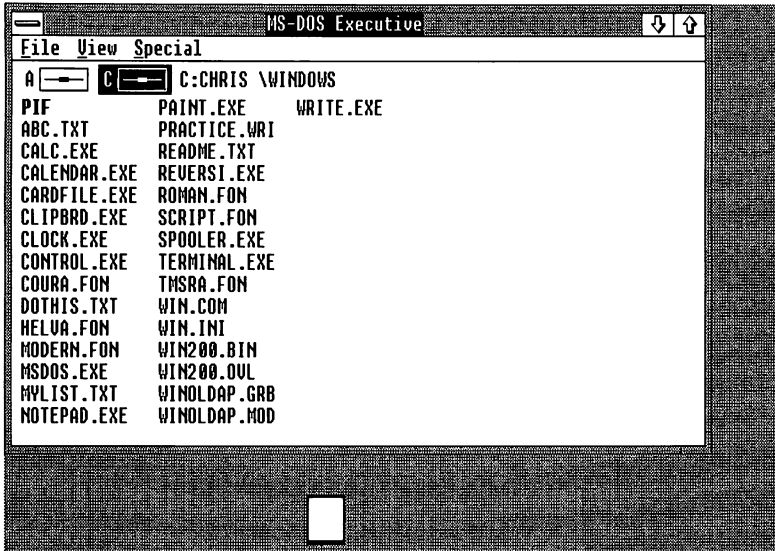
- 1 Select the Control menu by pressing ALT, SPACEBAR. (In this manual, a keyname followed by a comma and another keyname indicates a key sequence: you should press and release the first key, then press and release the second key.)

## Selecting an icon

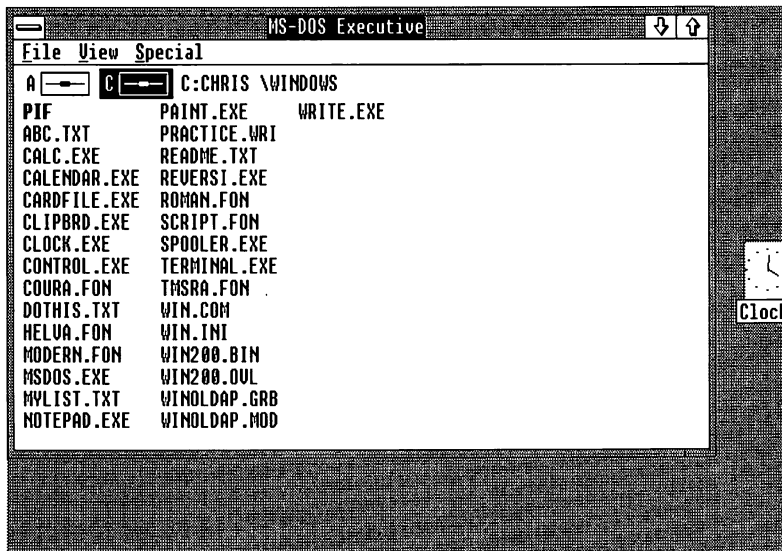
## Using the Move command



- 2 Choose the Move command by pressing the underlined letter, M.
- 3 Use the DIRECTION keys to move the icon on your screen. (If, after you move the icon, you decide that you don't want it moved after all, it's easy to cancel the Move command by pressing the ESCAPE key.)  
The icon becomes an empty rectangle while you move it.



- 4] When you have positioned the icon where you want it, press the ENTER key.  
The title of the icon appears.



## Enlarging a Window

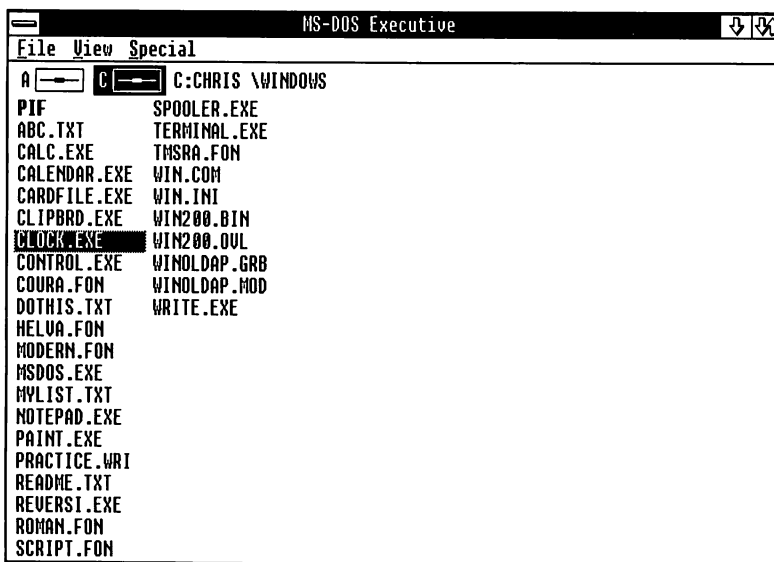
### Using the Maximize command

If you want to work in one window, you can use the Maximize command to enlarge a window so that it fills the entire screen.

Try selecting the MS-DOS Executive's Control menu and choosing the Maximize command:

- 1 If you need to, press ALT+ESCAPE to select MS-DOS Executive as your active window.
- 2 Press ALT, SPACEBAR to display the Control menu.
- 3 Press X, the underlined letter, to choose the Maximize command.

MS-DOS Executive expands to take up your entire screen.



Take a look at the Control menu:

- Press ALT, SPACEBAR.

Restore	Alt+F5
Move	Alt+F7
Size	Alt+F8
Minimize	Alt+F9
Maximize	Alt+F10
Close	Alt+F4

The Maximize command is grayed, showing that you can't use it now. The Restore command is no longer grayed. This command lets you restore a window to its previous size and location on the screen.

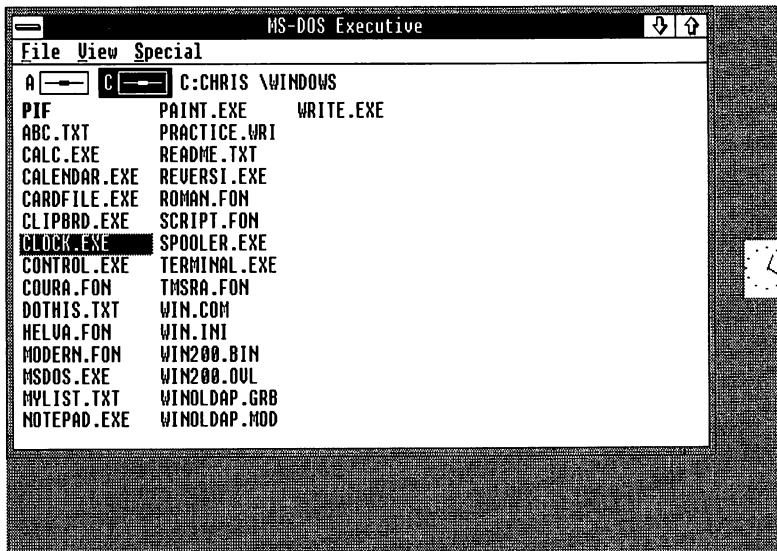
## Restoring a Window

Use the Restore command to reduce MS-DOS Executive to its previous size:

- Press R or the ENTER key to choose the Restore command.

MS-DOS Executive shrinks to the size you made it when you used the Size command.

## Using the Restore command

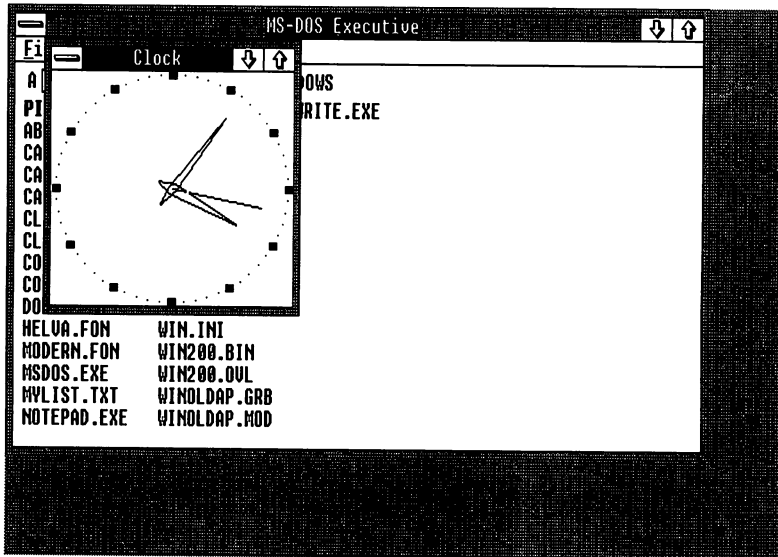


## Restoring the Clock window

Now use the Restore command to restore the Clock window:

- 1 Select the Clock icon by pressing ALT+ESCAPE.
- 2 Select the Control menu by pressing ALT, SPACEBAR.
- 3 Press R or the ENTER key to choose the Restore command.

Clock is restored to its previous size.

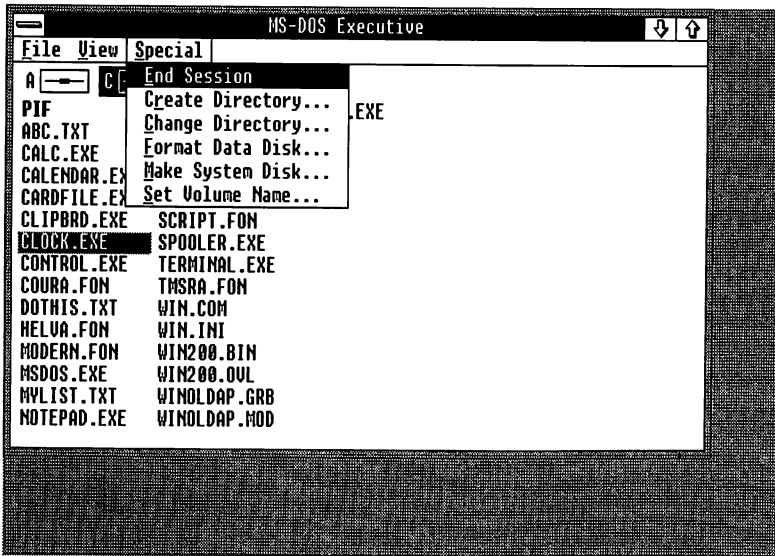


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**Ending your session**

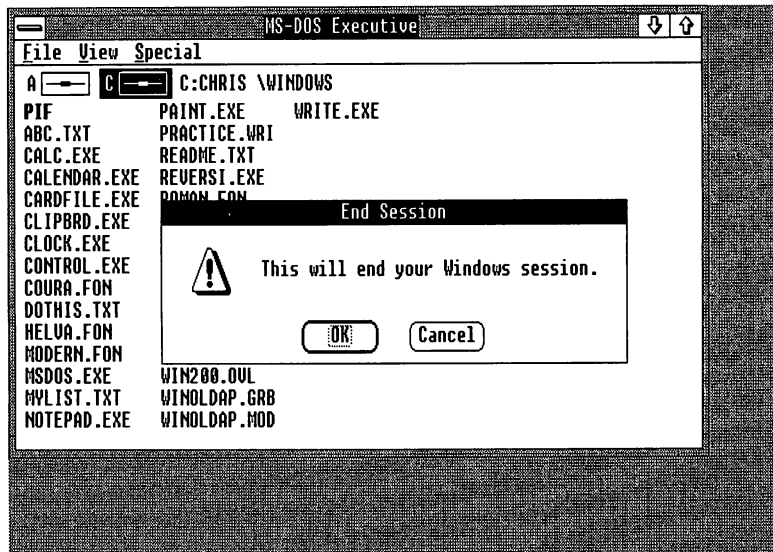
Now choose the End Session command from the Special menu to end your Windows session:

- 1 Select the MS-DOS Executive window as your active window by pressing ALT+ESCAPE.
- 2 Press ALT and then S to select the Special menu.



- 3 The End Session command is selected because it is listed first, so press E or the ENTER key to choose it.

A dialog box appears, warning you that this will end your Windows session.



The OK button is already selected. To end your session, do the following:

- Press the ENTER key to choose OK.

If you want to continue working in Windows, do the following:

- Press the ESCAPE key.

In this exercise, you reviewed selecting menus, choosing commands, and starting applications. You learned how to select the active window when you have more than one application started. You used the Move command. You also changed the size of windows, using four different commands: Size, Minimize, Maximize, and Restore.

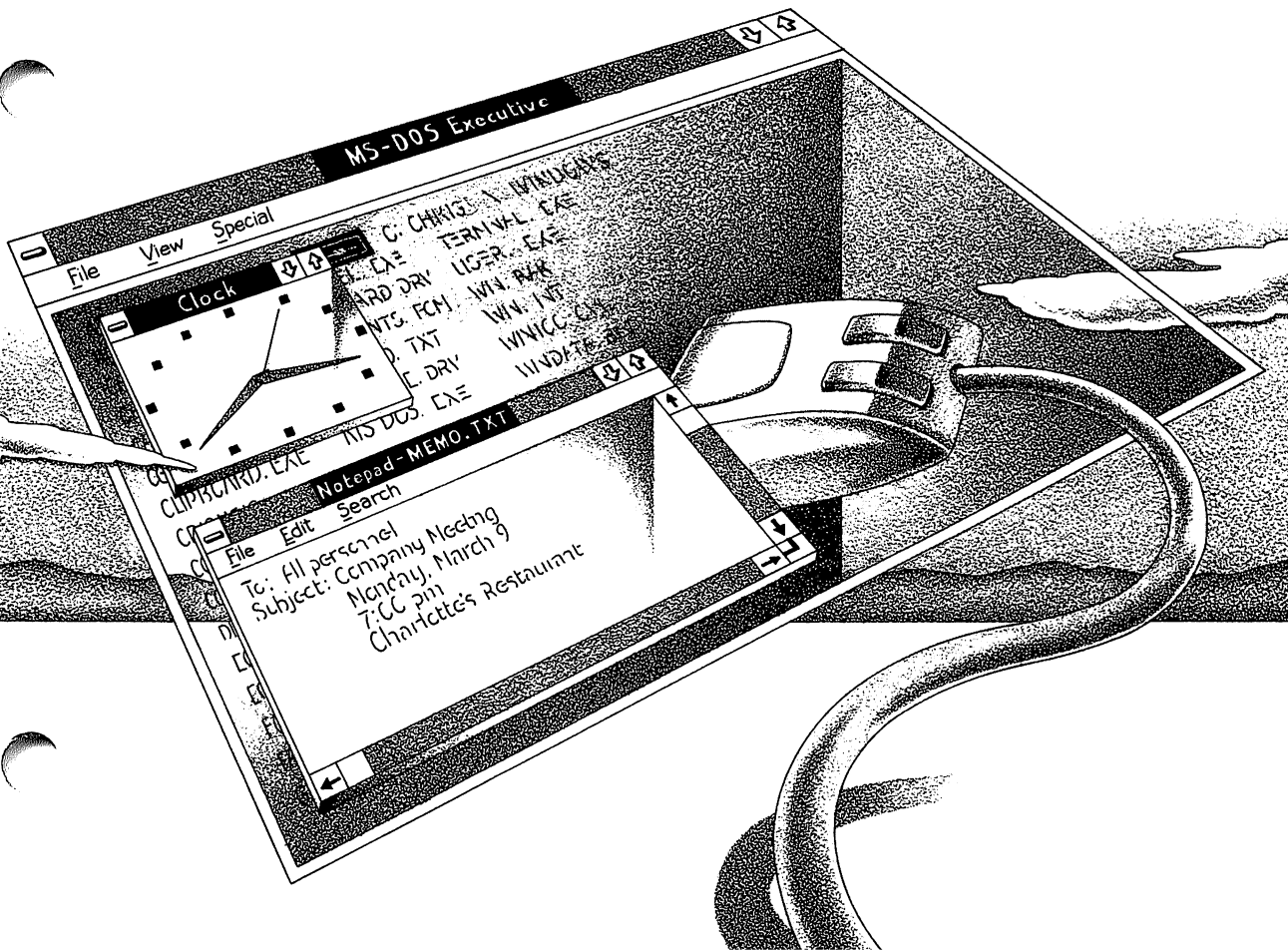
You've mastered all the basic skills you need in order to use Windows with the keyboard. Go ahead and start working with Windows, or read further in this manual. The next chapter repeats these exercises for users who have a mouse. Chapter 4, "Techniques," reviews the things you've learned here, and provides more advanced techniques and some shortcut commands for accomplishing common tasks.

### 3 Learning Windows with the Mouse

These exercises will give you hands-on experience using Microsoft Windows with a mouse. Using a mouse makes many tasks faster and easier to learn.

If you are a new user, you will find this chapter especially helpful. The step-by-step instructions and the illustrations will tell you exactly what to do.

If you have a mouse installed, you can still use the keyboard techniques. See Chapter 2, "Learning Windows," for more information on working from the keyboard.



In this chapter, you will learn and practice the following skills:

- Using the mouse
- Selecting command menus
- Choosing commands from menus
- Starting a Windows application
- Opening a file in Windows
- Using dialog boxes
- Saving an application document
- Quitting an application
- Moving between windows
- Changing the size of a window
- Moving windows on the screen
- Shrinking a window to an icon
- Ending your Windows session

---

## Exercise 1: Beginning a Windows Session

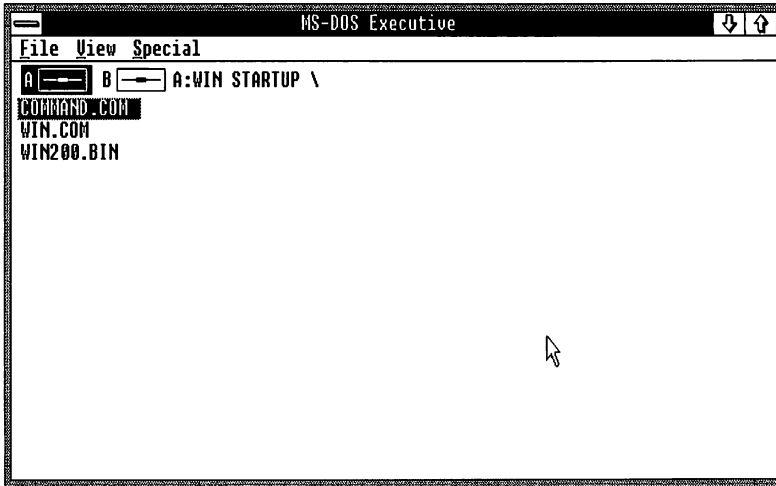
In this exercise, you'll learn the basics of how to select menus and choose commands in any Windows application.

First, start Windows. (If you need to review how to get started on your system or how to use your mouse, see Chapter 1, "Getting Started.")

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### If you have a two-drive system

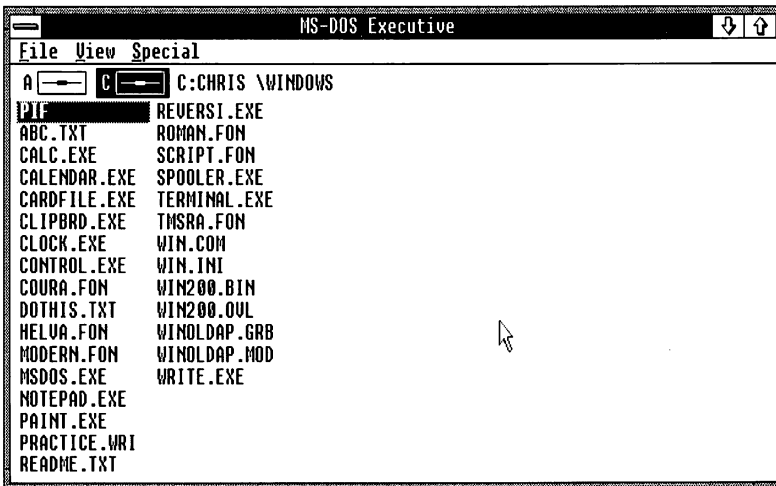
On a two-drive system, the files you need for the first exercise are on the Windows startup disk that you created, and they appear in your MS-DOS Executive window when you start Windows. Your screen will look something like this:



On a hard-disk system, the files you need for these exercises are on your hard disk, and they appear in your MS-DOS Executive window when you start Windows. After you start Windows, your screen will look something like this:

---

**If you have a hard-disk system**

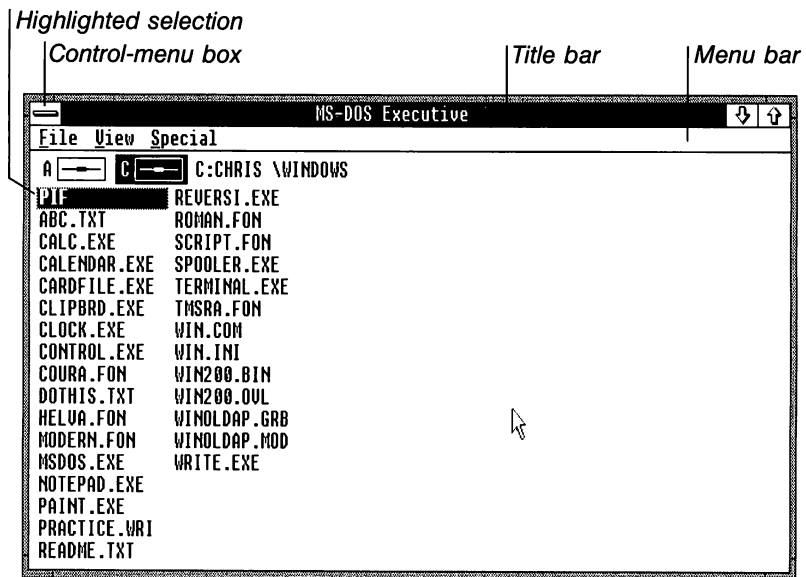


The first window you see is the MS-DOS Executive window. MS-DOS Executive is the application program that you'll use to start other applications, to organize your files and windows, and to do things like change directories and format disks.

All Windows commands are organized in menus on the menu bar. A menu shows the names of a group of commands. Each application has its own menus, but one, the Control menu, is common to all applications. The act of picking a menu is called selecting the menu. In Windows, you select the items that a command will affect—for example, a filename or an area of the screen—and you choose the commands that carry out the action.

## Selecting the Control Menu

The Control menu is represented by a box in the upper-left corner of every window. You use the Control menu's commands to arrange windows on the screen. The commands allow you to move the windows, change their size, and close them.

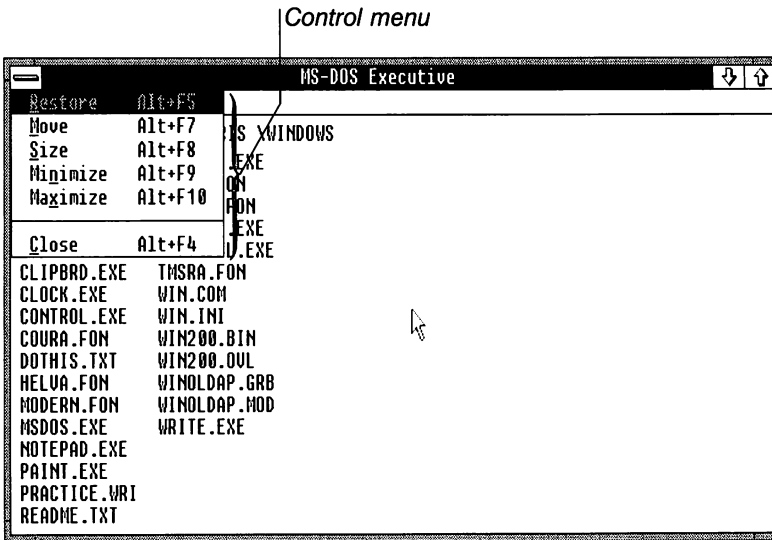


### The Control menu

Here's how to select the Control menu:

- 1 Point to the Control-menu box.
- 2 Click the menu box.

The Control menu appears on your screen. The first command in the list, Restore, is highlighted, to show that this command is selected.



Try canceling the Control-menu display:

- 1 Point to a blank part of the screen outside the menu.
- 2 Click the mouse button.

The Control menu disappears. You can also cancel menu displays by pressing the ESCAPE key.

## Selecting Menus and Choosing Commands

You use the same technique to select menus on the menu bar. Try selecting the View menu:

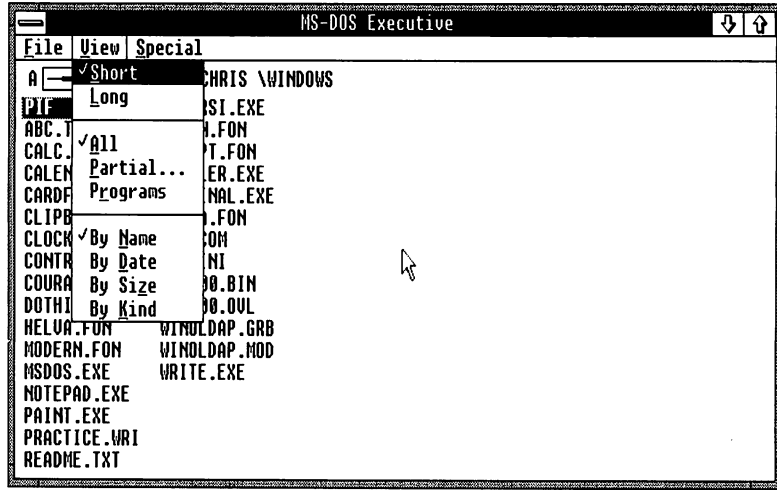
- 1 Point to the View menu on the menu bar. (Just point to any part of the word "View.")
- 2 Click the menu name.

---

### Canceling the Control menu

---

### Selecting menus



The View menu lets you choose how MS-DOS Executive displays your current directory. Try selecting the other menus on the menu bar. To make a menu disappear, click anywhere outside the menu.

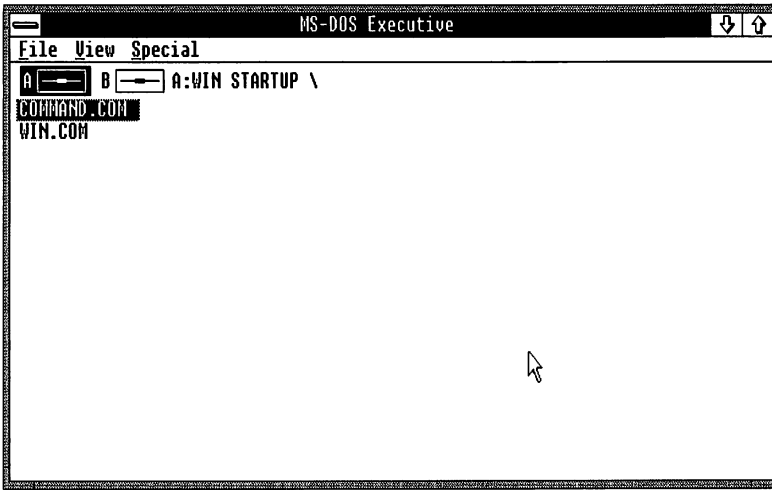
## Choosing commands

Choosing commands from menus is simple. Try choosing the Programs command from the View menu:

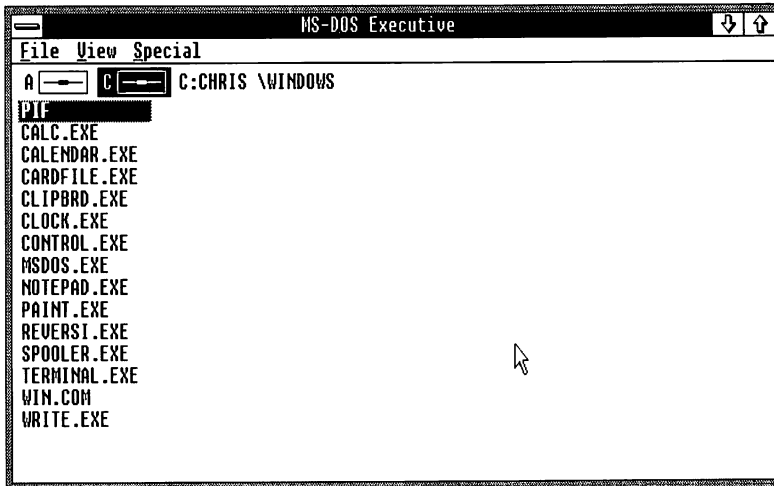
- 1 Point to the Programs command.
- 2 Click the command name.

The file listing in your MS-DOS Executive window changes, and only files with a .EXE, .COM, or .BAT extension are displayed.

If you have a two-drive system, your screen should look something like the following:



If you have a hard-disk system, your MS-DOS Executive window should look something like this:



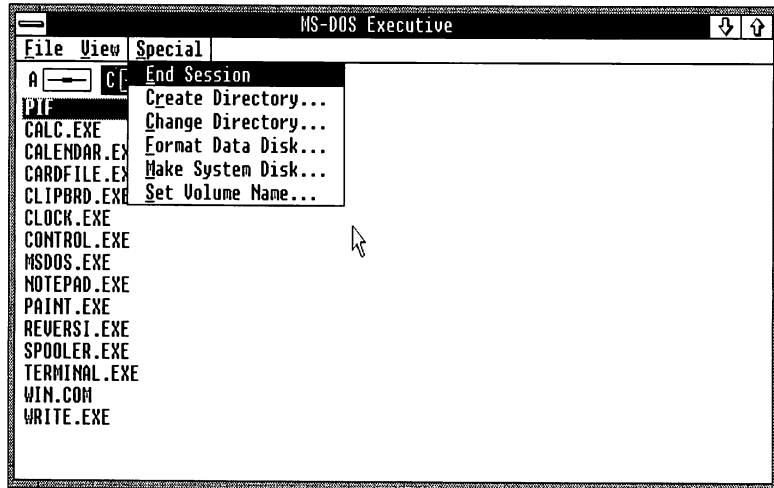
Experiment by choosing some of the other commands in the View menu.

## Ending Your Windows Session

### Quitting Windows

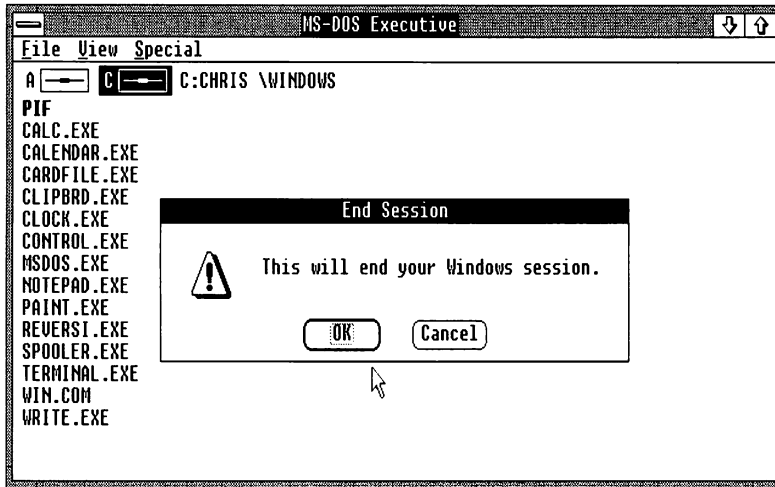
You can end your Windows session now or go on to the next exercise. Ending your session is as easy as choosing a command:

- 1 Point to the Special menu.
- 2 Click the menu name.



- 3 Point to the End Session command.
- 4 Click the command name.

A message appears on your screen asking if you want to end the session.



If you want to end your Windows session, here's what to do:

- 1 Point to the OK button.
- 2 Click the button.

If you want to go on to the next exercise, do this:

- 1 Point to the Cancel button.
- 2 Click the button.

In this exercise, you've covered the basics of selecting menus and choosing commands with the mouse. In the next exercise, you'll sharpen these skills, and you'll learn to start a Windows application, open a file, use dialog boxes, and save a document.

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## Exercise 2: Using Notepad

In this exercise, you'll start a Windows application, Notepad, and use it to edit a sample file included on your Windows Desktop Applications disk.

First start Windows, if you need to. (If you need a refresher, see Chapter 1, "Getting Started.")

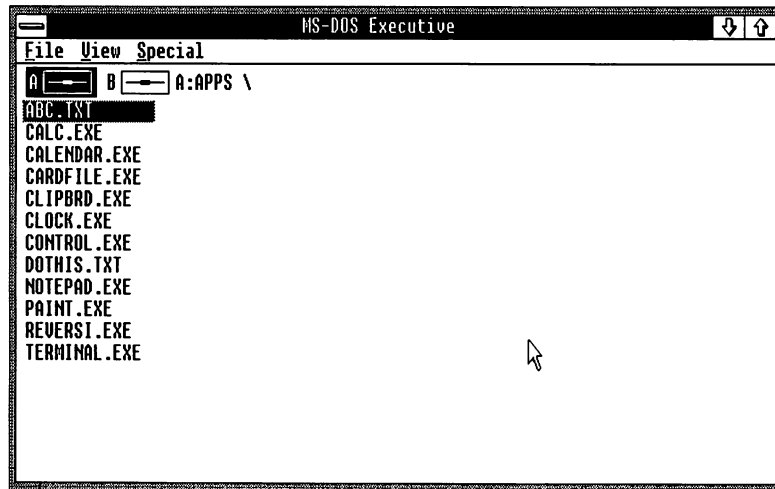
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### Two-drive system

If you have a two-drive system, you need to insert another disk to do this exercise:

- 1 Remove the startup disk from drive A.
- 2 Insert the Windows Desktop Applications disk in drive A.
- 3 Click the drive A icon.

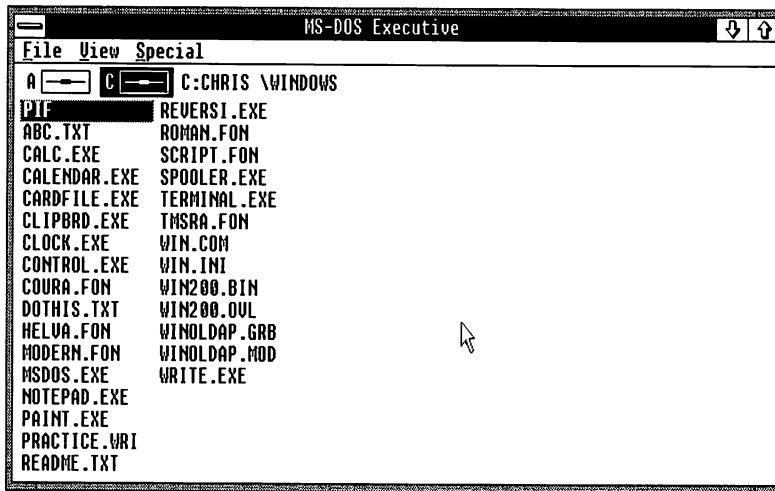
MS-DOS Executive displays the directory listing for the Desktop Applications disk in drive A. The drive A icon is highlighted, showing that it is selected. Your screen should look like this:



If you have a hard-disk system, the application file for Notepad (and all the Windows applications) is on your hard disk and appears in the MS-DOS Executive window. The drive C icon is highlighted, showing that it is selected. If you quit Windows at the end of the last lesson, your screen should look something like the following:

---

## Hard-disk system



If you did not quit Windows at the end of the last lesson, then the directory listing in your MS-DOS Executive window will still show only the program files. You can use the View menu's All command to display the full directory list.

Now you're ready to begin. Remember, if you select the wrong menu or decide you don't want to choose a command, just point to the screen area outside the menu and click the mouse button. The menu disappears and you can start over again.

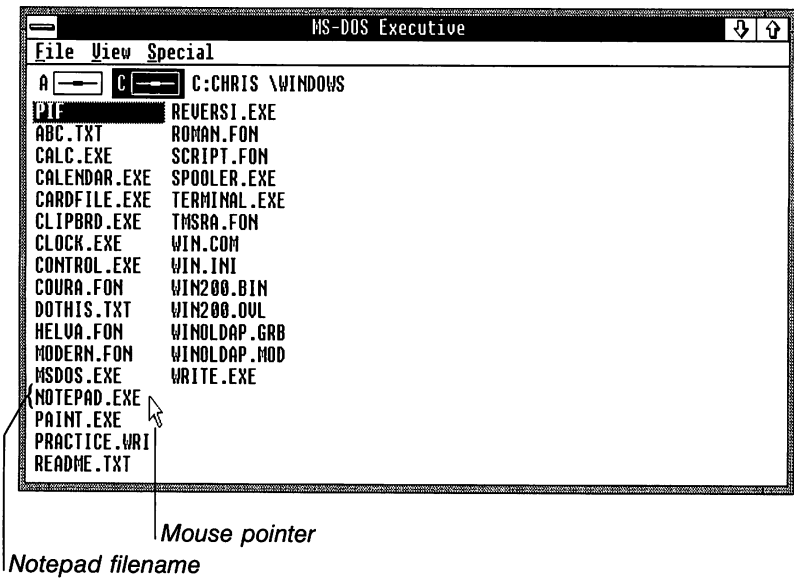
## Starting Notepad

You always start applications from the MS-DOS Executive window. You can use the mouse to start applications. Start Notepad now:

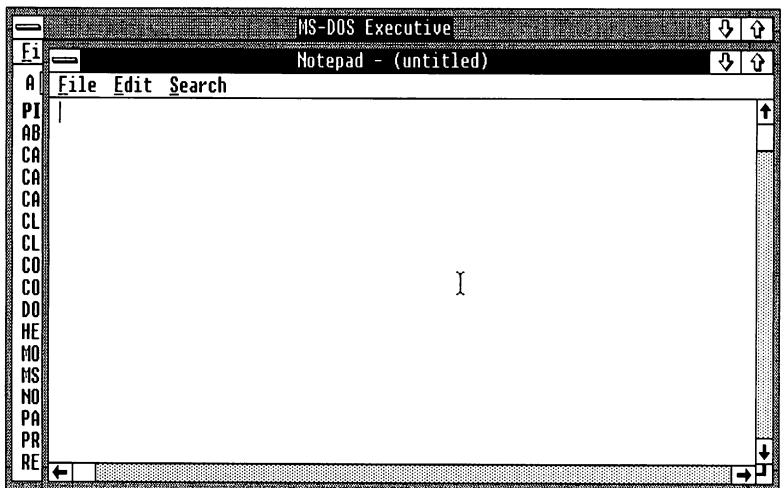
- Double-click the application filename, NOTEPAD.EXE.

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## Starting an application



Notepad appears in front of the MS-DOS Executive window.



## Opening a File

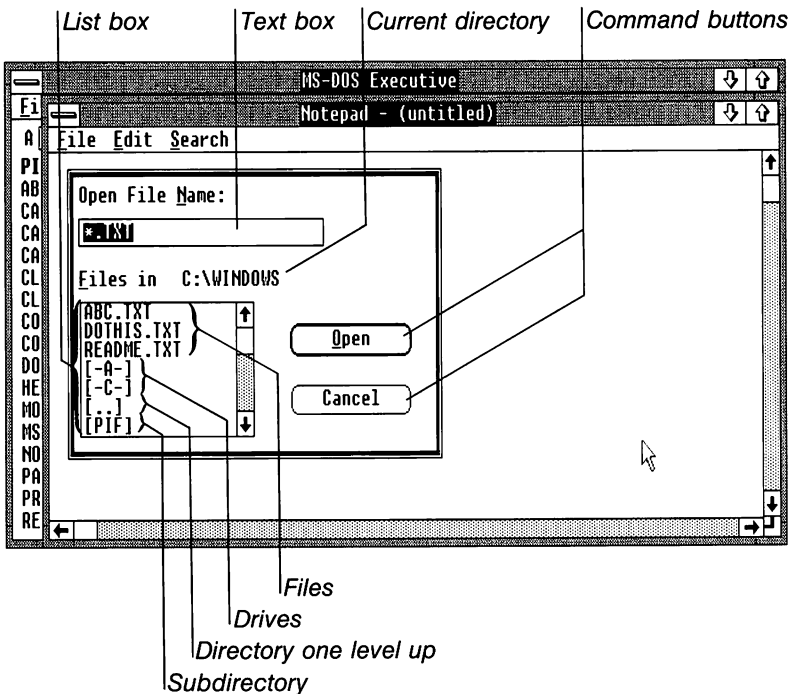
To open files for editing, you select the File menu and choose the Open command:

- 1 Click the File menu.
- 2 Click the Open command.

The Open command's dialog box is displayed on your screen. Windows uses dialog boxes to send you messages and to ask you for additional information — in this case, a filename — needed to carry out a command. You can use your mouse to supply the information to Windows.

### Opening files

### The Open dialog box



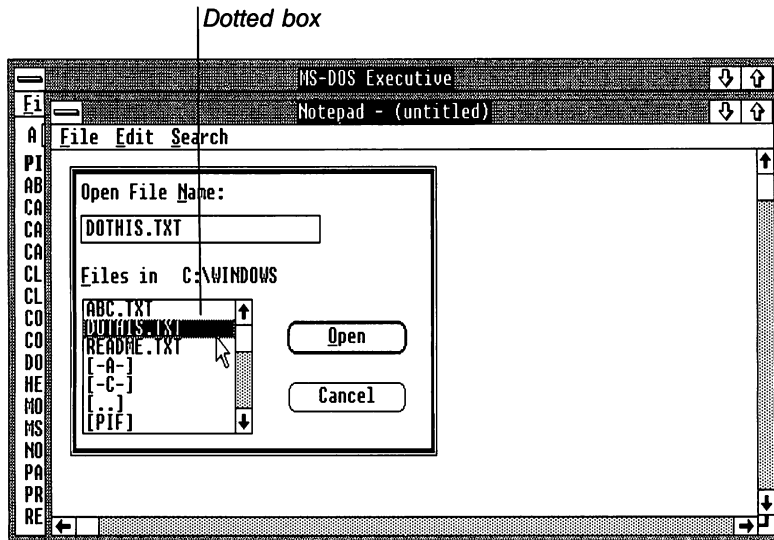
The list box contains a list of all the Notepad files (files with a .TXT extension). It also shows the disk drives, the directory one level up from your current directory (symbolized by [..]), and any subdirectories (directories in your current directory). You use the Open button or the Cancel button to complete the Open command.

## Opening a sample file

Here's how to select the file you want to open from the dialog box:

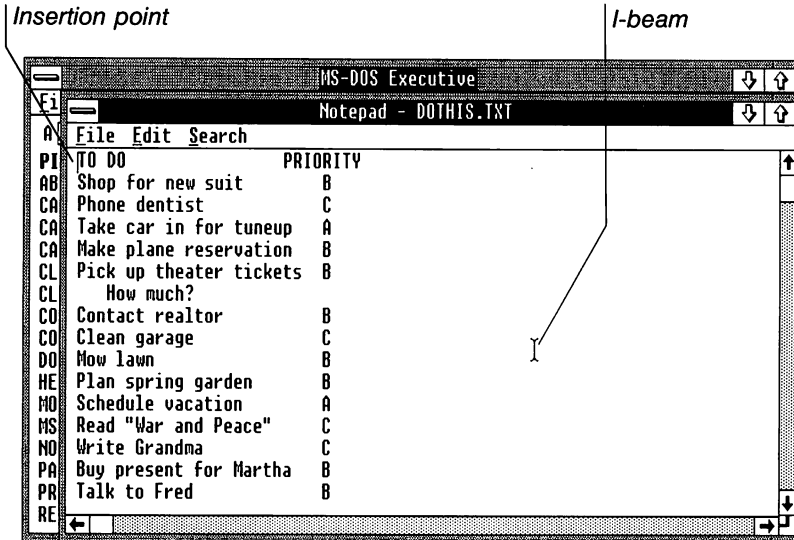
- 1 Click the filename DOTHIS.TXT in the list box.

The filename is highlighted, to show that it's selected, and it is surrounded by a dotted box, to show that the list box itself is selected. DOTHIS.TXT now appears in the Open File Name text box, too.



- 2 Click the Open button.

The sample text file, DOTHIS.TXT, appears in the Notepad window, and you're ready to edit it with Notepad.



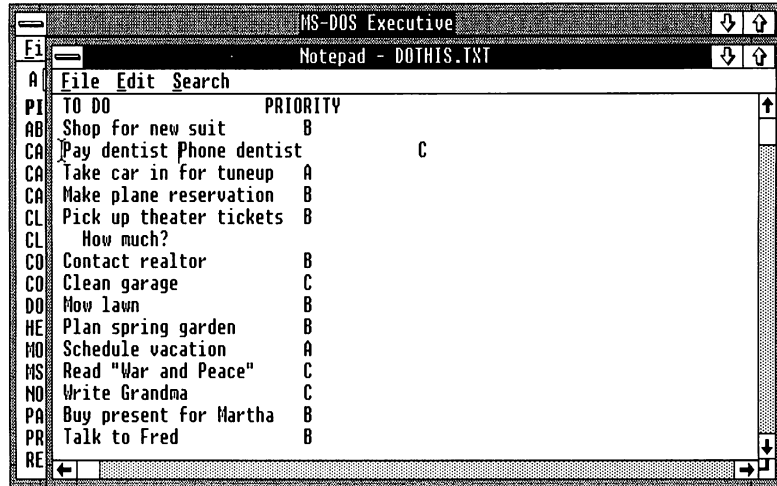
## Working in a File

Move your pointer around in the Notepad screen. Notice that when the mouse pointer is in the work area, it changes from an arrow to an I-beam. The flashing vertical line at the top of the file is the insertion point, the point at which new text can be typed. You can move the insertion point to any place in the file with your mouse.

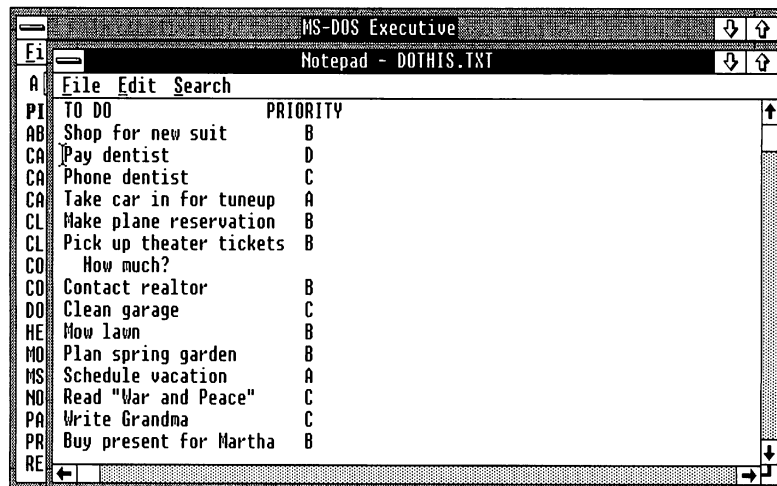
For example, move the insertion point to the third line in the file and add another item to your list:

- 1 Click the line beginning "Phone dentist."
- 2 Type your new item, *Pay dentist*.

## Inserting text



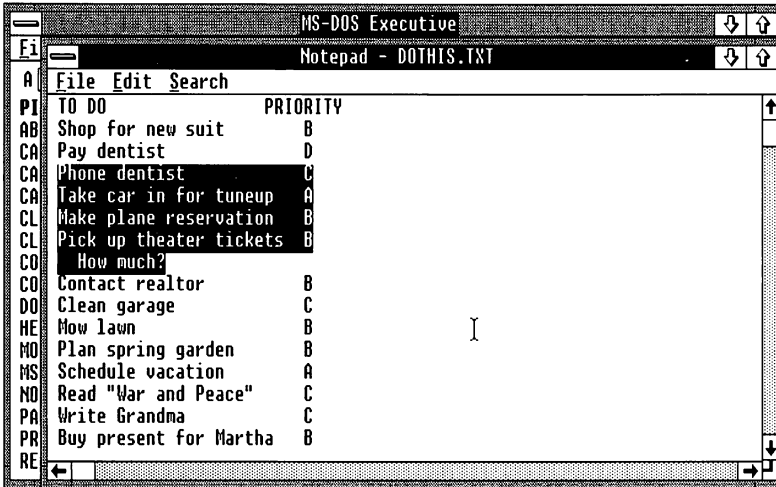
- 3 Use the SPACEBAR to move the insertion point over to the right-hand column, and give the new item a priority of D.
- 4 Press the ENTER key to move the line "Phone dentist" to the next line.



Now delete some of the tasks on your list. To do this, you need to select the text that you want your command to affect. Try selecting and deleting the next four items on your list:

- 1 Point to the line beginning "Phone dentist."
- 2 Drag the I-beam pointer down five lines.
- 3 Release the mouse button.

As you drag the I-beam pointer, the selected text is highlighted.



If you make a mistake, it's easy to correct:

- 1 Click the mouse button.

The text is no longer selected.

Once you have selected the lines, delete them by choosing the Edit menu's Cut command:

- 1 Click the Edit menu.

---

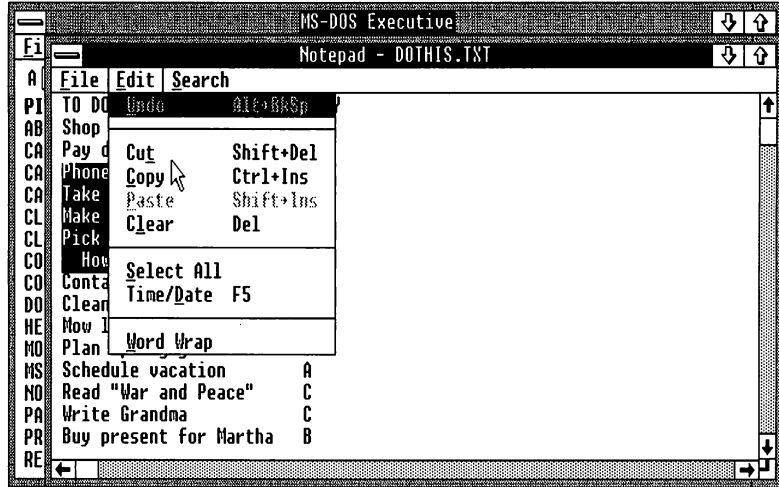
### Selecting text to delete

---

If you make a mistake

---

### Deleting selected text



2 Click the Cut command.

The lines you selected are deleted from your file.

---

### Saving your changes

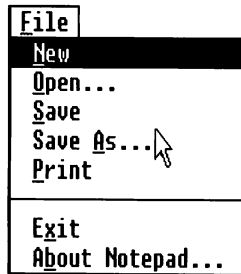
The next step is to save the changes you made with Notepad. Notepad has two commands to save documents: Save and Save As. The Save command saves the edited version of your document under the existing filename. The Save As command saves your edited version under a new filename, while the original version remains unchanged. (Windows uses the DOS file-naming convention that limits filenames to eight characters.)

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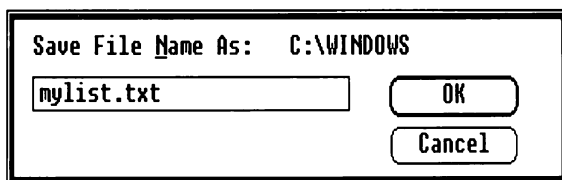
### Using the Save As command

In this exercise, use the Save As command from the File menu:

1 Click the File menu.



- 2 Click the Save As command.  
A dialog box appears. The current name of the file, DOTTHIS.TXT, is in the text box.
- 3 Type the new filename, *mylist.txt*, in the text box.



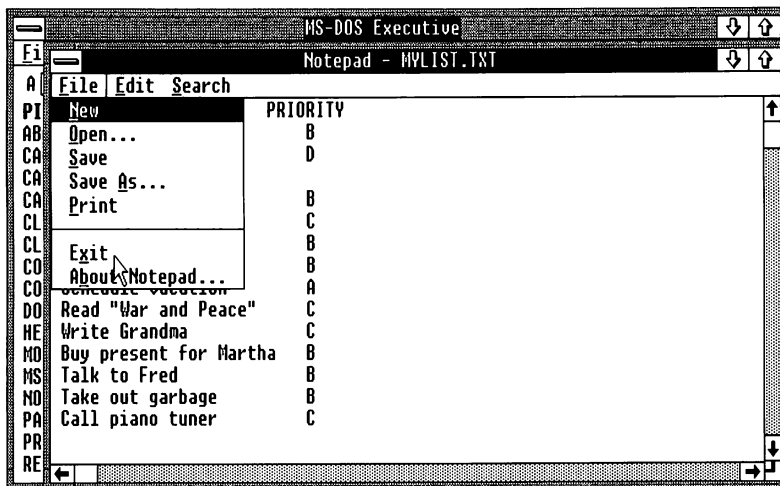
- 4 Click the OK button.

Windows saves the revised file under the new name. The original DOTTHIS.TXT remains intact.

After you're finished working with an application, you can use the Exit command to quit the application and return to MS-DOS Executive. Use this command to quit Notepad:

- 1 Click the File menu.

## Quitting an application



- Click the Exit command.

The Notepad window closes and you can once again see the entire MS-DOS Executive window.

In this exercise, you learned to start a Windows application, Notepad, and you used it to edit and save a file. You also learned how to use a dialog box and how to quit an application, and you reviewed selecting menus and choosing commands.

You can end your Windows session now or go on to the final exercise, in which you'll learn to move windows and change their size.

---

### Exercise 3: Using Clock

In this exercise, you'll start another Windows application, Clock, and learn to arrange and manipulate windows on your screen.

If you quit Windows at the end of the last exercise, start Windows again.

---

#### Two-drive system

If you have a two-drive system, insert the Desktop Applications disk in drive A. To select drive A, click the drive A icon.

---

#### Hard-disk system

If you have a hard-disk system, the file for Clock, CLOCK.EXE, appears in your Windows directory in the MS-DOS Executive window.

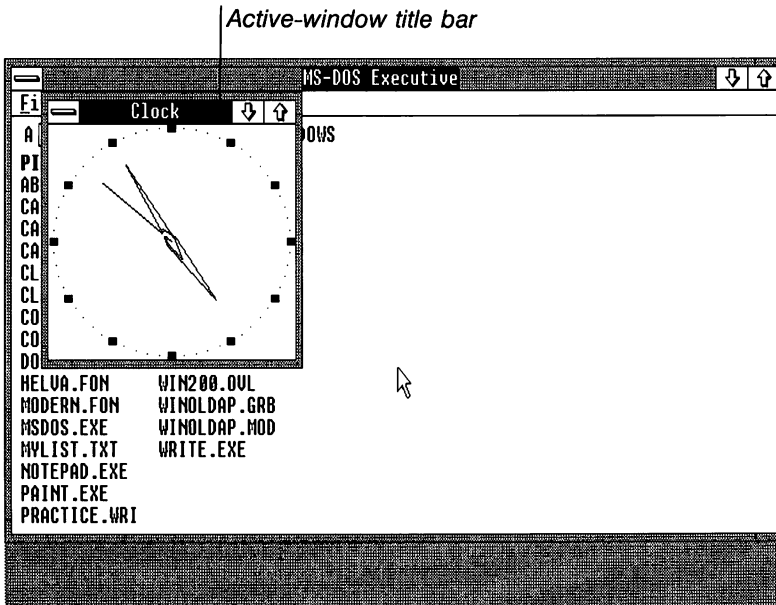
---

#### Starting Clock

The first step is to start Clock:

- Double-click the application filename for Clock, CLOCK.EXE.

Clock appears on your screen.



Notice that the title bar is darkened. This shows that Clock is the active window — the window that your commands will affect. The title bar of the MS-DOS Executive window is gray, showing that the window is no longer active. When you have more than one window open, you need to select one of them as your active window.

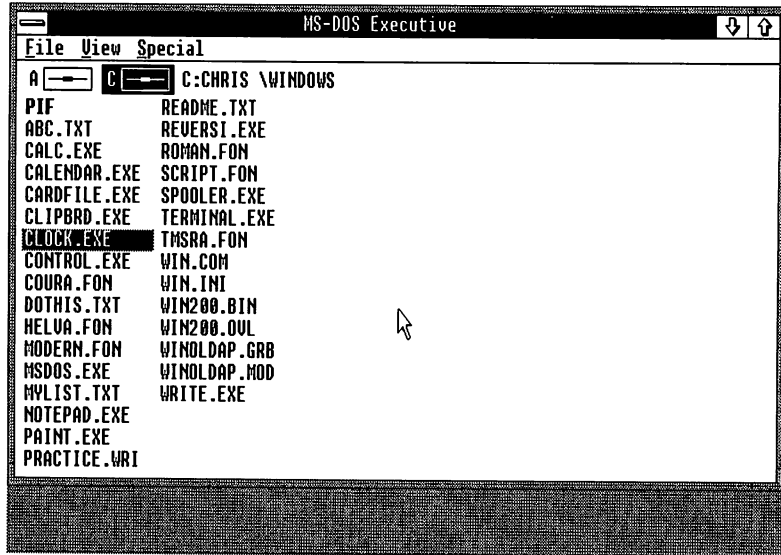
## Changing the Active Window

Try changing your active window to MS-DOS Executive:

- Click a blank area in the MS-DOS Executive window.

---

**Selecting a window**



MS-DOS Executive appears in front of Clock, and its title bar is darkened.

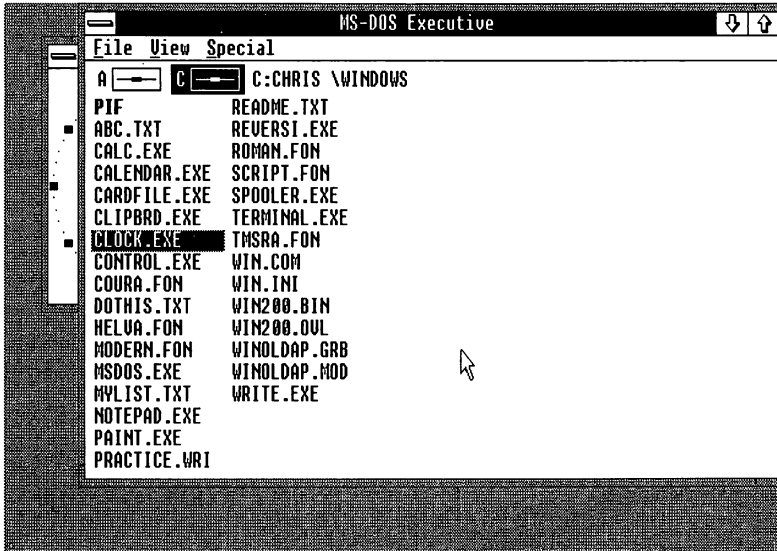
## Changing a Window's Size

If you want to select a window with the mouse, part of the window must be visible on the screen. You can make Clock visible by moving the borders of the MS-DOS Executive window. Moving the borders with the mouse is also an easy way to change a window's size.

To move the window's borders and select Clock, do this:

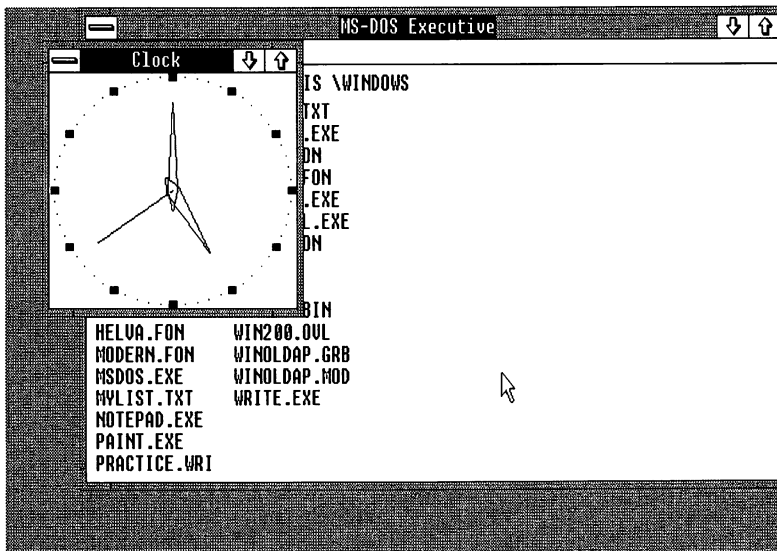
- 1 Point to the left border of the window. The pointer becomes a two-headed arrow.
- 2 Drag the border to the right until Clock is revealed.
- 3 Release the mouse button.

### Moving a window's borders



4 Click the Clock window.

Clock appears in front of MS-DOS Executive, and its title bar is darkened.

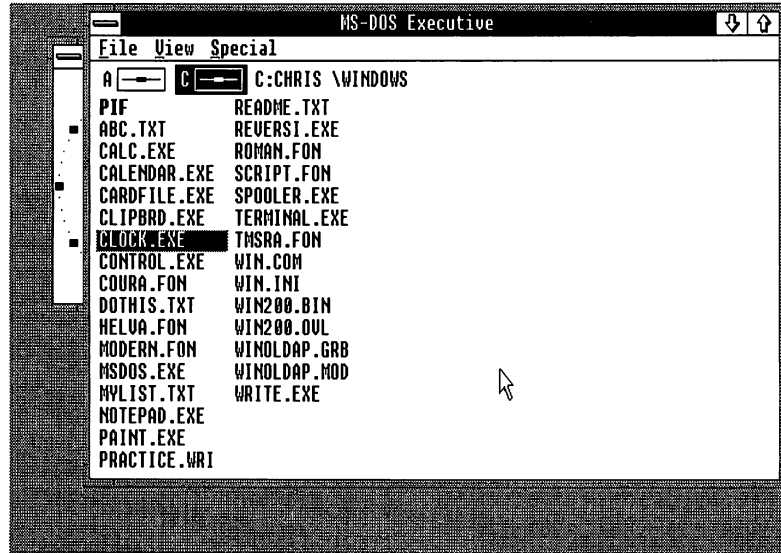


### Another way to select a window

An alternative way to select the active window is to use the keyboard. Try this technique to select MS-DOS Executive:

- 1 Press and hold down the ALT key.
- 2 Press the ESCAPE key.
- 3 Release the ALT key.

MS-DOS Executive appears in front of Clock.

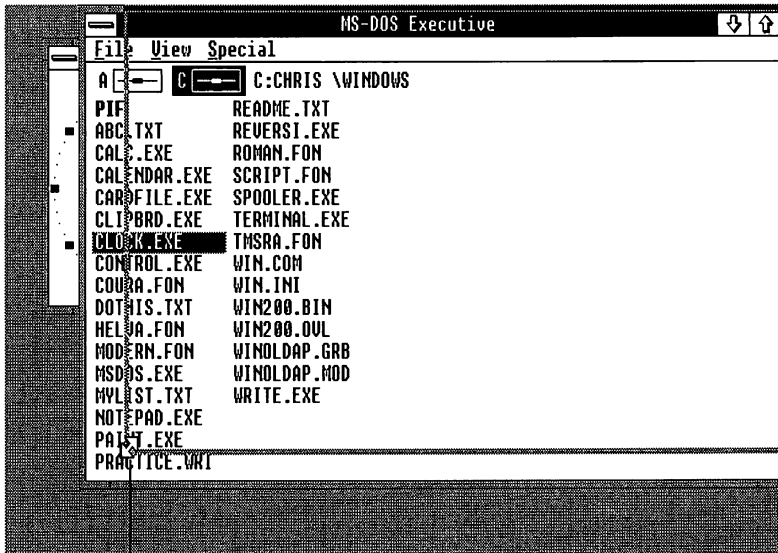


If your windows overlap, the one in front is the active window. If you have several windows sharing the screen, check the title bar to see which one is dark. That's your active window.

You can change the size of a window in several ways. One way is to drag the window borders, as you did with the MS-DOS Executive window. You can also move the corners of the window. Try making MS-DOS Executive smaller by moving the lower-left corner:

- 1 Point to the lower-left corner. The mouse pointer becomes a two-headed arrow.
- 2 Drag the corner up and to the right.

### Moving the corners of a window



Two-headed arrow

- 3 Release the mouse button.

Your window assumes the new size.

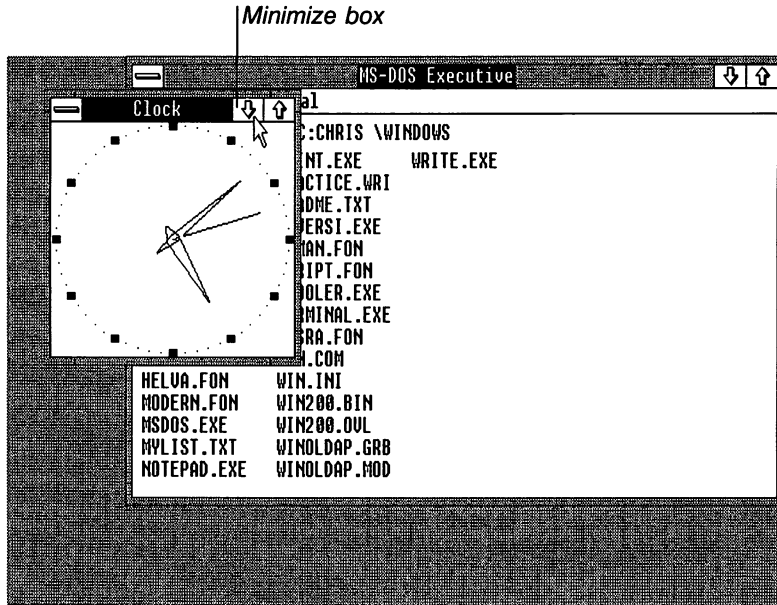
## Shrinking a Window to an Icon

Another way you can change the size of a window is by using the Minimize box to shrink the window and turn it into an icon. The application is still running but it doesn't take up as much space on the screen. Try using Clock's Minimize box:

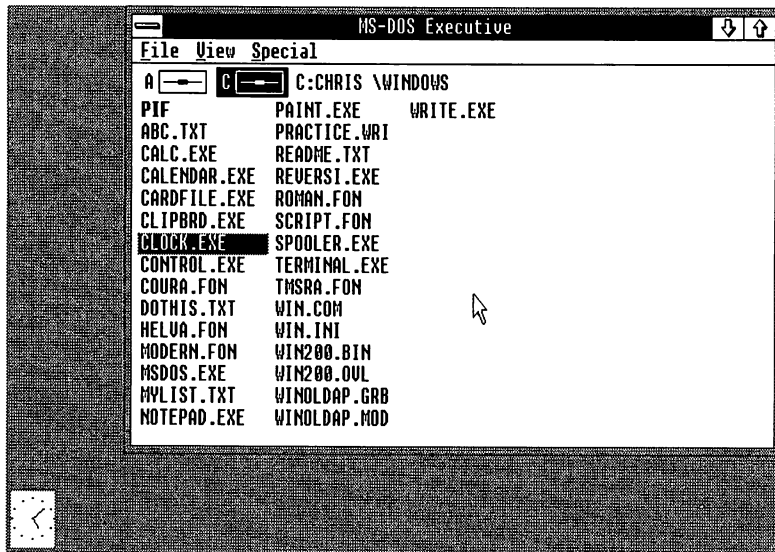
- 1 Select Clock with the mouse (click anywhere inside the Clock window).
- 2 Click the Minimize box.

---

## Using the Minimize box



Clock becomes an icon.



Windows puts applications in the lower portion of the screen when they are shrunk to icons. Clock continues to run, and the time is still visible.

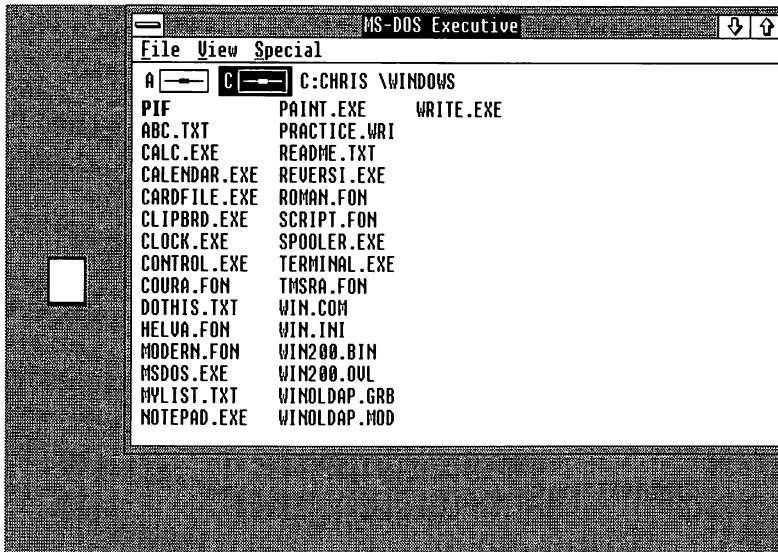
## Moving a Window or an Icon

You can move icons and windows to any part of the screen. Here's how to move the Clock icon:

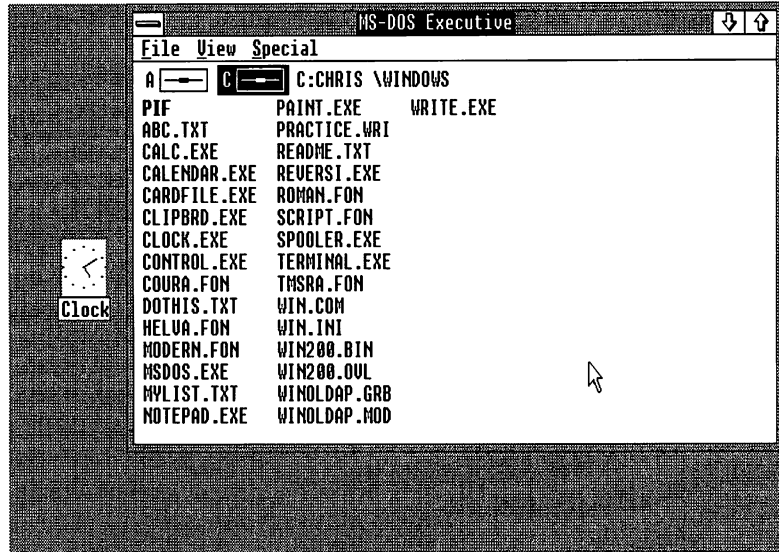
- 1 Point to the Clock icon.
- 2 Drag the icon up the left side of the screen. The icon becomes an empty rectangle when you drag it.

---

### Moving icons



- 3 Release the mouse button.  
The title bar appears underneath the Clock icon, showing that the icon is selected.

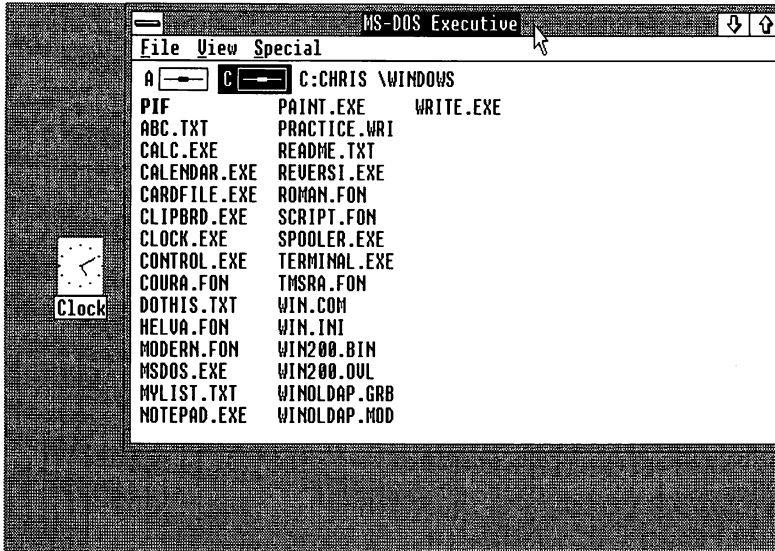


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## Moving windows

You move windows in a different way, by pointing to the title bar and dragging it. Move the MS-DOS Executive window down the screen:

- 1 Point to the title bar.

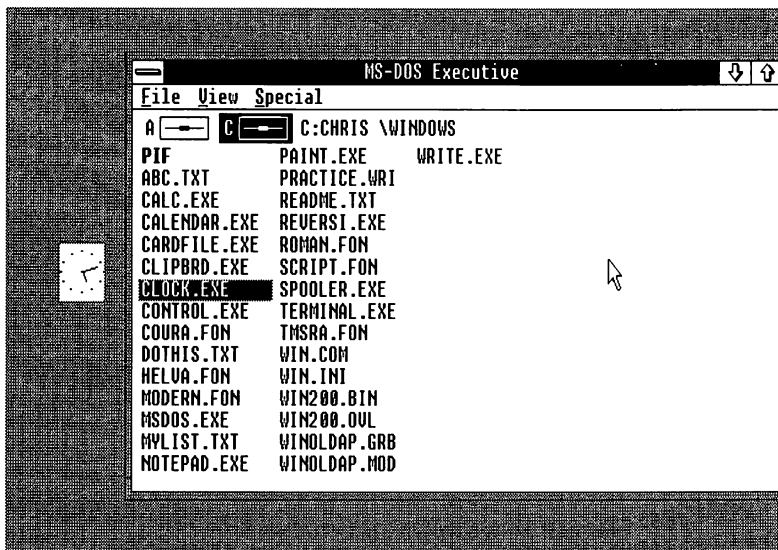


- 2 Drag the title bar down the screen.

You can see the new location of the window outlined as you move.

- 3 Release the mouse button.

MS-DOS Executive is displayed in its new location.

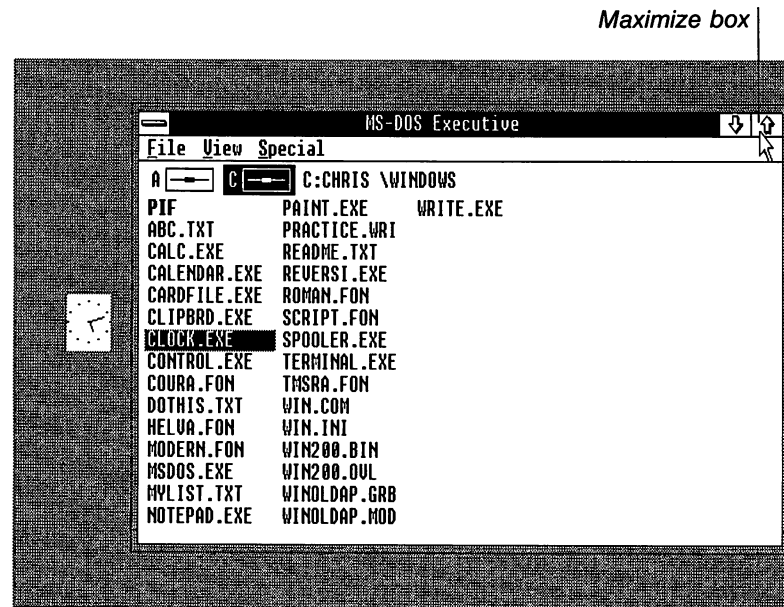


## Using the Maximize box

### Enlarging a Window

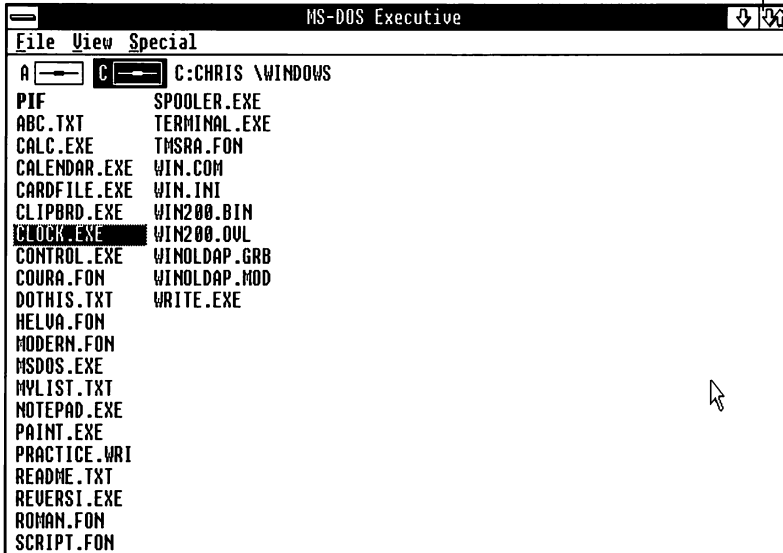
If you want to work in one window, you can use the Maximize box to expand a window to fill the entire screen. The Maximize box is in the upper-right corner of a window, and you use it in much the same way you use the Minimize box. (Some applications with windows of a fixed size have no Maximize box.) Try using the Maximize box in the MS-DOS Executive window:

- Click the Maximize box.



MS-DOS Executive enlarges to fill your entire screen. The Maximize box is gone and is replaced by a box with an up and a down arrow. This is the Restore box.

Restore box



## Restoring a Window

The Restore box restores your window to its previous size and location. You can restore a window after you've enlarged it to its maximum size or after you've shrunk it to an icon. The procedure is slightly different for each case.

First, use the Restore box in MS-DOS Executive:

- Click the Restore box.

MS-DOS Executive is restored to its previous size and location on the screen.

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## Using the Restore box

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### Restoring a window

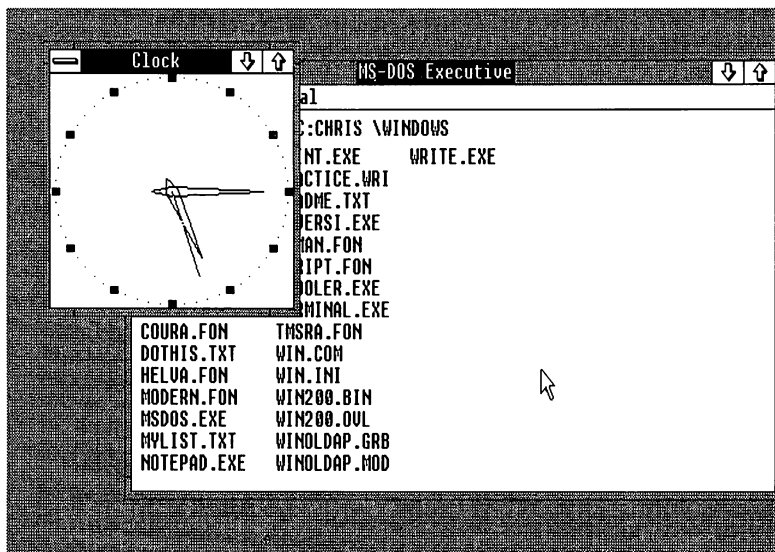


### Restoring an icon

To restore an icon, you double-click it. Try this with the Clock icon:

- Double-click the Clock icon.

Clock is restored to its original size and location.

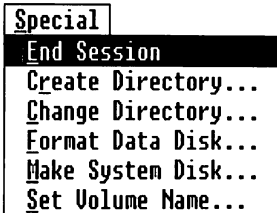


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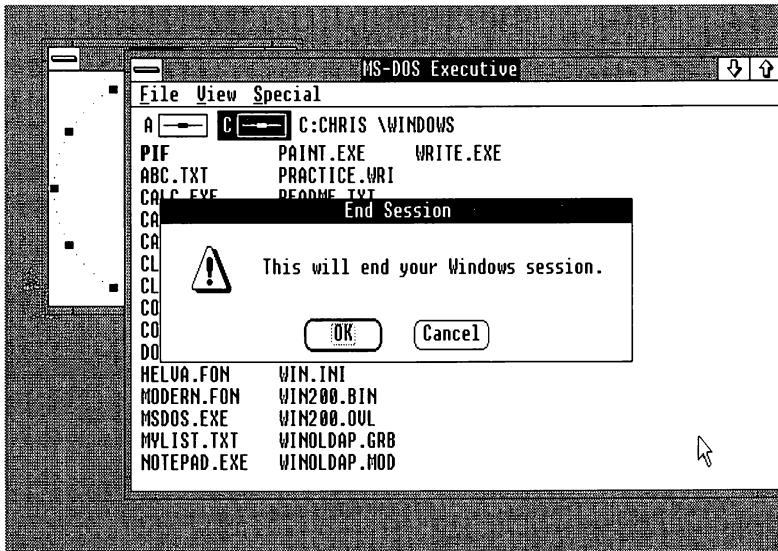
**Ending your session**

Now choose the End Session command from the Special menu, to end your Windows session:

- 1 Click the MS-DOS Executive window.
- 2 Click the Special menu.



- 3 Click the End Session command.  
A dialog box appears warning you that this will end your Windows session.



- 4 Click the OK button to end your Windows session, or click the Cancel button if you want to continue working in Windows.

In this exercise, you reviewed selecting menus, choosing commands, and starting and closing applications. You learned how to select the active window when you have more than one window open and to move windows and icons. You also practiced different ways of changing the size of windows: moving borders, moving corners, and using the boxes on the window's title bar.

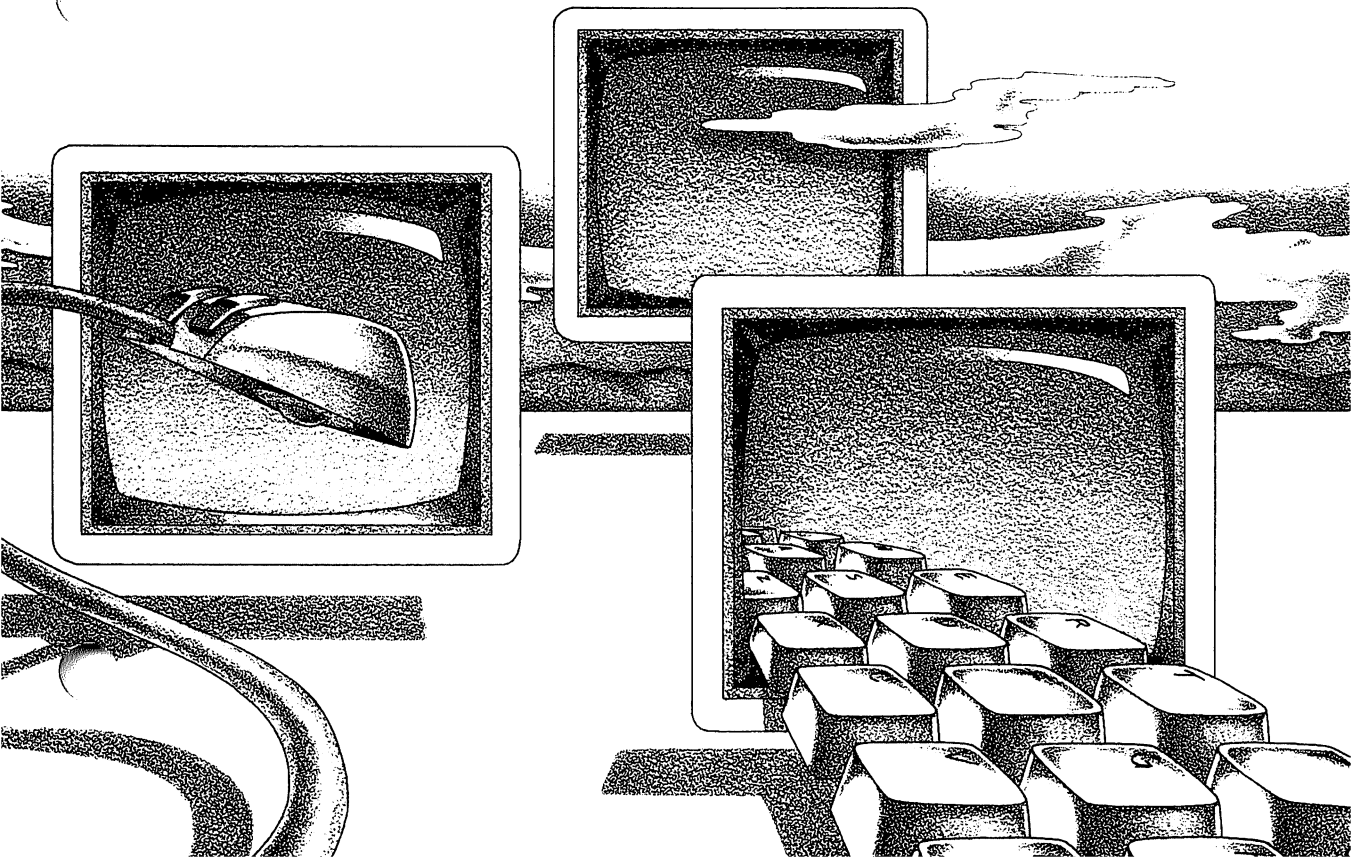
You've mastered all the basic skills you need in order to use Windows with a mouse. Go ahead and start working with Windows, or read further in this manual. Chapter 4, "Techniques," reviews the things you've learned here, and provides more advanced techniques and some shortcuts for accomplishing common tasks.

## 4 Techniques

This chapter describes basic techniques for working with Microsoft Windows and gives information about some Windows features.

Applications designed for Windows may have additional or alternate ways of doing some tasks. Some Windows applications have shortcuts for commands, options, and procedures. See your application's manual for details.

If you have a mouse, you can mix mouse and keyboard techniques to find the easiest way to perform a task.



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## Starting Windows

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### If you have a two-drive system

To start Windows, you use the WIN command. If you have a two-drive system, do the following:

- 1 Insert your Windows startup disk in drive A.
- 2 Insert your Windows system disk in drive B.
- 3 Turn on your computer.
- 4 Type the date and time if you are prompted to.
- 5 Type *win* and press the ENTER key.

---

### If you have a hard-disk system

If your computer is a hard-disk system, do the following:

- 1 Turn on your computer.
- 2 Type the date and time if you are prompted to.
- 3 Type *cd* and a space, followed by the pathname of the directory that your Windows files are in. (The Setup program created a directory named WINDOWS unless you specified another directory.)
- 4 Type *win* and press the ENTER key.

When you start Windows, MS-DOS Executive is displayed on your screen.

---

## Starting an Application

Usually you start an application program from the MS-DOS Executive window. (If you have a two-drive system, you should insert your application disk in drive A.)

---

### Starting applications

To start an application with the keyboard, follow these steps:

- 1 Use the DIRECTION keys to move to the filename in the MS-DOS Executive window. (The filename will probably have a .EXE or .COM extension.)
- 2 Press the ENTER key.

The application window appears on your screen.

To start an application with a mouse, do the following:

- ▣ Double-click the filename of the application you want to run. (This filename usually has a .EXE or .COM extension.)

The application window appears on your screen.

**Note** Windows uses the leftmost mouse button. You can switch this function to the right button by using Control Panel. See Chapter 7, “Using Control Panel,” for instructions.

See Chapter 5, “Using MS-DOS Executive,” for information on the different ways you can run applications.



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## Selecting

In Windows, you always have to select what your next action is going to affect. You select a window and then work in it, you select a command and then execute it, you select an area within a file and then do something to it. The way you select varies, depending on what you're doing and in what context, and the way Windows shows that something is selected also varies. But it's useful to remember the basic concept: first you select, then you do something to what you've selected.

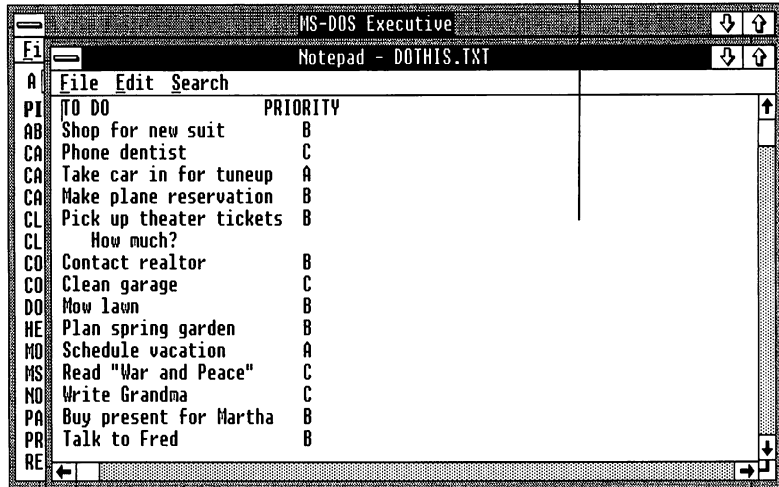
Windows will always show you in some way what you've selected. For example, if you've selected a filename in MS-DOS Executive, the filename will appear highlighted. If you've selected an icon, the icon's Control menu will appear and its title bar will be visible. If you've selected a window, the window's title bar will be darkened.

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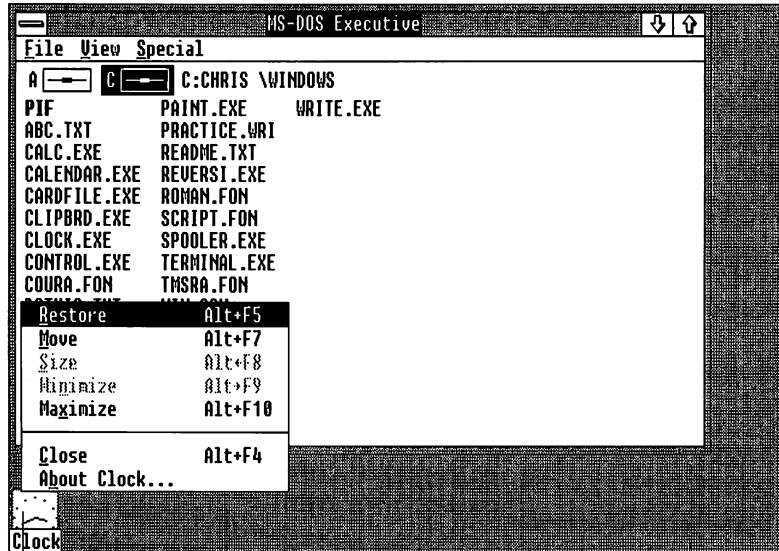
## Selecting the Active Window or Icon

If you have started more than one application, you need to select the one that you want your commands to affect. The selected application's window is your active window (or icon — you select windows and icons the same way). You can tell which window is active: its title bar is darkened and it is in front of any other windows you have opened.

Active window



If you select an icon rather than a window, the icon's Control menu appears and its title bar is visible.



Active icon

You can select a window or icon using either the keyboard or the mouse.

To select your next active window or icon with the keyboard, just do this:

- Press ALT+ESCAPE. (In this manual, a plus sign ( + ) used with two or more keynames indicates a key combination: you should press and hold down the first key, then press the next key or keys. After pressing all the keys, release the first key.)

Repeat this step until the window or icon you want appears in front. Windows and icons are selected in the order in which you started them.

You can use the SHIFT key to select windows in reverse:

- Press ALT+SHIFT+ESCAPE.

Here's how to select windows or icons with the mouse:

- Click anywhere within the window or icon.

If the window you want to select isn't visible, you can either use the keyboard method, or move or size the other windows until the window you want becomes visible.

## Previewing Windows or Icons

You can also preview the windows and icons you've started, without selecting them. The frame and title bar of each application appear, but you don't have to wait for the entire window to appear. This is useful if you have some windows or icons hidden by other windows or icons, and you want to flip through them quickly without taking the time to select each one in turn.

To preview the windows and icons on your screen, do this:

- 1 Press and hold down the ALT key.
- 2 Press the TAB key to preview each active window or icon in order.
- 3 When you reach the window or icon you want to select, release ALT.

The rest of your active window fills in, and the window appears in front of the other windows. If it's an icon that you selected, the icon is restored to its previous size and position as a window.

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## Selecting windows or icons




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## Previewing

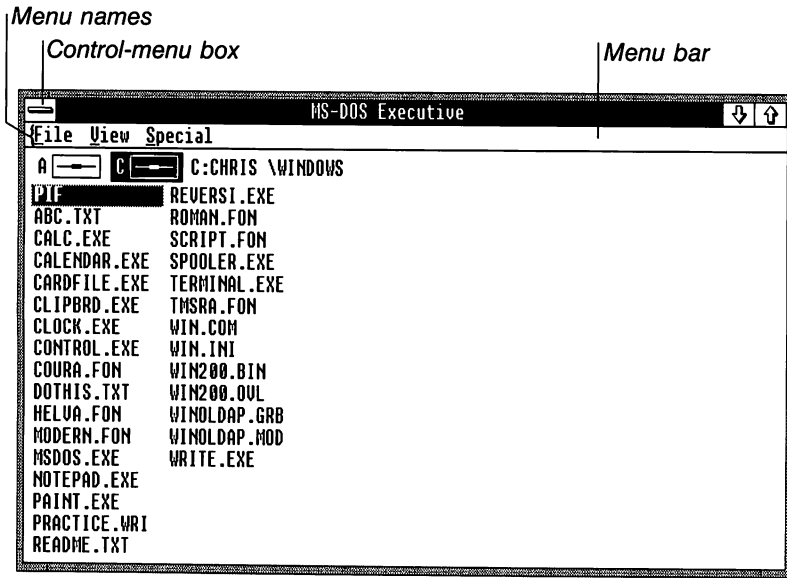
When you preview windows and icons, they appear in the order in which they were started. If you want to preview them in reverse order, do the same thing but use the SHIFT key as well:

- 1 Press and hold down the ALT key and the SHIFT key.
- 2 Press the TAB key to preview each window and icon.
- 3 When you find the window or icon you want to select, release ALT and SHIFT.

## Choosing Commands from Menus

Windows commands are organized into menus. Each application has its own menus, and one—the Control menu—is common to all applications. The Control menu is symbolized by a box at the upper-left corner of each window; all the other menus are represented by their names in the menu bar, which runs across the top of each window underneath its title bar.

In Windows, you select a menu, then choose a command from that menu. Choosing the command carries out the action. (Some applications use a shortcut method of referring to commands that reflects this process: the “File Open command,” for instance, refers to the Open command from the File menu.)



## Choosing a Command

If you're using the keyboard, you have two ways to choose commands from menus: the basic method, which works for all Windows applications, and the direct-access method.

The basic method uses the DIRECTION keys. To choose a command using the DIRECTION keys, do this:

- 1 Press the ALT key. (You can use the F10 key instead of the ALT key.)
- 2 Use the LEFT or RIGHT keys to select a menu name on the menu bar.
- 3 Press the ENTER key to display the menu.
- 4 Use the UP or DOWN keys to select the command you want.
- 5 Press ENTER to choose the command.

If your application shows underlined letters in command and menu names, you can use the direct-access method. To choose a command using the direct-access method, follow these steps:

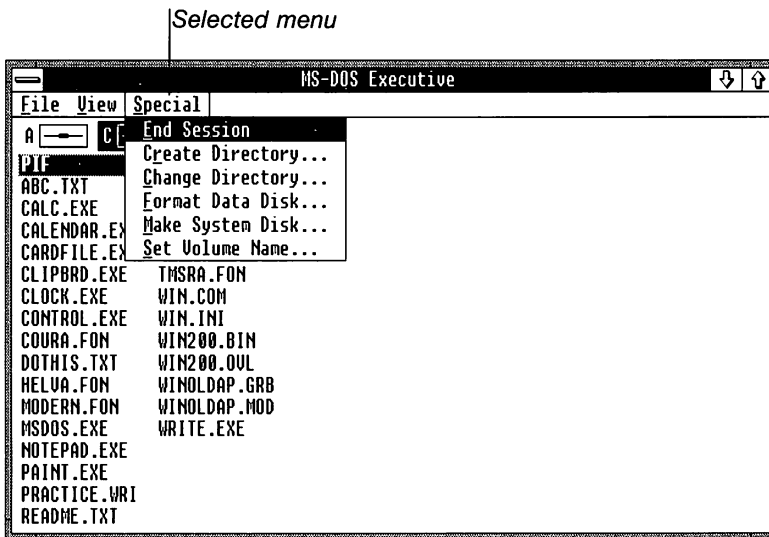
- 1 Press the ALT key.
- 2 Press the underlined letter in the menu name.

---

### Basic method

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### Direct-access method



- 3 Press the underlined letter in the command name.

**Note** If more than one command or menu share the same underlined letter, Windows will select the first menu or command listed. Press the underlined letter again to select the next menu or command. To display the menu or choose the command, press the ENTER key.

---

### Canceling a menu

If you decide after you've selected the menu that you don't want to choose a command, you can cancel the menu:

- Press ESCAPE.

---

### Choosing a command



If you're using the mouse, it's easy to choose a command from a menu:

- 1 Click the menu name on the menu bar.
- 2 Click the command name.

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### Canceling a menu



If you decide after you've selected the menu that you don't want to choose a command, you can cancel the menu:

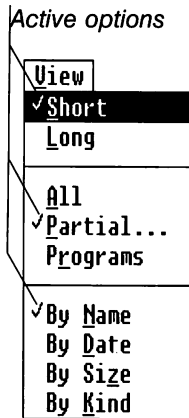
- Click anywhere outside the menu.

Clicking in a blank area of the window is best, so that you don't select something else in the window without meaning to.

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### Checked options

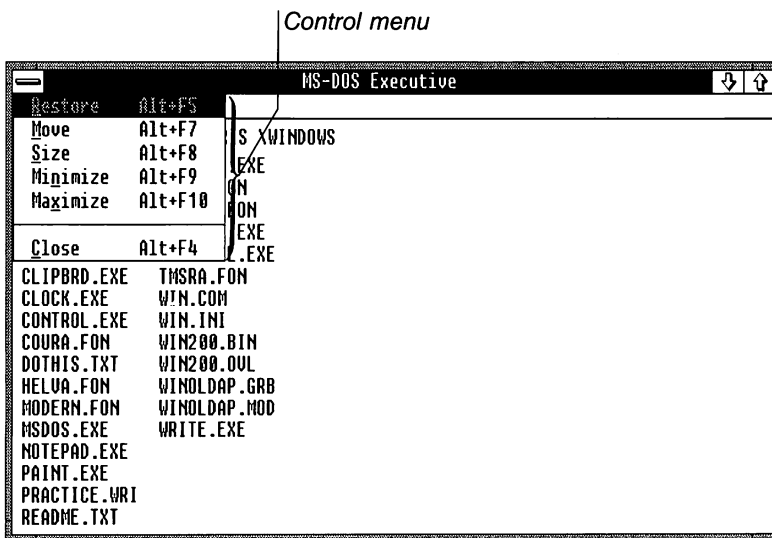
Some menus show commands that you choose in order to set options. Checkmarks in the menu indicate which options are active.



## The Control Menu

In addition to the menus for each application, the Control menu appears in all windows, and you select it a little differently. You use its commands to manipulate windows—for example, to change their size or move them on the screen. (Some dialog boxes also have Control menus.)

Although you choose commands from the Control menu as you would from any other, you select the Control menu in a different way.



## Using the Control menu

To select the Control menu from the keyboard, do this:

- ▣ Press ALT, SPACEBAR. (In this manual, a keyname followed by a comma and another keyname indicates a key sequence: you should press the first key, then press the second key.)

You can use SHIFT+ESCAPE instead of ALT, SPACEBAR.

You can then use either the basic method or the direct-access method to choose the command you want.

To select the Control menu with the mouse, do this:

- ▣ In a window, click the Control-menu box, in the upper-left corner of the window; in an icon, just click the icon.

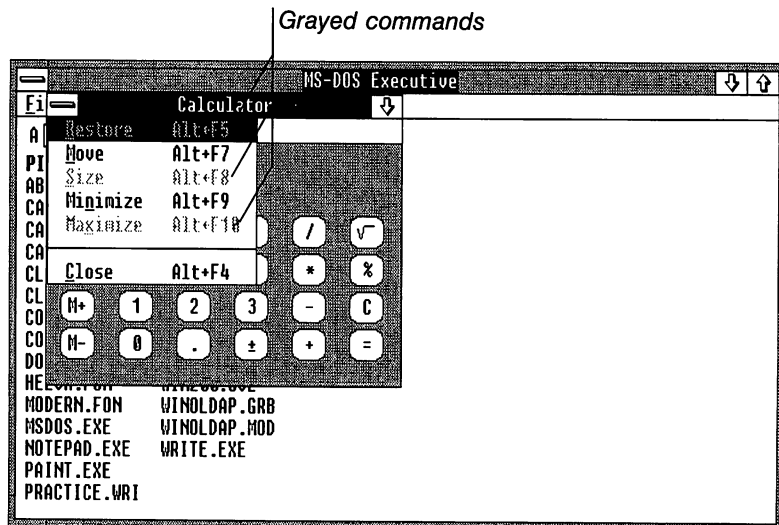
You can then simply click the name of the command you want to choose, as you would on any other menu.

If you choose the Size or Move commands with the mouse, you have to complete the command by moving or sizing the window.

## Inactive Commands

When you see a command name grayed on the menu, it means that the command is inactive and you can't currently use it.

## Inactive commands



You may have to select something before you can use the command, or it may be that the command cannot be used with your application — for example, the Calculator window has a fixed size, so you can't use the Maximize or Size commands on the Control menu.

## Shortcut Keys

Some menus have shortcut keys, usually listed to the right of the command name. Often these keys are combinations of the ALT or CONTROL keys and a function key. You use these keys to choose a command without selecting the command's menu. The following list shows the shortcut keys for the Control menu:

Command	Shortcut key
Restore	ALT + F5
Move	ALT + F7
Size	ALT + F8
Minimize	ALT + F9
Maximize	ALT + F10
Close	ALT + F4

For example, if you wanted to use the shortcut keys to enlarge a window with the Maximize command, you would simply select the window and press ALT + F10.

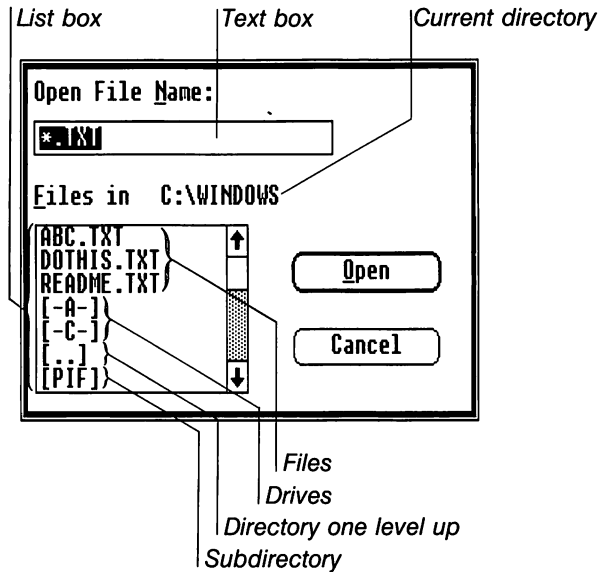
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## Using a Dialog Box

Windows displays a dialog box when it needs additional information to carry out a command. The dialog box contains areas where you enter the information; there are different kinds of areas depending on what kind of information is needed.

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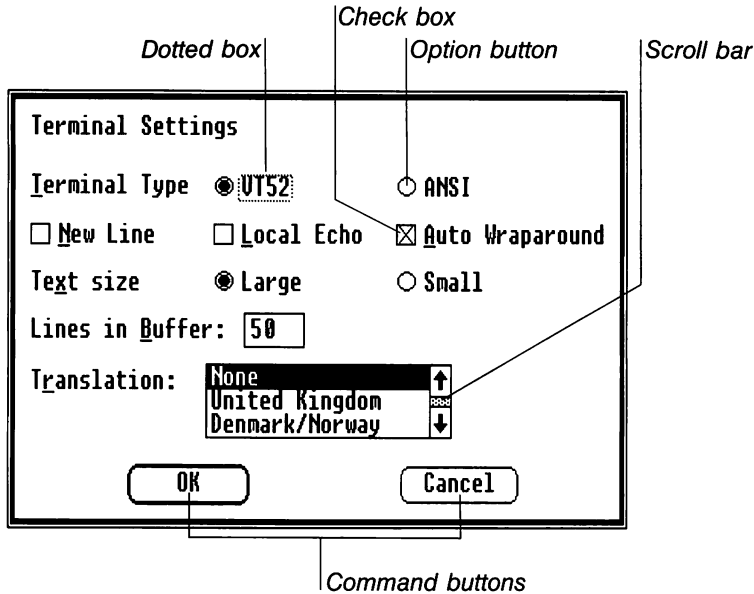
## Shortcut keys



## Dialog-box areas

Here are some definitions and descriptions of the different areas that a dialog box may have:

- The **text box** is where you type information. The text you type appears to the left of the insertion point, a flashing vertical line, which pushes any existing text to the right as you type.
- The **list box** contains the names of available choices—in the preceding illustration, the names of files and directories on the disk, and the disk drives. Files in a dialog box are listed by filename. Drives and subdirectories are indicated with brackets; hyphens distinguish drives from directories. For example, [-A-] represents drive A; [PIF] represents a subdirectory named PIF. The parent directory (one level up) is represented by two periods within brackets ([..]). The list box may have scroll bars if all available choices don't fit in the list box.
- **Command buttons** carry out commands when they are chosen; these buttons have labels—OK, Cancel, Open, Reset, for example—to indicate what the buttons do.



- **Circular option buttons** let you select options for a particular command. In a group of option buttons, only one option at a time can be selected. Windows treats the whole group of option buttons as a single area within the dialog box.
- **Square check boxes** also let you select options for a particular command. In a group of options with check boxes, several options can be selected at the same time. Windows treats each check box as a separate area within the dialog box.
- **Grayed commands or options** are inactive, which means that you can't currently use them.

Often a dialog box appears with information already in it reflecting what you've selected on the screen (for example, a filename from your MS-DOS Executive window). It can also display options you selected earlier, or the default options preset in Windows.

## Moving in a Dialog Box

Moving from one area of a dialog box to another selects that area. The area you select is always marked somehow — most often with a dotted box.

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## Moving in dialog boxes

In some cases, you'll move within an area in order to select one of a group of items within that area — for instance, a filename within a list box, or one option button in a group of option buttons.

## Selecting Areas with the Keyboard

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### The basic method

If you're using the keyboard, you can use either of two methods, depending on your application. Just as you do with menus and commands, you can use a basic keyboard method that works with any Windows application:

- ▣ Press the TAB key to move from area to area in a dialog box.

You can use the same method in reverse:

- ▣ Press SHIFT+TAB to move through the dialog box in the opposite direction.

---

### The direct-access method

If the items in your dialog box show underlined letters in their names, you can use the direct-access method to move directly to them:

- 1 Press and hold down the ALT key.
- 2 Press the underlined letter in the item name.
- 3 Release the ALT key.

## Selecting Areas with the Mouse

If you're using a mouse, you can select any area in a dialog box easily:

- ▣ Click the area.

When the area has a number of items within it, the item you click will be selected.

## Selecting Items Within an Area

Moving within an area in a dialog box is a little different from moving between areas:

- ▣ Use the DIRECTION keys to move from item to item within an area.



If you've selected an item in an area and you then move to another area, the item remains selected.

The following are the areas that you may want to move in.

### Text Box

In a text box, you use the **DIRECTION** keys to move to the right or to the left in the line. The **HOME** key moves to the beginning of the line; the **END** key moves to the end of the line.

Moving and selecting in a text box are not the same thing. To select text in a text box, do this:

- ▣ Press and hold down the **SHIFT** key and use a **DIRECTION** key to extend the selection. Selected text is highlighted.

You can use the mouse with the keyboard to select text in a text box:

- 1 Press and hold down the **SHIFT** key.
- 2 Drag the pointer across the text you want to select.
- 3 Release **SHIFT**.

### List Box

In a list box, you use the **DIRECTION** keys to move up and down in the list. As you move in a list box, the item you move to is highlighted, to show that it's selected.

The **HOME** key moves to the top of the list and selects the first item; the **END** key moves to the bottom of the list and selects the last item.

You can also use the **PAGE UP** and **PAGE DOWN** keys to move within a list box. These keys will move the list up or down by the "page" — that is, as much as will fit in the visible portion of the list box at one time — without selecting a new item. When you're moving through the list using the **PAGE UP** and **PAGE DOWN** keys, you may not be able to see the item that's actually selected, if it isn't in the "page" that's visible.

To select an item that you've moved to, just do this:

- ▣ Press the **SPACEBAR**.

When you move to another area in the dialog box, whatever item you selected in the list box remains selected.

---

### Moving in a text box




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### Moving in a list box

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### Selecting in a list box

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### Selecting in a list box



You can use the mouse to select items in a list box:

- Click the item you want to select.

If the item isn't visible, use the scroll bar to make it visible.

### Group of Option Buttons

You can use the DIRECTION keys to move through a group of option buttons. Windows treats a group of option buttons as a single area in the dialog box, and only one option button in the group can be selected at a time. Moving to an item selects that item.

You can select an option button easily with the mouse by clicking the option button.

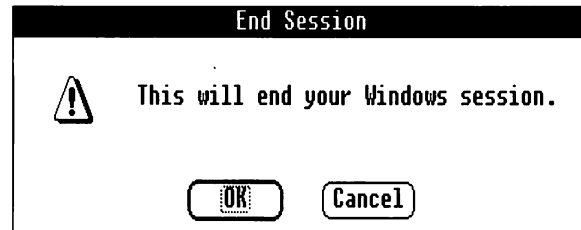
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### Moving in a group of option buttons



### Choosing a Command Button

Command buttons with bold borders are defaults — options that you're most likely to want to choose.



---

### Choosing the default command button

You can automatically choose the default command button:

- Press the ENTER key.

**Note** Even if you have moved to another area of the dialog box, pressing the ENTER key will still choose the default.

You can also choose a command button with the mouse:

- Click the command button.



Some dialog boxes have Control menus. You can use the Close command from the Control menu to close a dialog box that has no OK or Cancel button.

You can always cancel a dialog box:

- ▣ Press the ESCAPE key.

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## Canceling dialog boxes

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## Moving a Window or an Icon

You can move a window or an icon using your keyboard or your mouse.

Here's how to move a window or icon using the keyboard:

- 1 Select the window or icon you want to move by pressing ALT+ESCAPE or ALT+TAB.
- 2 Select the Control menu by pressing ALT, SPACEBAR.
- 3 Press M to choose the Move command. A four-headed arrow appears in your window.
- 4 Use the DIRECTION keys to move the window.  
An outline of the window borders moves as you press the DIRECTION keys.
- 5 After you have moved the window to its new location, press the ENTER key to complete the move.

---

## Moving windows and icons

Follow these steps to move a window with the mouse:

- 1 Point to the title bar of the window you want to move.
- 2 Drag the title bar. The highlighted borders mark the position of the window.
- 3 After you have moved the window to its new location, release the mouse button.

---

## Moving windows



You move an icon with a mouse differently:

- 1 Point to the icon you want to move. (Point at the icon itself, not the title bar.)
- 2 Drag the icon to the new location on the screen.
- 3 Release the mouse button.

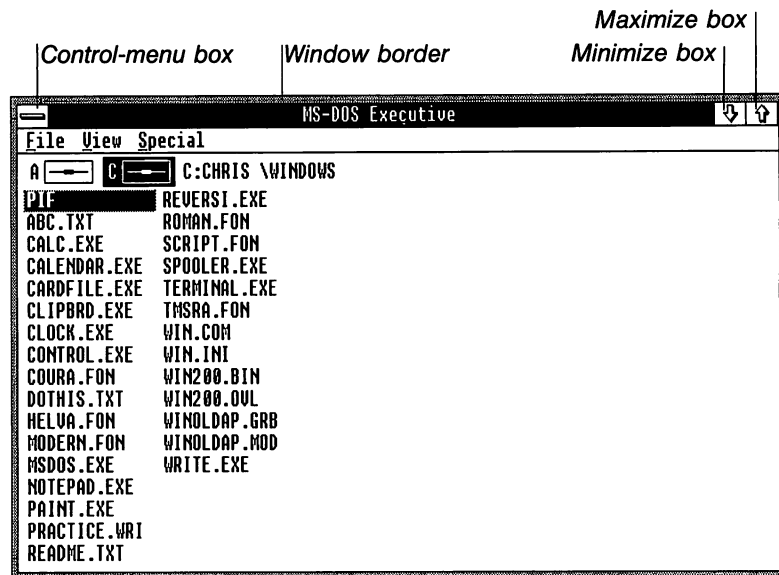
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## Moving icons



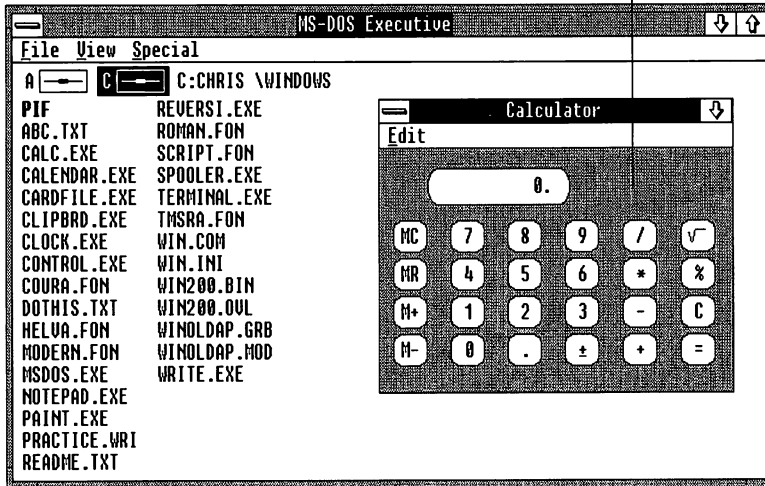
## Changing the Size of a Window

There are several easy ways to arrange the windows on your screen. If you're using the keyboard, the Control-menu commands let you change the size and shape of your windows. If you're using a mouse, you can directly manipulate each window border to change sizes. (You can also manipulate windows by using the Maximize, Minimize, and Restore boxes, which are explained later in this chapter.)



**Note** Some applications, such as Calculator and Control Panel, have a fixed size. The Size and Maximize commands appear grayed on the Control menu. The application window doesn't have a Maximize box or adjustable borders. You can only shrink these applications to icons and restore them.

Fixed-size window



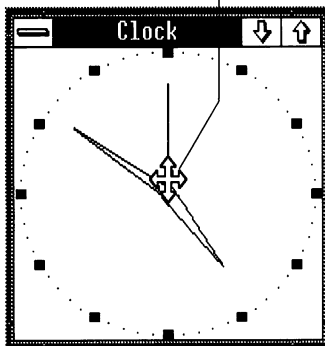
You can change the size and shape of your windows by using the Size command or by directly moving the borders with a mouse.

If you're using the keyboard, the Size command lets you change the size of your windows. Here's what to do:

- 1 Select the active window by pressing ALT+ESCAPE or ALT+TAB.
- 2 Select the Control menu by pressing ALT, SPACEBAR.
- 3 Press S to choose the Size command.

A four-headed arrow appears in the middle of your window.

Four-headed arrow



## Changing windows' sizes

- 4 Press one of the DIRECTION keys to select the border you want to move.
- 5 Use the DIRECTION keys to move the border up and down, or right and left.
- 6 When you finish adjusting the border, press the ENTER key.

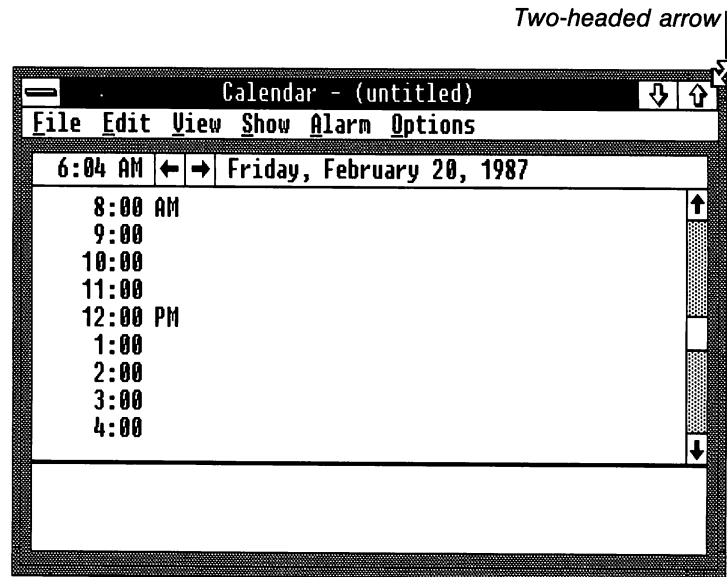
The window assumes its new size.

## Changing windows' sizes



You can directly adjust the size of any window with borders by using the mouse. Follow these steps:

- 1 Select the window you want to size.
- 2 Point to a border or corner that you want to move. The mouse pointer becomes a two-headed arrow.



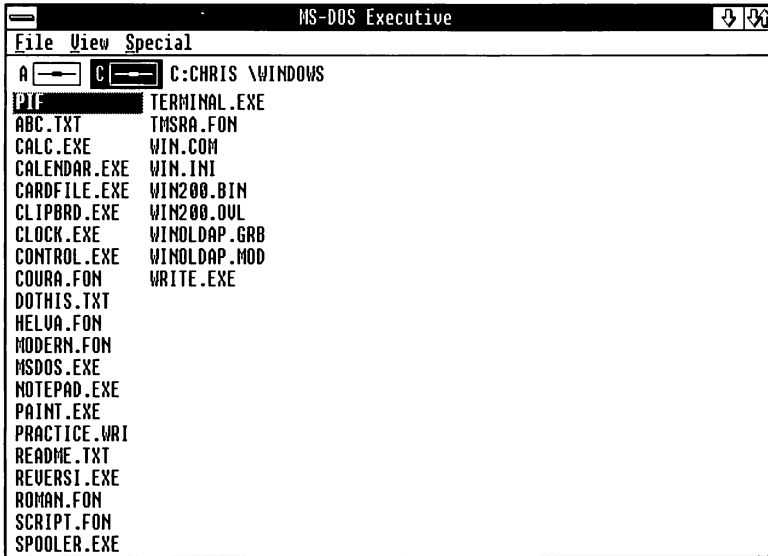
- 3 Drag the corner or border until the window is the size you want.
- 4 Release the mouse button.

Using the Size command or moving the borders of the windows allows you to reduce your window to almost the size of its title bar or to enlarge it to fill almost the entire screen.

---

## Enlarging a Window or an Icon

You can enlarge windows and icons to fill the entire screen.



If you're using the keyboard, use the Maximize command from the Control menu. Here's what to do:

- 1 Select the window or icon you want to enlarge by pressing ALT+ESCAPE or ALT+TAB.
- 2 Press ALT, SPACEBAR to select the Control menu.
- 3 Press X to choose the Maximize command.

Your window enlarges to fill the entire screen.

Here's how to enlarge a window to its maximum size with the mouse:

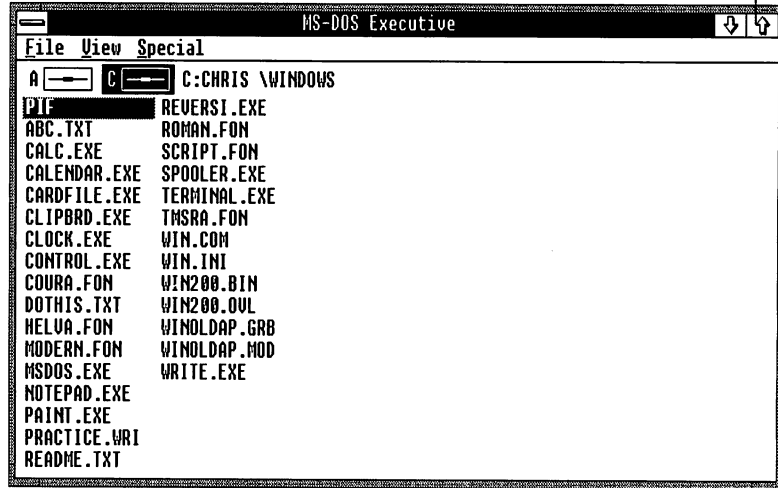
- 1 Select the window you want to enlarge.
- 2 Click the Maximize box in the upper-right corner of the window.

---

### Enlarging windows and icons



Maximize box



The window fills your entire screen. Note that the Maximize box has disappeared and the Restore box has taken its place.

### Enlarging an icon



You enlarge an icon with the mouse a little differently:

- 1 Click the icon you want to enlarge.  
The Control menu appears.
- 2 Click the Maximize command.

The application window fills the entire screen.

## Shrinking a Window to an Icon

You shrink a window to an icon when you are finished working with it, but want it easily available to use later. The application is still running in memory (represented by the icon), but it's not taking up space in your work area. You can do many of the same things with an icon that you can do with a window, such as selecting it or moving it on the screen. And when you want to work in the window again, you can use the Maximize or Restore commands to enlarge it. You can shrink windows to icons using either the keyboard or the mouse.

If you are using a keyboard, follow these steps to shrink your window to an icon:

- 1 Select the window you want to shrink by pressing ALT+ESCAPE.
- 2 Select the Control menu by pressing ALT, SPACEBAR.
- 3 Choose the Minimize command by pressing N.

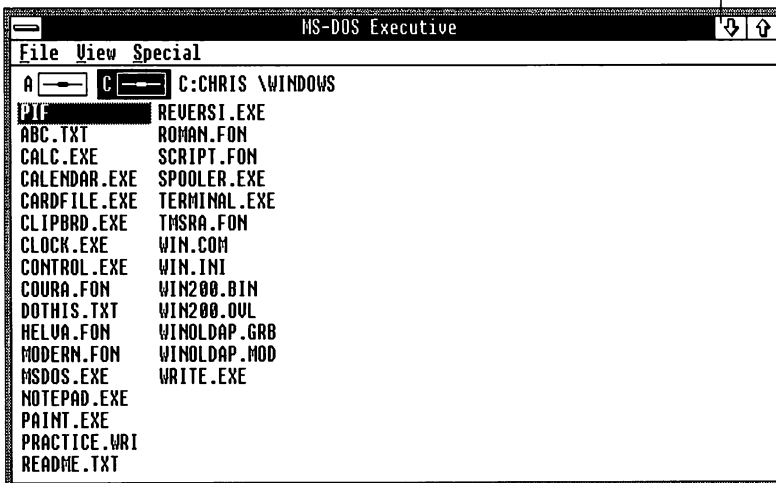
To shrink a window with the mouse, use the Minimize box in the upper right-corner of the window. Here's how to do it:

- 1 Select the window you want to shrink.
- 2 Click the Minimize box.

### Shrinking windows to icons



Minimize box



---

## Restoring a Window or an Icon

You can restore a window to its previous size and place on your screen with the Restore command (if you're using the keyboard) or with the Restore box (if you're using a mouse). Restore returns your window to its original size, or to the size you last made it. The Restore command also returns your window to its original place on the screen, or to the place you last moved it to.

If you're using the keyboard, follow these steps to choose the Restore command:

- 1 Select the window that you want to restore by pressing ALT+ESCAPE or ALT+TAB. (Selecting an icon with ALT+TAB automatically restores it.)
- 2 Select the Control menu by pressing ALT, SPACEBAR.

<b>R</b> estore	ALT+F5
M <u>o</u> ve	ALT+F7
S <u>i</u> ze	ALT+F8
M <u>i</u> nimize	ALT+F9
M <u>a</u> ximize	ALT+F10
<b>C</b> lose	ALT+F4

- 3 The Restore command is highlighted when you select the Control menu, so you can either press R or press the ENTER key to choose it.

You can use the Restore box to return a window to its previous size if you're using a mouse. Follow these steps:

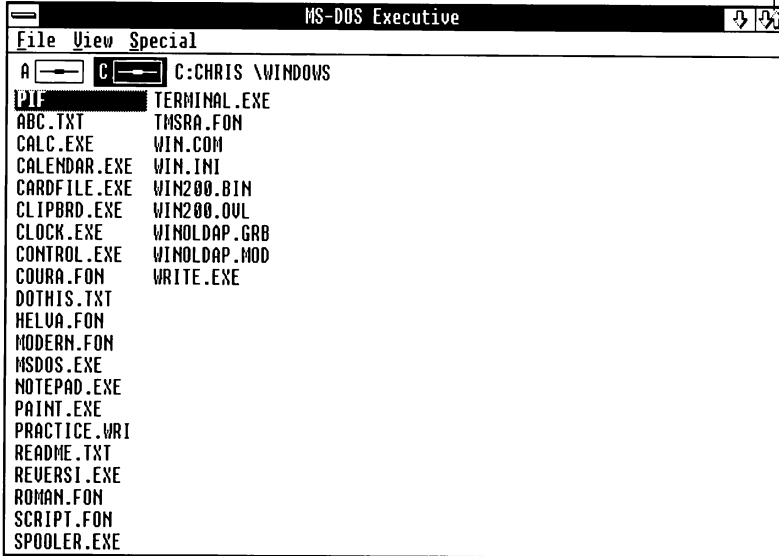
- 1 Select the window that you want to restore to its original size. The Restore box is in the upper-right corner of the window.

---

### Restoring windows and icons



Restore box



- 2 Click the Restore box.

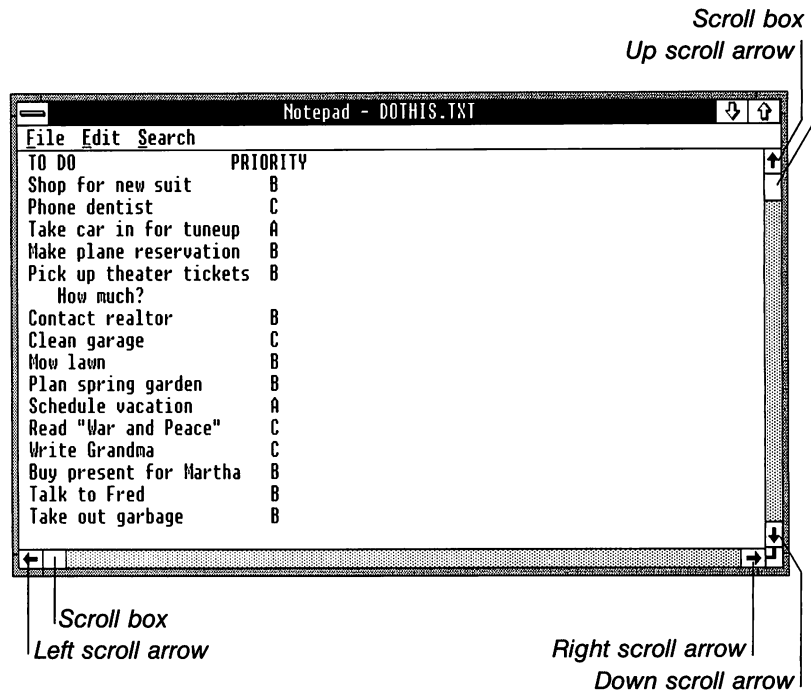
To restore an icon to its previous size, do the following:

- Double-click the icon.

---

## Using Scroll Bars

Some application windows and dialog boxes have scroll bars, which let you view information that won't fit in the window.



## Scrolling

If you're using the keyboard, here's how to scroll after you have reached the last character or item in the window:

- Press the DIRECTION key in the direction you want to scroll.

For example, to scroll right, go to the rightmost character or item on the screen and keep pressing the RIGHT key.

In addition, some applications allow you to scroll by the screenful (that is, as much as will fit in the window or dialog box at one time). The following list shows keys that you can use in some applications to move in a file or dialog box. Not all applications use these keys in the same way, so it's best to try them out in each case.

To scroll	Press
Up one screen	PAGE UP
Down one screen	PAGE DOWN
Left one screen	CONTROL + PAGE UP
Right one screen	CONTROL + PAGE DOWN

You can use the mouse to scroll to a general location in a file or dialog box:



- 1 Drag the small white box (the scroll box) in the scroll bar to a position in the scroll bar that corresponds to the general location you want (beginning, middle, or end of the file or dialog box).
- 2 Release the mouse button.

The following list details how to scroll more precisely with the mouse:

To scroll	Do this
One line at a time	Click the scroll arrows at either end of the scroll bar.
One screen at a time	Click the scroll bar on either side of the scroll box.

---

## Messages from an Inactive Window

When an inactive application needs to send you status or error information, you hear a beep; the application then flashes its title bar or icon. To receive the message, do the following:

- ▣ Press ALT+ESCAPE or use the mouse to select the window or icon.

The message appears as soon as you select the window or icon.

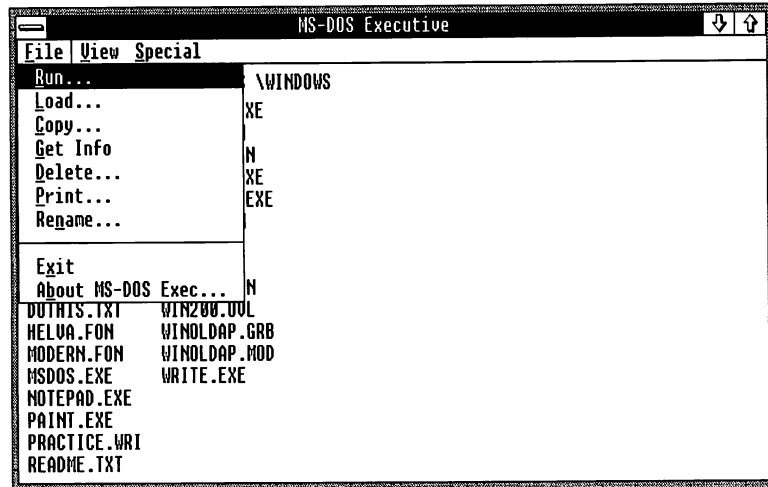
---

## Messages from inactive windows

## Quitting an Application

You quit an application — remove it from memory — when you are finished with it. To work with it again, you need to run the application from the MS-DOS Executive window.

To quit an application, use the Exit command. This command is usually on the first menu on the application's menu bar.



### Using the Exit command

Follow these steps to quit an application using the keyboard:

- 1 Select the window of the application you want to quit by pressing ALT+ESCAPE OR ALT+TAB.
- 2 Select the first menu on the left by pressing ALT and then the underlined letter.
- 3 Choose the Exit command by pressing X.

To use the Exit command with the mouse, do the following:

- 1 Click the window of the application you want to quit.
- 2 Click the first menu name on the left of the menu bar.
- 3 Click the Exit command.



If the application does not have an Exit command, use the Control menu's Close command. The Close command closes a window. Some applications may have secondary windows or dialog boxes with Control menus (for example, MS-DOS Executive's Get Info command). You can use the Close command to close these secondary windows, but the main window remains open and the application continues to run. If your application has only one window open, the Close command closes that window and removes the application from memory.

To use the Close command with the keyboard, do the following:

- 1 Select the Control menu by pressing ALT, SPACEBAR.
- 2 Choose the Close command by pressing C.

Here's how to close an application window with a mouse:

- Double-click the Control-menu box.

If you close the MS-DOS Executive window and no other MS-DOS Executive windows are on the screen, your Windows session ends.

---

## Ending a Windows Session

When you end a Windows session, you quit Windows and return to DOS. If you have applications running and files open when you end the session, you may be prompted to save your files.

To end a session, follow these steps:

- 1 Select the Special menu with your mouse or by pressing the ALT key and then S.
- 2 Choose the End Session command.

A dialog box asks you to confirm that you want to end the session.

---

### Using the Close command

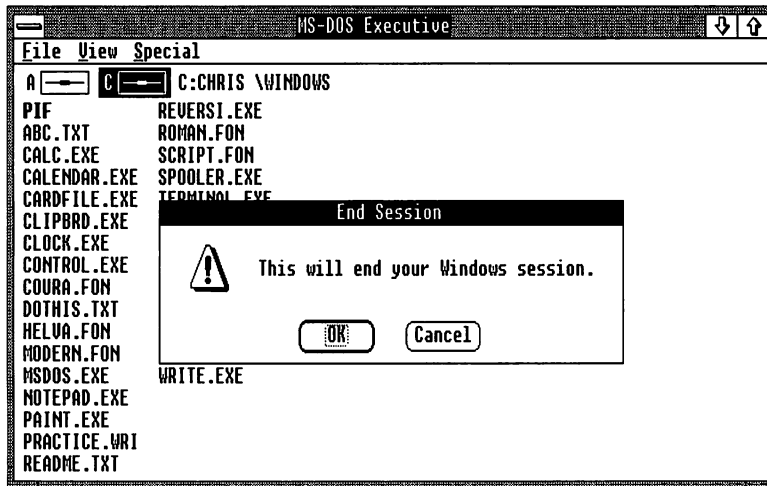


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### Shortcut to end your Windows session

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### Ending a session

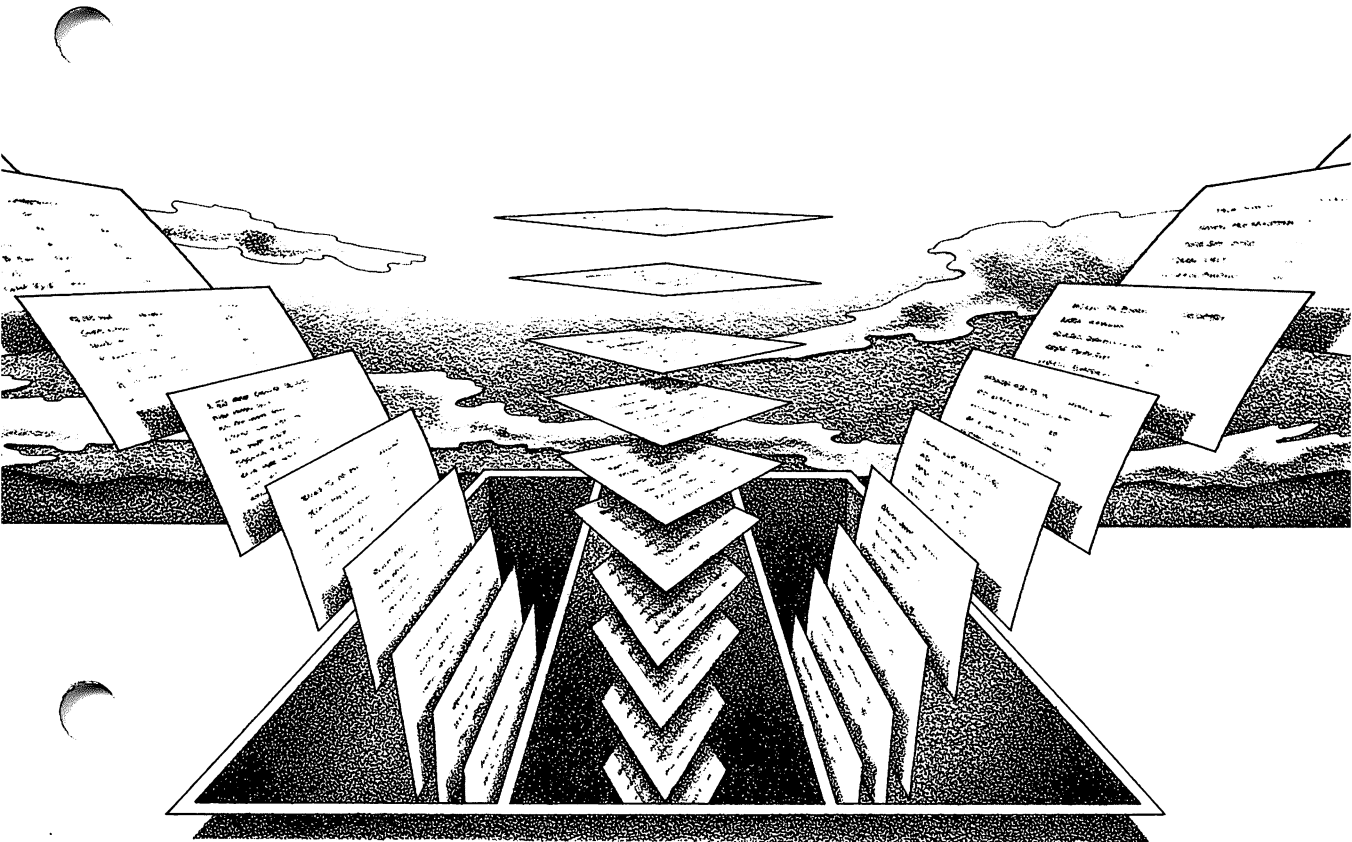


- 3 Choose the OK button to end your session, or choose the Cancel button to cancel the command.

Your Windows session ends and you're returned to DOS.

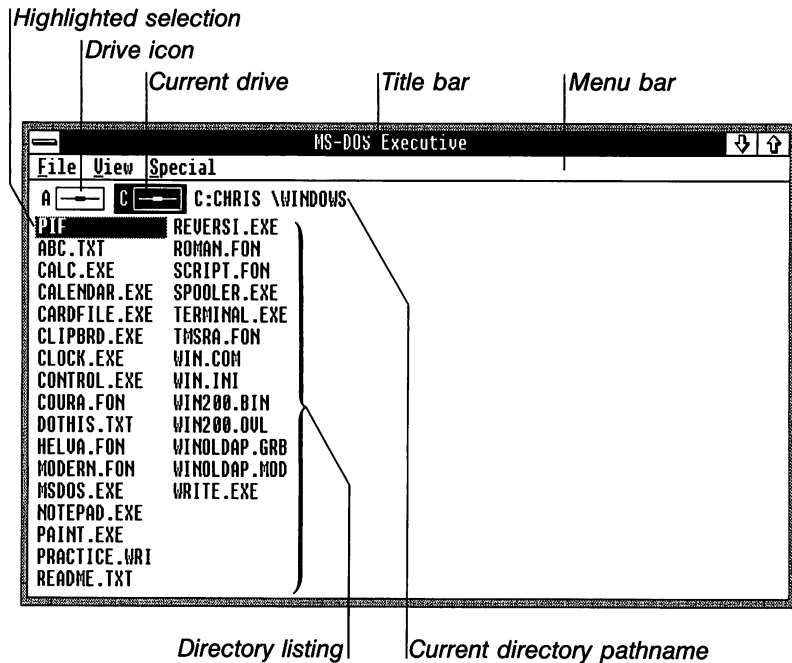
## 5 Using MS-DOS Executive

MS-DOS Executive runs automatically when you start Microsoft Windows. MS-DOS Executive gives you access to DOS commands so that you can run applications, copy and print files, and rename and delete files and directories. You can also use MS-DOS Executive to create directories to organize your files into convenient groups.



## Running MS-DOS Executive

When you start Windows, the MS-DOS Executive window appears on your screen.



The MS-DOS Executive window contains the following parts:

- The **title bar** displays the application name.
- The **menu bar** contains the names of the MS-DOS Executive menus.
- The **drive icons** represent the disk drives of your computer. The current drive is selected.
- The **pathname** shows what directory you are working in (the current directory). The pathname consists of the drive letter, followed by the volume name (if there is one) and the directory name. If the current directory is a subdirectory, you will see several directory names separated from each other by backslashes.
- The **directory listing** shows the directories and files in the current directory.
- The **highlighted selection** is the item (for example, a file or directory) that will be affected by the next command you choose.

If the entire directory listing can't fit in the window, MS-DOS Executive displays a scroll bar. See Chapter 4, "Techniques," for more information on scrolling.

For detailed information on DOS directory structure and files, see the DOS manuals provided with your computer.

---

## Making a Selection

When you work with Windows, you must select the item that the next command or action will affect. The selected item is highlighted.

### Selecting a File, Directory, or Drive Icon

You use the DIRECTION keys to select a file or directory (directories are shown in bold) in the MS-DOS Executive window. You can also select a file or directory by typing the first letter of the filename or directory name; for example, if you type *S*, you select the first filename or directory name beginning with "S." Typing *S* again selects the second filename or directory name beginning with "S," and so on.

The following list describes how to make selections:

To select	Press
A filename or directory name	DIRECTION keys or initial letter
A drive icon	CONTROL + drive letter

Here's how to select an item with the mouse:

- Click the drive icon, filename, or directory name you want to select.

**Note** You can press the SPACEBAR to cancel a filename or directory name selection. Pressing the SPACEBAR again reselects the filename or directory name. If you have a mouse, you can press and hold down the SHIFT key, click the selected filename, then release the SHIFT key to cancel a selection.

---

### Selecting an item



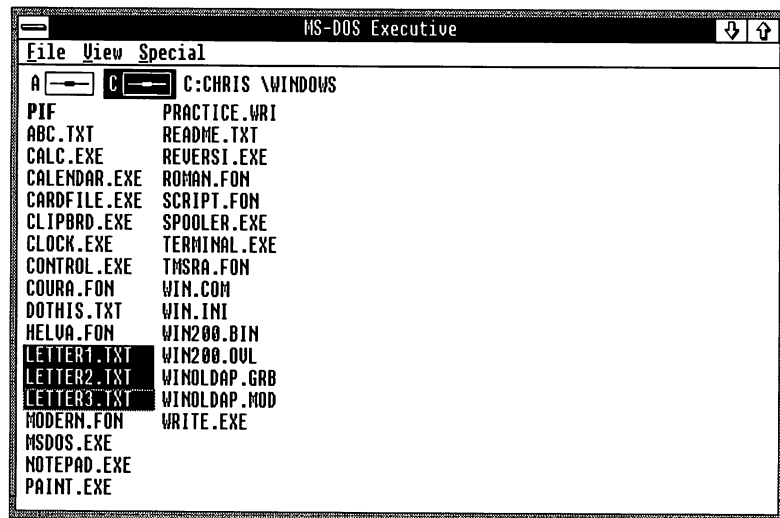
## Extending a Selection

Whether you use the keyboard or the mouse, you can extend a selection to include more than one item. You can select a block of files—files that are next to each other—or you can select files that are scattered throughout the directory listing.

### Selecting a block of files

To select a block of files, follow these steps:

- 1 Use the **DIRECTION** keys to select the first file in the block.
- 2 Press and hold down the **SHIFT** key and press the **DIRECTION** keys to select the rest of the files in the block.
- 3 Release the **SHIFT** key when you are finished selecting.



To select a block of files with the mouse, do the following:

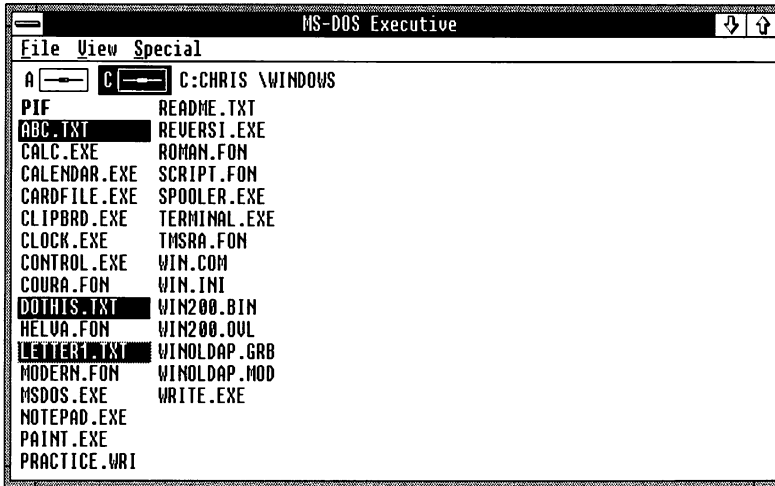
- 1 Press and hold down the **SHIFT** key and click all the files you want to select.
- 2 Release the **SHIFT** key when you have selected the desired files.

### Selecting scattered files

To select files that are scattered throughout the directory listing, follow these steps:

- 1 Press and hold down the **CONTROL** key and press the **DIRECTION** keys until a dotted box surrounds a file you want to select.

- 2 Release the CONTROL key.
- 3 Press the SPACEBAR to select the file.
- 4 Repeat steps 1, 2, and 3 to select all desired files.



To select scattered files with the mouse, follow these steps:

- 1 Press and hold down the SHIFT key and click each file you want to select.
- 2 Release the SHIFT key.



## Starting an Application

You start applications from the MS-DOS Executive window. Starting an application loads the application file into a window that appears in front of the MS-DOS Executive window.

An application file usually has the name of the program and a .EXE or .COM extension as its filename. For example, the file containing the Calendar program has the filename CALENDAR.EXE.

You can start applications that are in the current directory or in any other Windows directory.

## Starting an Application in the Current Directory

Follow this step to start an application in the current directory:

- Select the application filename and press the ENTER key.  
The application window is displayed in front of the MS-DOS Executive window.

Here's how to start an application in the current directory with the mouse:

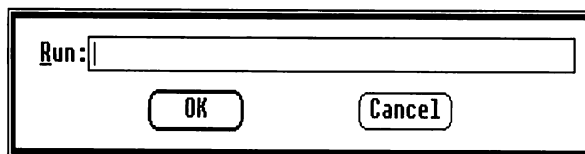
- Double-click the application filename.

## Starting an Application in Another Directory

You can start an application that is not in the current directory by using the File menu's Run command. The Run command lets you supply additional information, such as a pathname or a command-line argument.

To start an application in a different directory, follow these steps:

- 1 Select the File menu and choose the Run command. A dialog box appears.



- 2 Type the application's pathname, including the .EXE or .COM filename extension, in the text box. Include more information (such as an additional filename) if you need to.
- 3 Choose the OK button.

## Starting an Application as an Icon

You can start an application as an icon rather than running it in a window so that the application is ready for use but takes up minimal space on your screen.

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### Starting applications in the current directory



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### Starting applications in other directories

Follow this step to run an application as an icon:

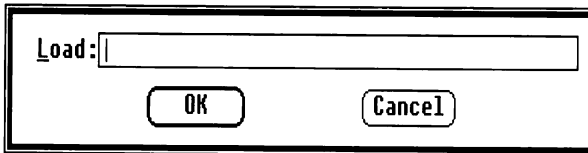
- Select the filename and press **SHIFT+ENTER**.  
The application icon appears in the icon area.

To run an application as an icon with the mouse, do the following:

- Press and hold down the **SHIFT** key and double-click the application filename. Release the **SHIFT** key.

If you want to run an application as an icon but need to supply additional information (such as a pathname or parameters), use the File menu's Load command:

- 1 Select the File menu and choose the Load command. A dialog box appears.



- 2 Type the application filename (or pathname if necessary), including the **.EXE** or **.COM** extension, in the text box. Include additional information (such as parameters) if you need to.
- 3 Choose the **OK** button.

## Starting an Application by Opening a File

Many applications supply a particular filename extension to the files you create with them. For example, the files you create with Notepad have a **.TXT** extension. With applications of this type, you can start an application by opening one of the files you created with it.

To start an application by opening one of its files, do the following:

- 1 Select the name of the file you want to open in the MS-DOS Executive window.
- 2 Press the **ENTER** key.

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## Running applications as icons




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## Loading applications to run as icons

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## Running applications by opening files

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## Running applications by opening files



If you have a mouse, you can open the file and start the application by following this step:

- Double-click the filename.

---

## Working with Files

A file can contain an application, graphics, or lines of text. Files in Windows use DOS filenames conventions. See your DOS manual for information on naming files and directories. Since many applications automatically supply a filename extension to files you create with them, you don't have to supply one unless you want to. When deleting files, however, you must supply the entire filename, including any extension.

### Copying a File

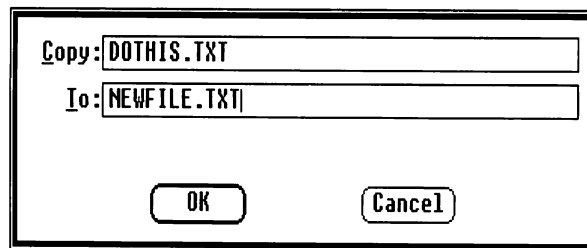
You can copy a file under a new name or create a copy in a different directory or on another disk by using the File menu's Copy command.

---

## Duplicating files

To copy a file, do the following:

- 1 Select the file you want to copy.
- 2 Select the File menu and choose the Copy command. A dialog box appears. The selected filename appears in the Copy text box.



- 3 Type the new filename, or the pathname of the directory you want to copy the file to, in the To text box.  
If you have a two-drive system and are copying the file to another disk, put the destination disk in drive B. (After you finish copying, reinsert the system disk in drive B.)
- 4 Choose the OK button.

## Copying a Group of Files

You can copy a group of files to a directory in one procedure.

To copy several files at once, follow these steps:

- 1 Select all the files you want to copy.  
For details on selecting groups of files, see the section called "Extending a Selection" earlier in this chapter.
- 2 Select the File menu and choose the Copy command. A dialog box appears. You will see the selected filenames in the Copy text box. If you select many files, there may not be room for all the filenames to appear in the Copy text box; however, all the files you've selected will still be copied.
- 3 In the To text box, type the pathname of the directory that you want the files copied to.  
If you have a two-drive system and are copying the files to another disk, put the destination disk in drive B. (After you finish copying, reinsert the system disk in drive B.)
- 4 Choose the OK button.

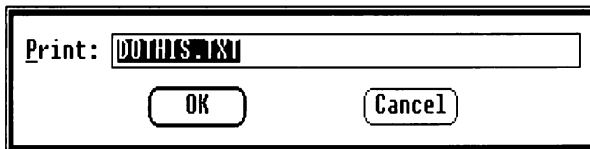
**Note** You cannot copy more than one file to a single file. You can copy multiple files to a directory only.

## Printing a File

Most applications have a command that prints files you create with that application. You should use that command whenever possible. However, if you want to print text files from the MS-DOS Executive window, you can use the File menu's Print command.

You can print files from the MS-DOS Executive window by following these steps:

- 1 Select the file you want to print.
- 2 Select the File menu and choose the Print command. A dialog box appears with the name of the selected file in the text box.



- 3 Choose the OK button.

---

### Duplicating a group of files

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### Printing files

Using the Print command creates a print-spool file that is sent to the Spooler program. See Chapter 8, "Using Spooler," for more information on Spooler.

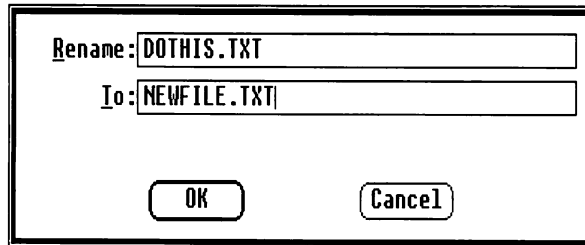
**Note** See the hardware manual for your printer for instructions on connecting the printer to your computer. For details on setting up, adding, or removing a printer, see Chapter 7, "Using Control Panel."

## Changing a Filename

If you want to change the name of a file, you can do so by using the File menu's Rename command.

Follow these steps to rename a file:

- 1 Select the file you want to rename.
- 2 Select the File menu and choose the Rename command. A dialog box appears with the name of the selected file in the Rename text box.



- 3 Type the new filename in the To text box.
- 4 Choose the OK button.

## Getting Information About a File

If you want more information about a particular file or group of files, you can use the File menu's Get Info command. When you choose Get Info, Windows displays a dialog box showing the filename, size in bytes, and the date and time the file was created or last changed.

Follow these steps to get information about a file:

- 1 Select the files you want information about.
- 2 Select the File menu and choose the Get Info command. The Get Info dialog box appears. This dialog box has a Control menu, a title bar, and if necessary, a scroll bar. If you have selected many files, you may need to scroll to see all the information in the dialog box.

Get Info				
LETTER1	.TXT	1120	4/20/87	2:03PM
LETTER2	.TXT	775	4/24/87	9:27AM
TODO	.TXT	493	4/24/87	9:33AM

Filename
Size in bytes
Date and time created or last changed

- 3 When you are finished looking at the dialog box, select the Control menu in the dialog box and choose the Close command, or press the ESCAPE key.

## Deleting a File

When a file is no longer useful, you can delete it to make room for other files. When you delete a file, you remove it from the disk permanently. You delete files with the File menu's Delete command.

To remove a file, do the following:

- 1 Select the file you want to delete.
- 2 Select the File menu and choose the Delete command. A dialog box displays the name of the selected file.
- 3 Choose the OK button.

To delete more than one file at a time, select all the files you want to delete, then follow steps 2 and 3 of the preceding procedure. If you select many files, there may not be room in the dialog box's text box for all the filenames to appear; however, all the files you've selected will still be deleted.

## Getting file information

## Removing files

**Note** Do not delete temporary files while you are running Windows applications other than MS-DOS Executive; an application may be using the temporary files. You can recognize a temporary file by its filename: it usually begins with a tilde (~) and ends with a .TMP extension. See the following section, "Organizing Temporary Files," for more information.

## Organizing Temporary Files

Some applications that run with Windows create temporary files. The filename of a temporary file usually begins with a tilde character (~) and ends with a .TMP extension. If you quit Windows without using the End Session command, some temporary files may remain in your root (\) directory. (Using the End Session command automatically deletes temporary files at the end of each Windows session.) You should not delete temporary files while you are running applications other than MS-DOS Executive because the applications may be using them. After you close all applications except MS-DOS Executive, you can safely delete these temporary files.

You can have Windows put all temporary files your programs create into a special directory; then you can quickly locate and, if you want, delete them. If you don't specify an alternate directory, Windows places the .TMP files in your root directory.

Follow these steps to specify where you want Windows to place the temporary (.TMP) files:

- 1 Create a directory for your temporary files. See the following section, "Working with Directories," for information on how to create a directory.
- 2 Add the following line to your DOS AUTOEXEC.BAT file:

```
set TEMP=pathname
```

For example, if you had created the directory TEMPDIR on drive C, you would add the following line to your AUTOEXEC.BAT file.

```
set TEMP=c:\tempdir
```

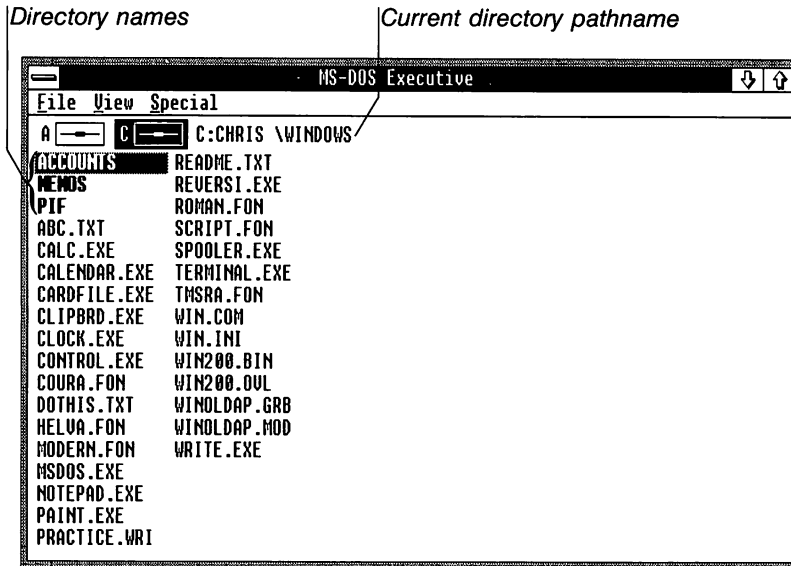
Be sure to create the directory. If you specify a directory that doesn't exist, applications that create .TMP files will not run.

## Working with Directories

You can use directories to organize your files into groups. You can also create subdirectories within a directory.

The name of the current directory (the one you are working in) is always shown in the pathname at the top of the MS-DOS Executive window. A pathname contains the drive letter, the volume name (if there is one), and a sequence of directory names with backslashes separating the names.

In the directory listing, directories are listed first. These are subdirectories of the current directory. Directory names appear in bold letters when the listing is in short form, as shown in the following example.



## Creating a Directory

You must create a directory before you can put files in it:

- 1 Select the Special menu and choose the Create Directory command. A dialog box appears.
- 2 Type the new directory name in the text box.
- 3 Choose the OK button.

## Making directories

Once you create a directory, you can use the File menu's Copy command to copy files into it. See the section called "Copying a File" earlier in this chapter for details. You also can use an application to create new files for the directory.

## Changing the Directory-Listing Display

When you start Windows, the MS-DOS Executive directory listing is displayed in alphabetical order with directory names listed first. However, you may want to see the directory listing displayed in a different way. You may want to see the files listed in order of their size, or by the date they were created or changed. Or you may want to see only files that have the same extension.

You can change the order in which files are listed by using commands from the View menu.

### Using the View Menu

The commands in the View menu are divided into three groups. One command in each of the three groups has a checkmark beside it, indicating that the command is in effect.

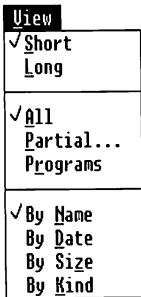
You can choose a command from each group in the View menu to list your files in different ways. When you choose a command from the View menu, it affects only the directory you are displaying at that time. All commands except Partial take effect as soon as you choose them. No matter which command you choose, directories will always be listed first.

You choose from two commands in the first group:

- The Short command displays the listing in multiple columns by filename only.
- The Long command displays a one-column list containing each file's name, extension, and size in bytes, and the date and time it was created or last changed. Directory names are followed by <DIR>.

You choose from three commands in the second group:

- The All command lists all files in the directory.
- The Partial command lets you specify a subset of the directory to display. A description of the Partial command follows this list of View menu commands.
- The Programs command displays filenames with .EXE, .COM, or .BAT extensions only.



You choose from four commands in the third group:

- The By Name command displays the listing alphabetically by filename.
- The By Date command displays the listing by the date and time each file was created or last changed, beginning with the most recent date and time.
- The By Size command lists files according to their size in bytes, sorting them from largest to smallest.
- The By Kind command lists files alphabetically by filename extension.

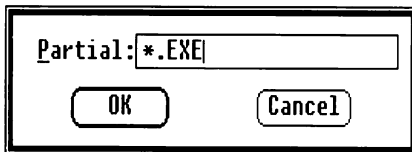
### Displaying Part of a Directory

You may not always want to see a listing of all the files in a directory, preferring instead to see only a particular group of files. For example, you may want to see only files with the .EXE extension. Use the Partial command to specify the kind of files you want to display:

---

### Using the Partial command

- 1 Select the View menu and choose the Partial command. A dialog box appears.



- 2 In the text box, type the filenames you want to see. Use "wild-card" characters to tell Windows which kind of file to display; for example, type *\*.EXE* to display all filenames with the .EXE extension.  
 Wildcard characters represent other characters in a filename. See your DOS manual for details on using wildcard characters to specify filenames or directory names.
- 3 Choose the OK button.

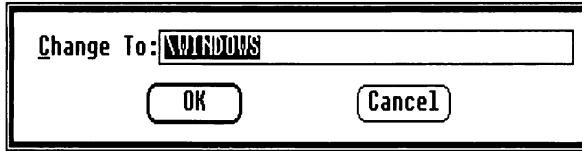
### Changing Directories

You change directories when you want to see what is in another directory or when you want to work with the files in another directory. You can move from one directory to another with the Special menu's Change Directory command.

## Moving to another directory

Follow these steps to move to another directory:

- 1 Select the Special menu and choose the Change Directory command. A dialog box appears. The text box contains the name of the directory you are working in.



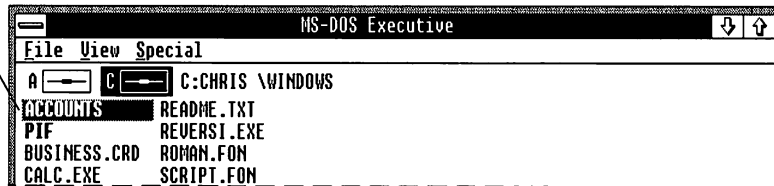
- 2 Type the directory you want to go to, including a pathname if necessary.
- 3 Choose the OK button.

## Directory-changing shortcuts

Here's how to quickly change to a subdirectory of your current directory:

- 1 Select the name of the directory you want to move to.

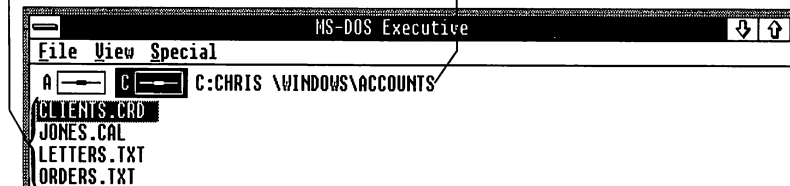
*The ACCOUNTS directory is selected.*



- 2 Press the ENTER key.  
The MS-DOS Executive window now lists the selected directory's contents.

*ACCOUNTS directory listing*

*ACCOUNTS directory pathname*



Here's another useful shortcut for changing directories:

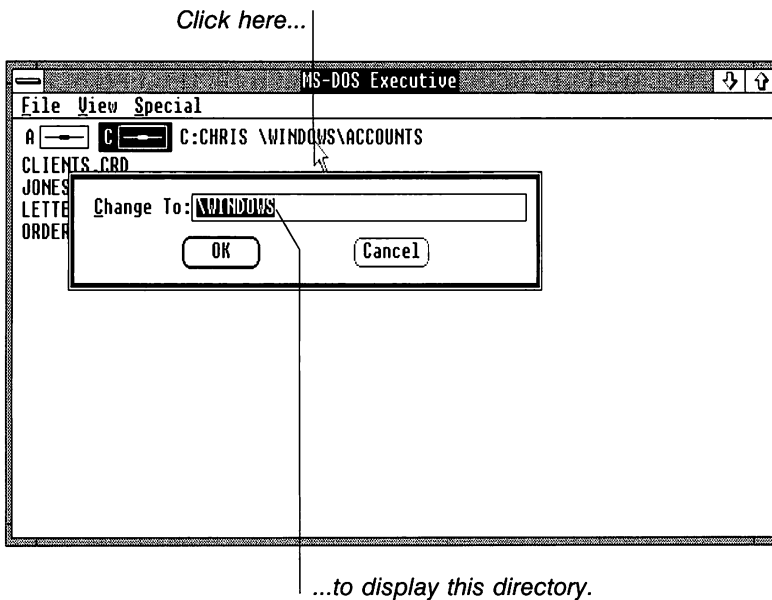
- No matter where you are or what you have selected in the MS-DOS Executive window, you can go to the next higher directory by pressing the BACKSPACE key.

If you're using the mouse, you can do the following to change to a subdirectory of your current directory:

- Double-click the name of the directory you want to move to.

You can quickly change to a higher directory with the mouse by following these steps:

- 1 In the pathname at the top of the MS-DOS Executive window, click the name of the directory you want to move to. A dialog box appears. The pathname to the left of the place you clicked appears in the text box (you can type a different directory pathname if you want).



- 2 Click the OK button.

## Changing directories



---

## Shortcut



You can double-click part of the pathname at the top of the MS-DOS Executive window to go to that directory without seeing a dialog box.

## Displaying Two Directories Simultaneously

To display two different directories at the same time, run a second MS-DOS Executive window and select a different directory or disk icon in each window:

- 1 Select MSDOS.EXE (on a two-drive system, MS-DOS.EXE is located on the Windows system disk) and press the ENTER key to run MS-DOS Executive as another window.
- 2 In the new MS-DOS Executive window, display the directory that you want to see by using one of the previously described procedures.

Follow this step to display the contents of another disk:

- Press and hold down the CONTROL key, press the drive letter, then release the CONTROL key to choose a drive icon; this displays the directory listing for the disk in that drive.



If you're using the mouse, you can display the contents of another disk by following this step:

- Click the desired drive icon.

Each copy of the MS-DOS Executive window acts independently of the other, so you can display and work with different directories in each window.

To exit from a copy of MS-DOS Executive without ending your Windows session, follow this step:

- Select the File menu and choose the Exit command.

---

## Exiting from an MS-DOS Executive copy

## Printing a Directory Listing

You can print a subdirectory listing by following these steps:

- 1 Select the directory name from the current directory listing.
- 2 Select the File menu and choose the Print command. A dialog box appears. The text box contains the selected directory name.
- 3 Choose the OK button.

To print the current directory listing, follow these steps:

- 1 Cancel the selection of any files or directories.  
To cancel a selection, press the SPACEBAR. To cancel a selection with the mouse, press and hold down the SHIFT key, click the selected filename, then release the SHIFT key.
- 2 Select the File menu and choose the Print command. A dialog box appears. The text box contains the current directory name.
- 3 Choose the OK button.

## Deleting a Directory

Before you can delete a directory, you must first delete all files in the directory. Windows will not delete a directory that contains files. This feature protects you from losing files should you unintentionally try to delete a directory.

To delete a directory, do the following:

- 1 Select all the files in the directory that is to be deleted.
- 2 Select the File menu and choose the Delete command. A dialog box appears with as many of the selected filenames in the text box as will fit.
- 3 Choose the OK button.
- 4 If the directory you want to delete is your current directory, move to the next higher directory. You can't delete your current directory.
- 5 Select the name of the directory you want to delete.
- 6 Select the File menu and choose the Delete command. A dialog box appears with the selected directory name in the text box.
- 7 Choose the OK button.

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### Printing directory listings

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### Removing directories

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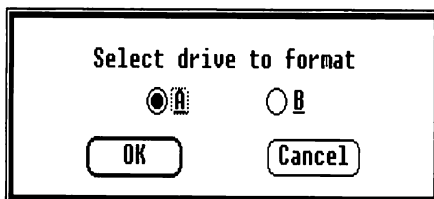
## Working with Disks

You can use MS-DOS Executive to format disks, make system disks, and run certain DOS programs.

Before you can use a new disk, you must prepare the disk by formatting it. If you format a used disk, any information already on the disk will be erased. Once you have formatted a disk, you can use it to store data or to make a system disk. A system disk contains the files necessary for starting DOS. You cannot format hard disks with MS-DOS Executive.

Here's how to format a disk:

- 1 Insert the new disk in the appropriate disk drive.
- 2 Select the Special menu and choose the Format Data Disk command. A dialog box appears.



- 3 Select the option button for the drive that contains the new disk.
- 4 Choose the OK button.

The disk is now ready to store data.

---

## Making a system disk

To make a system disk, follow these steps:

- 1 Format a disk using the Format Data Disk command as described in the previous procedure.
- 2 Select the Special menu and choose the Make System Disk command. A dialog box appears.
- 3 Select the option button for the drive that contains the new disk.
- 4 Choose the OK button. (If COMMAND.COM is not in your Windows directory or on your Windows system disk, a dialog box appears requesting that you insert your DOS system disk.)

## Naming a Disk

To identify a disk by its contents, you can give it a volume name by using the Special menu's Set Volume Name command:

- ❶ Select the drive icon for the drive that contains the disk you want to name.
- ❷ Select the Special menu and choose the Set Volume Name command. A dialog box appears.
- ❸ Type a name in the text box.
- ❹ Choose the OK button.

The volume name for the disk now appears after the drive letter in the pathname.

## Running DOS Utility Programs

Some DOS utility programs, such as FIND or DISKCOPY, can be run in a window if the programs are in directories that are accessible to Windows. See Chapter 9, "Using Standard Applications," for further information.

You can also carry out DOS commands while using Windows by running COMMAND.COM:

- ❶ Insert a disk containing COMMAND.COM. (This file is on your DOS disk.)
- ❷ Display the directories for that disk.
- ❸ Run COMMAND.COM from the MS-DOS Executive window.
- ❹ Type the command you want to run in the COMMAND.COM window (include any command-line arguments) and press the ENTER key.
- ❺ Type *exit* to leave the COMMAND.COM window when you are finished. Then select the Control menu and choose the Close command.

**Note** It is recommended that you run DOS utility programs from MS-DOS Executive rather than from COMMAND.COM.

It is also recommended that you not use the DOS program CHKDSK in Windows. If you do run it from Windows, do not use the /F parameter. CHKDSK was not designed to run with Windows, and using the /F parameter will close any files your Windows applications are using (such as temporary files).

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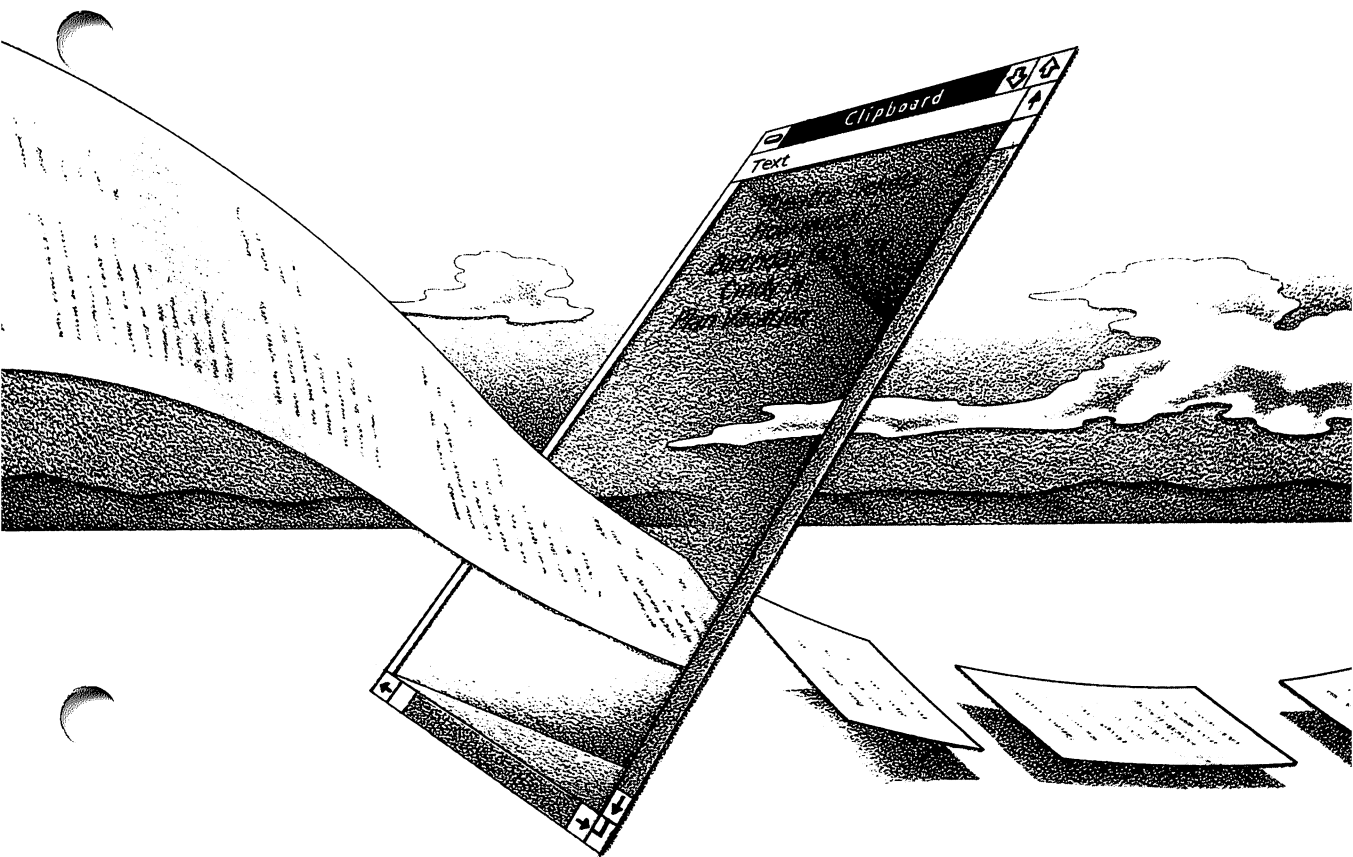
### Setting a volume name

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### Running COMMAND.COM

## 6 Using Clipboard

In Microsoft Windows, you use Clipboard to hold information being copied or moved. You can move or copy information from one place in a window to another. For example, you can move text around in a report as you edit. You can also move or copy information from one window to another window. For example, you can copy a paragraph from one report to another report. You can even move or copy information from one application to another application. For example, you can move a picture from Windows Paint to a report in Windows Write.



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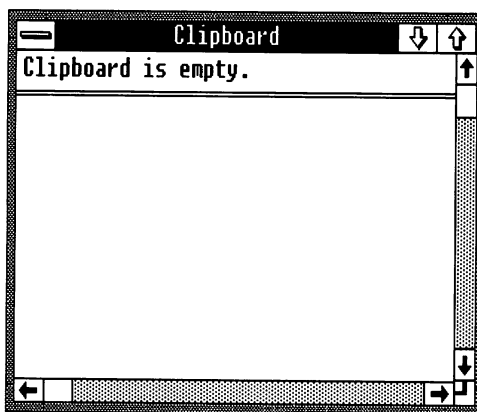
## Displaying Clipboard

Clipboard is always available when you are running Windows. Although you don't have to run a file to use Clipboard, you can run a file to display the Clipboard contents.

Follow this step to display Clipboard:

- Start CLIPBRD.EXE from the MS-DOS Executive window.

The Clipboard window appears. If the Clipboard is empty, a blank window is displayed, as shown in the following figure.



---

## Cutting, Copying, and Pasting

To put information on the Clipboard, use the application's Cut or Copy command. To insert information in your application from the Clipboard, use the application's Paste command. Most applications require that you first select the information you want to cut or copy. For more information about selecting, see the manual for the application you are using.

Though your application may have different names for the Cut, Copy, and Paste commands, the commands should operate in this way:

- The Cut command deletes the selected information from the window and places it on the Clipboard.

---

**Running Clipboard in a window**

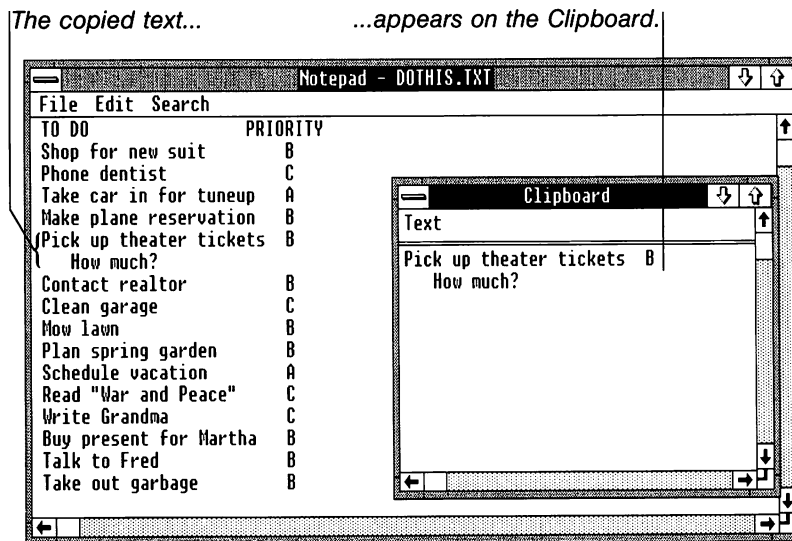
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**Transferring information**

- The Copy command makes a copy of the selected information and places it on the Clipboard, leaving the selected information in its original location.
- The Paste command inserts information from the Clipboard in a selected area in a window. If the window contains an insertion point, the information appears to the left of the insertion point. If the window contains a selection, the information on the Clipboard replaces the selection. You can paste the same information from the Clipboard as many times as you want.

**Note** Some standard applications have commands similar to Cut, Copy, and Paste but don't use Windows Clipboard to transfer information.

The following figure shows information that was copied from a Notepad file to the Clipboard.



The bar below Clipboard's menu bar tells you what kind of information appears on the Clipboard. In the previous figure, text is on the Clipboard.

Generally, the formatting for your text is not stored on the Clipboard. However, this can vary from application to application.

---

## Quitting Clipboard

Once you've finished viewing the Clipboard contents, you may want to quit Clipboard.

To exit from Clipboard, follow this step:

- Select the Control menu and choose the Close command.

Although Clipboard is no longer running in a window, it continues to be available while you are working in Windows.

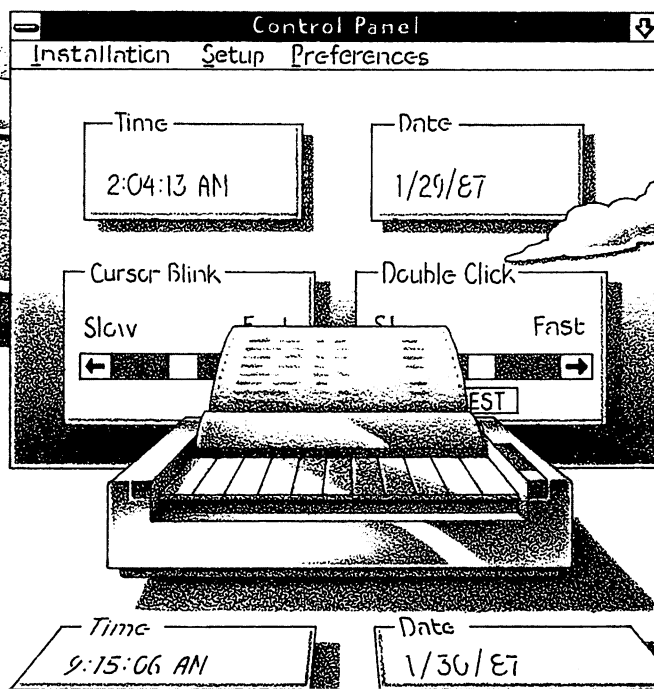
---

### Exiting from Clipboard

## 7 Using Control Panel

You use Control Panel to adjust Microsoft Windows system settings such as the date and time, printer assignments, and baud rates for communications devices. You can also use Control Panel to specify screen colors.

Control Panel lets you adjust these settings quickly and easily without running the Setup program again. Many of the changes you make in Control Panel are reflected in the WIN.INI file. See Appendix A, "Customizing Your WIN.INI File," for information about WIN.INI.



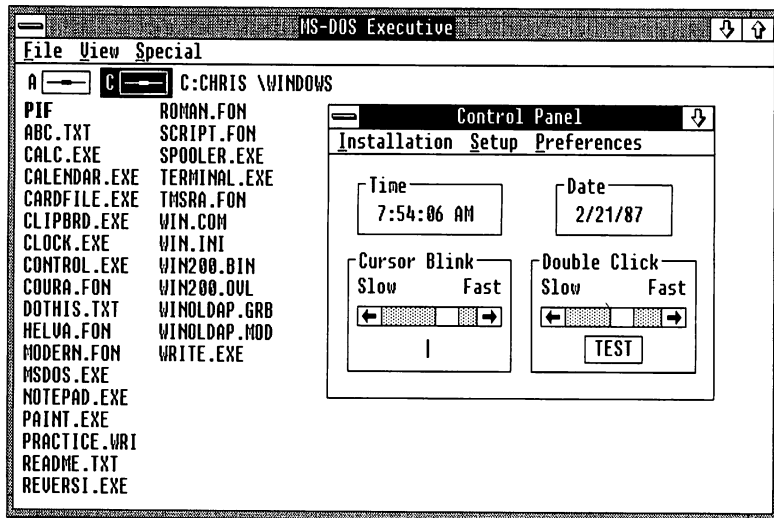
## Starting Control Panel

### Running Control Panel

Here's how to start Control Panel:

- 1 Select and run CONTROL.EXE from the MS-DOS Executive window.

When you start Control Panel, it creates a window containing four sections: Time, Date, Cursor Blink, and Double Click.

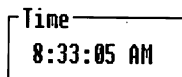


## Changing the Time

You can use Control Panel to change the system time. The time you set from Control Panel will be reflected in any applications (such as Clock or Calendar) that use the system time.

Here's how to change the time:

- 1 Press the TAB key to move to the Time section.



- 2 Use the RIGHT or LEFT key to select the part of the time (hours, minutes, or seconds) that you want to change.

### Adjusting the time

- 3 Press the UP key to increase the number; press the DOWN key to decrease the number.

The system time changes when you move to another section or quit Control Panel.

Follow these steps to change the time with the mouse:

- 1 Click the part of the time (hours, minutes, or seconds) that you want to change.
- 2 Click the up arrow to increase the number or the down arrow to decrease the number.

The system time changes when you click outside the Time section or quit Control Panel.




---

## Changing the Date

Some applications, like Notepad, use the system date. You change the date the same way that you change the time:

- 1 Press the TAB key to move to the Date section.

Date
2/21/87

- 2 Use the RIGHT or LEFT key to select the part of the date (month, day, or year) that you want to change.
- 3 Press the UP key to increase the number; press the DOWN key to decrease the number.

The system date changes when you move to another section or quit Control Panel.

If you're using the mouse, follow these steps to change the date:

- 1 Click the part of the date (month, day, or year) that you want to change.
- 2 Click the up arrow to increase the number or the down arrow to decrease the number.

The system date changes when you click outside the Date section or quit Control Panel.




---

## Adjusting the date

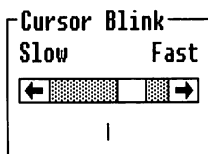
---

## Changing the Cursor-Blink Rate

Some applications have an underscore (cursor) or insertion point that blinks. The blink rate is the frequency at which the cursor flashes.

Here's how to change the cursor-blink rate:

- 1 Press the TAB key to move to the Cursor Blink section.



- 2 Press the RIGHT or LEFT key to scroll to the setting you want. The farther right you scroll, the faster the blink rate. The vertical cursor within the Cursor Blink section reflects the new setting.

Do the following to change the cursor-blink rate with the mouse:

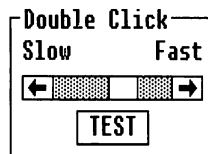
- Click the right or left scroll arrow in the Cursor Blink section.

You can also change the cursor-blink rate by dragging the scroll box within the scroll bar.

---

## Changing the Mouse Double-Click Rate

When you double-click the mouse button, Windows interprets your action by the speed with which one click follows another. You can change the expected speed by adjusting the setting in the Double Click section.



Do the following to change the mouse double-click rate:

- ▣ Click the right or left scroll arrow in the Double Click section. The farther right you scroll, the faster the double-click rate.

You can also change the double-click rate by dragging the scroll box within the scroll bar.

You can test the new double-click setting by double-clicking the Test button. The button color will invert if Windows perceived your pressing the mouse button as a double-click.

---

## Adjusting the double-click rate

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## Adding and Removing Printers

When you first set up Windows, you select the printer you'll use with your system. To change this selection, use the Installation menu's Add New Printer and Delete Printer commands.

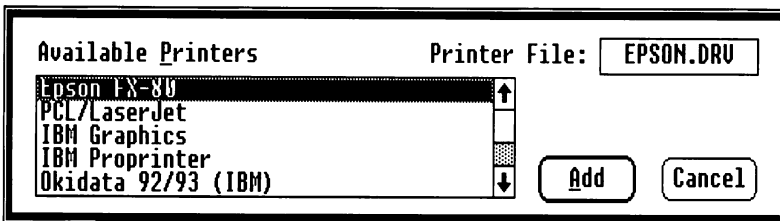
### Adding a Printer

Follow these steps to add a new printer to your system:

- 1 Select the Installation menu and choose the Add New Printer command. A dialog box appears prompting you for the disk that contains printer-driver files.
- 2 Insert the disk that contains the printer-driver files you want to install. (This is the Utilities disk for printer-driver files that are included with Windows.)
- 3 Choose the OK button. A dialog box appears listing the printer-driver files available on the disk.

---

### Adding printers



- 4 Select the name of the printer that you want to add in the list box. The name of the corresponding printer-driver file appears in the Printer File text box at the right.

- 5 Choose the Add button.
- 6 A dialog box appears prompting you to enter the drive or directory you want to copy the printer-driver file to. Drive B or your Windows directory appears in the text box. If you want to change this, type the drive or directory you want in the text box. (The directory must already exist.)  
If you do not specify a drive or directory, the file will be copied to the disk in drive B if you have a two-drive system. The file will be copied to your Windows directory if you have a hard-disk system.
- 7 Choose the Yes button.

Whenever you add a new printer to your system, you must let Windows know which port the printer is connected to. See the section called "Configuring Your System" later in this chapter for more information on this procedure.

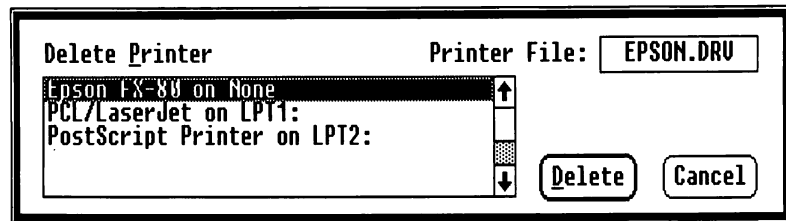
## Removing a Printer

---

### Deleting printers

To remove a printer from your system, use the Delete Printer command:

- 1 Select the Installation menu and choose the Delete Printer command. A dialog box appears listing the printers you have set up.



- 2 Select the name of the printer you want to remove in the list box. The name of the corresponding printer-driver file appears in the Printer File text box.
- 3 Choose the Delete button.
- 4 A dialog box appears displaying the location of the printer-driver file. If necessary, type an alternate location for the file in the text box.
- 5 Choose the Yes button.

**Note** If other printers use the printer-driver file that appears in the Delete Printer dialog box, that printer-driver file will not be deleted from the named directory; it will still be available to the other printers.

---

## Adding and Removing Fonts

The Windows Fonts disk(s) include fonts for a variety of output devices. The Setup program installs fonts automatically, based on your choices of graphics adapter and printer(s). You can override the automatic settings by adding or deleting fonts with Control Panel. If you add a dot-matrix printer, you may want to check to see if you need to add a font for your printer. You can do this by viewing the dialog box that appears when you follow steps 1 and 2 of the following procedure.

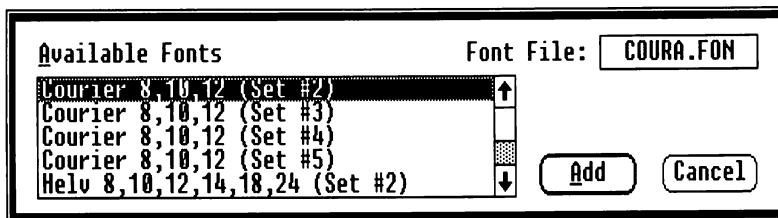
### Adding a Font

Follow these steps to add a font:

- 1 Select the Installation menu and choose the Add New Font command. A dialog box appears prompting you for the disk that contains the font files.
- 2 Insert the Fonts disk and choose the OK button. A dialog box appears listing the fonts available on the disk. For more information on the various sets of fonts, see the following section, "Choosing a Font."

---

### Adding fonts



- 3 Select the name of the font that you want to add in the list box. The name of the corresponding font file appears in the Font File text box to the right.

- 4 Choose the Add button.
- 5 A dialog box appears prompting you to enter the drive or directory you want to copy the font file to. Drive B or your Windows directory appears in the text box. If you want to change this, type the drive or directory you want in the text box. (The directory must already exist.)

If you do not specify a drive or directory, the file will be copied to the disk in drive B if you have a two-drive system. The file will be copied to your Windows directory if you have a hard-disk system.

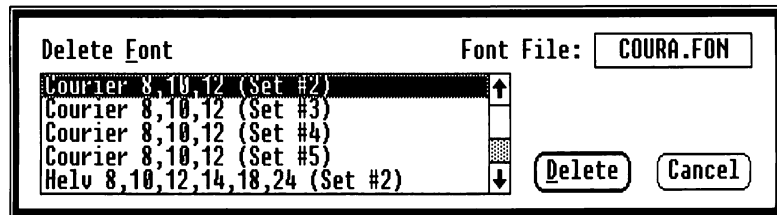
- 6 Choose the Yes button.

## Removing a Font

### Deleting fonts

To remove a font, follow these steps:

- 1 Select the Installation menu and choose the Delete Font command. A dialog box appears listing the fonts you have set up.



- 2 Select the name of the font that you want to remove in the list box. The name of the corresponding font file appears in the Font File text box.
- 3 Choose the Delete button.
- 4 A dialog box displays the location of the font file. If necessary, type an alternate location for the font file in the text box.
- 5 Choose the Yes button.

## Choosing a Font

The Windows Fonts disk(s) provide two font types: raster fonts and stroke (also known as vector) fonts. Raster fonts generally are used only for devices such as dot-matrix printers or the screen. They are available only in fixed sizes. Raster fonts look better and may be drawn more quickly than stroke fonts on raster devices. Stroke fonts typically are used if your output is going to a plotter.

When you choose the Installation menu's Add New Font or Delete Font command, you are prompted to insert the Fonts disk or to specify where the font files are located. You then see a list of the available fonts. The listing includes the font names, font sizes, and the set numbers.

The font set number indicates the kind of devices that the font is designed to be used with. Six sets of fonts are included on the disk:

**Set #1** This set contains stroke fonts that can be used for screen, printer, or plotter devices of any resolution.

**Set #2** This set contains raster fonts designed for screen resolution of  $640 \times 200$ . For example, if you are using the IBM Color Graphics Adapter or a compatible adapter, you would select from this set.

**Set #3** This set contains raster fonts designed for screen resolution of  $640 \times 350$ . For example, if you are using the Hercules Graphics Card or the IBM Enhanced Graphics Adapter, you would select from this set. These fonts are also used by the CITH 8510 (Portrait mode) printer.

**Set #4** This set contains raster fonts designed for printers in 60 dpi (dots per inch) resolution, including the following:

- Okidata 92, 93, 192, and 193 standard models (Portrait mode)
- Okidata 92, 93, 192, and 193 standard and IBM-compatible models (Landscape mode)
- Epson MX-80, FX-80, and compatible models (Landscape mode)
- IBM Graphics (Landscape mode)
- IBM Proprinter (Landscape mode)
- Star Micronics SG-10 (Landscape mode)

**Set #5** This set contains raster fonts designed for printers in 120 dpi resolution, including the following:

- Epson MX-80, FX-80, and compatible models (Portrait mode)
- IBM Graphics (Portrait mode)
- IBM Proprinter (Portrait mode)
- Okidata 92, 93, 192, and 193 IBM-compatible models (Portrait mode)
- Star Micronics (Portrait mode)

---

## Raster and stroke fonts

**Set #6** This set contains raster fonts designed primarily for screen resolution of 640 × 480.

**Note** Because applications handle fonts differently, some applications may not list all available fonts.

---

**Windows font names**

Fonts have names that represent their different characteristics. Included on your Windows Fonts disk(s) are the following fonts:

<b>Font</b>	<b>Description</b>
Helv (Raster)	Proportional font (characters have varying widths) without serifs ("sans serif")
Courier (Raster)	Fixed-width font (characters have uniform widths) with serifs
Tms Rmn (Raster)	Proportional font with serifs
Roman (Stroke)	Proportional font with serifs
Modern (Stroke)	Proportional font without serifs
Script (Stroke)	Proportional font of slanted characters formed from nearly continuous curved lines

The following fonts are not included on the Fonts disk(s), but you may see them in some applications; these fonts cannot be added or deleted:

<b>Font</b>	<b>Description</b>
System (Raster)	Fixed-width default font designed for menus and dialog boxes
Terminal (Raster)	Fixed-width font that is the same as the font your computer displays in DOS

In addition to the previously described fonts, an application may list device fonts. These are the fonts that are provided by the device. For example, on print-wheel printers, font names correspond to wheel names. These fonts cannot be added or deleted with Control Panel, but they may be listed when the output device is selected. Since there may not be a corresponding raster font for the screen, Windows will usually substitute a screen font in the same class.

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## Device fonts

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## Configuring Your System

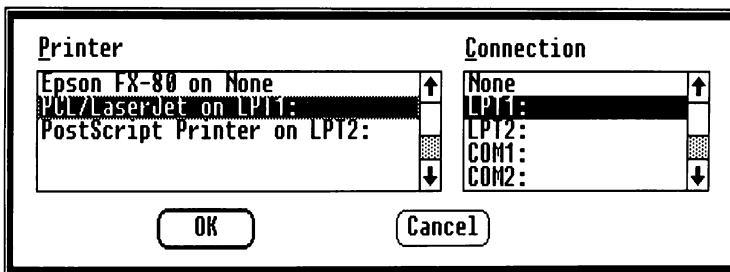
You use commands from the Setup menu to change printer port assignments, set the system default printer and specify its output modes, and set up serial communications ports.

### Connecting Printers

Windows needs to know which port your printer is connected to. You use the Connections command to assign or change the port for your printer(s). For example, if you decide to move your printer from port LPT1 to port LPT2, you need to use Control Panel to change the printer connections setting.

To change printer connections, follow these steps:

- 1 Select the Setup menu and choose the Connections command. A dialog box appears displaying a list of printers and a list of ports.




---

## Changing printer connections

- 2 Select the name of the printer you want to change from the Printer list box. The current port assignment for the selected printer is selected in the Connection list box to the right.
- 3 Select the desired port from the Connection list box.
- 4 Choose the OK button.

## Setting Up Printers

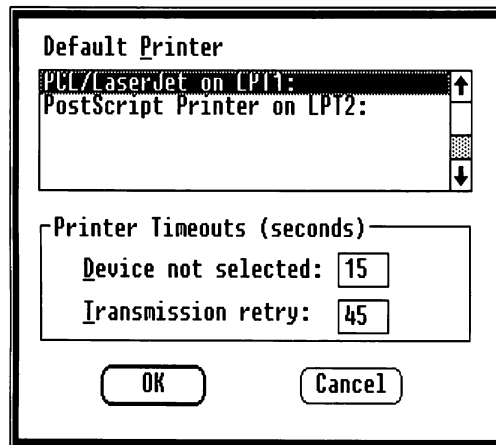
You use the Setup menu's Printer command to specify the system default printer and set its output modes. You also use it to set a certain amount of time for printing problems to be corrected before Windows sends you a message about the problem.

The system default printer is the printer used by applications designed for Windows. Printer output modes are printer-specific settings such as portrait (normal page orientation), landscape (lengthwise page orientation), or color for plotters. These options vary from printer to printer. If you have several printers installed, you can use the Printer command to let Windows know which printer you want to use.

The two Printer Timeouts settings let you adjust the amount of time Windows waits before sending you messages about printer problems. The Device Not Selected setting controls the amount of time Windows waits before notifying you that a printer is off-line. The default setting is 15 seconds. The Transmission Retry setting controls the amount of time Windows waits for output characters to be received by a printer before notifying you that it cannot print to the device. The default setting is 45 seconds.

To select a system default printer or change printer output modes, follow these steps:

- 1 Choose the Printer command from the Setup menu. A dialog box appears listing all available printers and their port connections.



---

### Selecting default printers and output modes

- 2 To select a default printer, move to the Default Printer list box and select the name of the printer that you want to serve as the default.
- 3 Choose the OK button. Another dialog box appears containing the default mode settings for your printer.
- 4 If necessary, change the settings.
- 5 Choose the OK button.

To change the amount of time Windows waits before sending you messages about printing problems, do the following:

- 1 Choose the Printer command from the Setup menu. A dialog box appears.
- 2 To change the Device Not Selected setting, move to that text box and type the number of seconds you want Windows to wait before sending you a message that the printer is off-line.
- 3 To change the Transmission Retry setting, move to that text box and type the number of seconds you want Windows to wait before sending you a message that it cannot print to the device.
- 4 Choose the OK button. A dialog box appears showing the default settings for your printer.
- 5 If necessary, change the settings.
- 6 Choose the OK button.

## Setting Up a Communications Port

You use the Communications Port command to set up a serial communications port. You would want to do this if you are setting up a communications device or a serial printer.

**Note** If you are setting up a serial printer, check your printer's manual to make sure that the port settings you select are correct.

To choose a communications port, follow these steps:

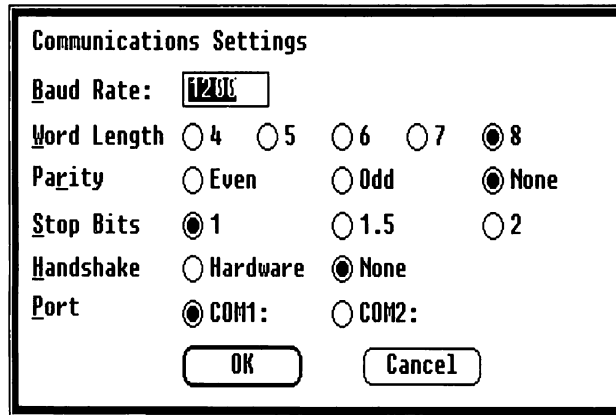
- 1 Select the Setup menu and choose the Communications Port command. The Communications Settings dialog box appears displaying the available serial ports and their port settings.

---

### Adjusting the printing message delay

---

### Choosing a communications port



- 2 Choose a port; the settings for that port appear.
- 3 Select the appropriate options.
- 4 Choose the OK button.

---

## Selecting Screen Colors

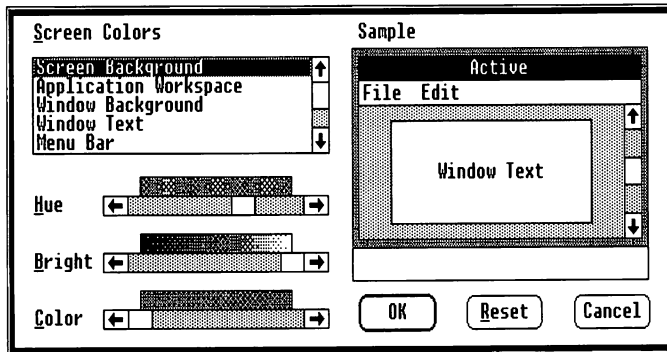
You use the Preferences menu's Screen Colors command to adjust the text and background colors on your screen. The Screen Colors command also lets you adjust the shades of gray on the screen. You can specify hue, brightness, and amount of color for the following areas of your screen:

- Screen background
- Application workspace
- Window background
- Window text
- Menu bar
- Menu text
- Active (selected) title bar
- Inactive (unselected) title bar
- Title-bar text
- Active border
- Inactive border
- Window frame (the border that surrounds the window)
- Scroll bars

## Adjusting screen colors

Here's how to select screen colors:

- 1 Select the Preferences menu and choose the Screen Colors command. The Screen Colors dialog box appears.



- 2 In the list box, select the part of the screen or window for which you want to adjust the color.
- 3 To change the hue, move to the Hue scroll bar. Available colors are shown in the color palette above the scroll bar. Scroll to the right or to the left to choose a color. The Sample area simulates the window appearance.  
Use the RIGHT or LEFT key to change settings in small increments. To move across the scroll bar more quickly, use the PAGE UP or PAGE DOWN key. If you are using the mouse, you can click the scroll arrows or drag the scroll box.
- 4 To change the brightness, move to the Bright scroll bar. Scroll to the right to brighten the color (increase the amount of white). Scroll to the left to darken the color.  
If the Bright scroll box is at the extreme left of the scroll bar, the color is black. If the scroll box is at the extreme right, the color is white.
- 5 To change the color, move to the Color scroll bar. Scroll to the right for a more vibrant, intense color. Scroll to the left for less intensity or saturation.  
If the Color scroll box is at the extreme left of the scroll bar, adjustments to the Hue and Bright scroll bars will result only in black, white, and shades of gray.

- 6 When you have adjusted the screen colors to your satisfaction, choose the OK button. If you have changed your mind and want to return to the previous settings, choose the Reset button. This restores the original settings but does not close the dialog box. To cancel the new settings and close the dialog box, choose the Cancel button.

The Hue, Brightness, and Color controls are similar to those on a color TV; adjust the controls until you have the effect you want.

**Note** You need to run the Setup program again if you want to add or change graphics cards or change the resolution of the graphics card you have already set up. You cannot use Control Panel to make these changes in your system configuration. See Chapter 1, "Getting Started," for information on running Setup.

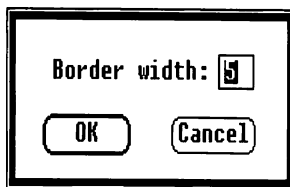
---

## Changing the Window Border Width

The Border Width command in the Preferences menu lets you change the width of the border around a window. You cannot change the width of a fixed-size window, such as the Control Panel window.

Here's how to change border width:

- 1 Select the Preferences menu and choose the Border Width command. A dialog box appears.



- 2 The Border Width text box shows the current width of the border. Windows automatically sets the value to 5. To change the border width, type a new number. The larger the number the wider the border.
- 3 Choose the OK button.

---

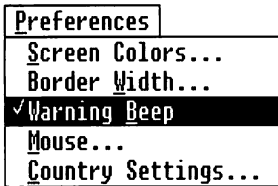
### Adjusting the window border width

---

## Turning Off the Warning Beep

When you're using Windows, your computer sometimes beeps; for example, this occurs if you press the wrong key. You can turn off the beep by using the Warning Beep command from the Preferences menu.

You can tell if the Warning Beep feature is in effect by looking at the Preferences menu. A checkmark appears by the Warning Beep command when the feature is active.



To turn the beep on or off, do the following:

- Select the Preferences menu and choose the Warning Beep command.

---

### Adjusting the beep feature

---

## Changing Mouse Options

The Mouse command in the Preferences menu lets you change which mouse button you press and adjust how fast the mouse pointer moves on the screen.

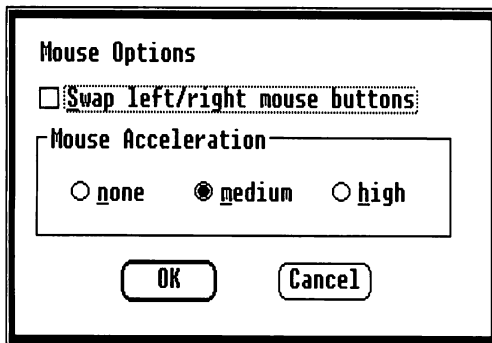
Windows generally uses only the left mouse button. You can switch usage from the left mouse button to the right mouse button (and vice versa). With the Mouse Acceleration setting, you can increase or decrease the speed at which the pointer moves on the screen.

---

## Switching mouse buttons

Follow these steps to switch mouse buttons:

- 1 Select the Preferences menu and choose the Mouse command. A dialog box appears.



- 2 Set the Swap Left/Right Mouse Buttons option.
- 3 Choose the OK button.

---

## Adjusting the pointer speed

To change the speed at which the mouse pointer moves across the screen, do the following:

- 1 Select the Preferences menu and choose the Mouse command. A dialog box appears.
- 2 Choose the acceleration rate you want. The default is medium.
- 3 Choose the OK button.

Once you have set these options, they remain set until you change them. If you have switched the mouse button function, applications that normally use the right button for extended usage will now use the left button to perform these functions.

---

## Changing Country Settings

You can set variables (such as date, number, and time formats) for a particular country by using the Preferences menu's Country Settings command.

You can make changes to the following settings:

- Country
- Time format (12- or 24-hour)
- Trailing string (A.M., P.M., etc.)
- Time-separator symbol
- Date format (month-day-year, year-month-day, etc.)
- Date-separator symbol
- Number-separator symbols
- Number of significant decimal digits
- List-separator symbol
- Leading zero
- Currency symbol

To change country settings, complete the following steps:

- 1 Select the Preferences menu and choose the Country Settings command. You will see the Country Settings dialog box.

## Adjusting country settings

**Country Settings**

U.S.A.  
Japan  
Netherlands  
Belgium  
France

**Time Format**  
 12 hour 11:59 AM 23:59 PM  
 24 hour Separator: :

**Date Format**  
 MDY  DMY  YMD  
 Separator: /

**Number Format**  
 1000: , Decimal digits: 2  
 Decimal: .  Leading Zero  
 List: ,

**Currency Format**  
 Symbol: \$  Prefix  Suffix

OK Reset Cancel

- 2 In the country names list box, select the appropriate country name.  
Notice that the country settings automatically change to correspond to the country you select.
- 3 If you do not want to make any modifications to the country settings, choose the OK button. The settings will be saved and will become your default values. See the following section for information about changing the settings. If you want to return to the original settings, choose the Reset button.

## Creating New Country Settings

If the country name you want is not shown in the list box, you can create your own country settings.

Here's how to do so:

- 1 Select Other Country in the country names list box.  
The settings displayed are for your current country setting (for example, the USA settings). You can change any of the settings.

---

### Making new country settings

## Changing the Time Format

To change the time format, follow these steps:

- 1 Move to the Time Format section.

Time Format

12 hour 11:59 AM 23:59 PM

24 hour Separator: :

- 2 Select the time format you want (12- or 24-hour). Notice that when you switch to the 24-hour format, the A.M./P.M. designations disappear.
- 3 Move to the trailing-string text boxes (shown as 11:59 and 23:59) and type the appropriate trailing string (for example, AM).
- 4 Move to the Separator text box and type the time-separator character you want (for example, :).

## Changing the Date Format

Here's how to change the date format:

- 1 Move to the Date Format section.

Date Format

MDY  DMY  YMD

Separator: /

---

### Adjusting the date format

- 2 Select the date format you want (M stands for month, D for day, and Y for year).
- 3 Move to the Separator text box and type the appropriate date separator (for example, /).

### Changing the Number Format

To change the number format, do the following:

- 1 Move to the Number Format section.

**Number Format**

1000:       Decimal digits:

Decimal:        Leading Zero

List:

- 2 Move to the 1000 text box and type the symbol used to separate the 1 from the 000.
- 3 Move to the Decimal text box and type the symbol used to separate integers from decimals.
- 4 Move to the List text box and type the symbol used to separate items in a list.
- 5 Move to the Decimal text box and type the number of decimal digits you want to display.
- 6 Move to the Leading Zero check box. If you want a leading zero in front of your decimal numbers, set this option.

### Changing the Currency Format

Follow these steps to change the currency format:

- 1 Move to the Currency Format section.

**Currency Format**

Symbol:        Prefix       Suffix

---

**Adjusting the number format**

---

**Adjusting the currency format**

- 2 In the Symbol text box, type the appropriate currency symbol.
- 3 Move to the Prefix or Suffix option button and select the option that corresponds to your currency. If the currency symbol precedes the number, select the Prefix option. If it follows the number, select the Suffix option.

---

### **Saving country settings**

#### **Saving Country Settings Changes**

Once you have adjusted the country settings to your satisfaction, you can save them by choosing the OK button in the Country Settings dialog box. The settings you have indicated will become effective immediately, and your WIN.INI file will be updated to reflect the changes.

If you decide to return to your original settings and keep the dialog box on the screen, choose the Reset button. To cancel the new settings and return to Control Panel's main window, choose the Cancel button.

---

### **Quitting Control Panel**

Once you have finished adjusting the different system settings, you may want to quit Control Panel.

To exit from Control Panel, follow this step:

- 1 Select the Installation menu and choose the Exit command.

---

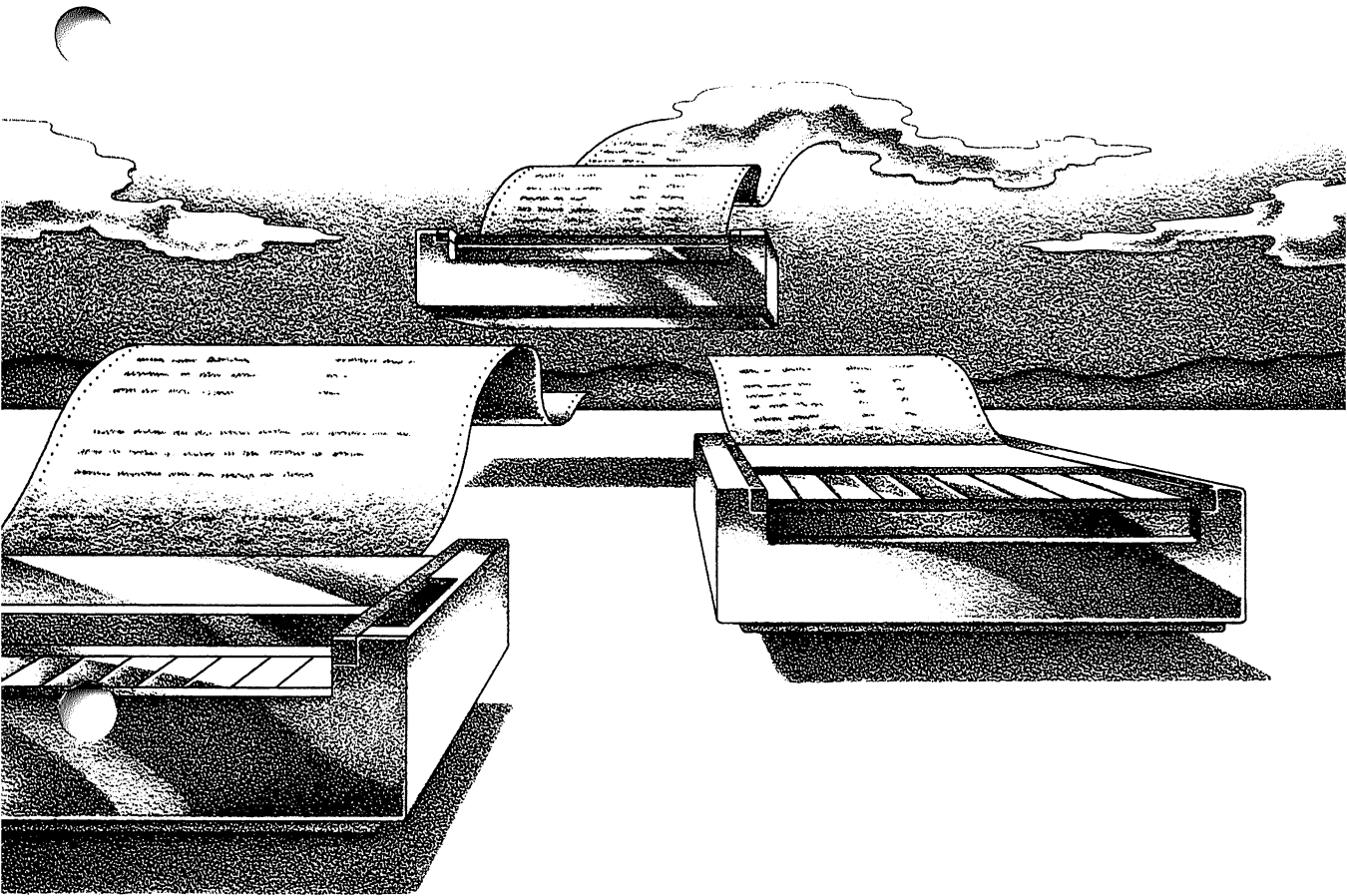
### **Exiting from Control Panel**

## 8 Using Spooler

In Microsoft Windows, files are printed by the Spooler program. When you choose a print command in a Windows application, the application creates a print-spool file, and Spooler automatically starts to print the file on the printer.



After Spooler starts, its icon appears on your screen. Spooler works in the background so that you can continue to work in an application while your file is being printed.



## Displaying Spooler in a Window

You can enlarge the Spooler icon to a window to look at the list of files being printed. The file listing, called the print queue, lists files in the order they will be printed. The listing also contains information about your printer, including its port, port status (whether the printer's in use), and name. If necessary, you can also work in the Spooler window to interrupt or cancel a print job.

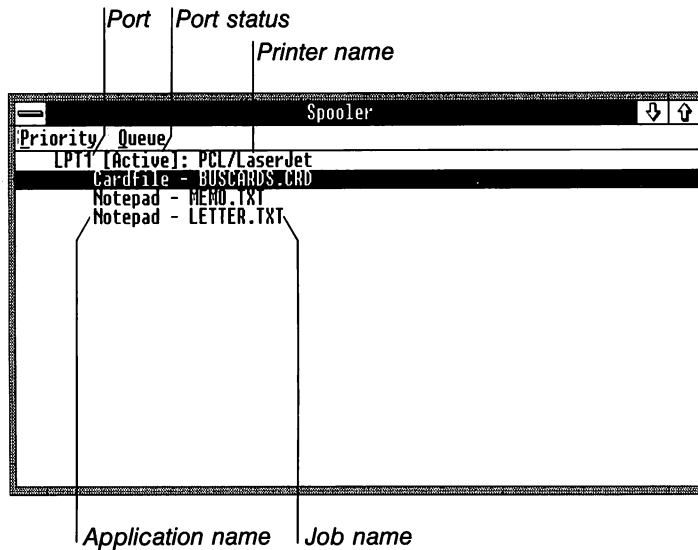
Spooler is used only for Windows applications. On a two-drive system, the Spooler program is located on the Windows system disk.

For information about setting up your printer, see your printer's manual. For details on adding or removing a printer and on specifying printer modes and options, see Chapter 7, "Using Control Panel."

### Viewing the print queue

To look at the print queue, follow these steps:

- 1 Select the Spooler icon.
- 2 Select the icon's Control menu and choose the Restore command. The Spooler window appears containing information similar to that shown in the following figure.



Follow this step to view the print queue with the mouse:

- Double-click the Spooler icon.



The first file in the list is the one that is currently printing. Spooler works on one job at a time in the order that the jobs are listed. If the entire list cannot fit on your screen, the window will have a vertical scroll bar that you can use to see the remaining entries.

---

## Specifying Printing Speed

You use the Priority menu commands to specify how fast you want to print your work. These commands change the rate at which information is transferred from Spooler to the printer ports.

If you want Spooler to print a job faster, do the following:

- Select the Priority menu and choose the High command.

This setting uses more of your computer's processor time, causing other applications to run more slowly.

If you want Spooler to print at a slower speed and free more processor time for other applications, follow this step:

- Select the Priority menu and choose the Low command.

A checkmark next to the High or Low command on the Priority menu indicates the current setting.

---

**Specifying how fast to print**

---

## Halting or Canceling a Print Job

You use the Queue menu commands to temporarily halt or cancel a print job.

Follow these steps to interrupt a print job:

- 1 Select the filename of the job you want to interrupt by pressing the UP or DOWN key or by clicking the filename with the mouse.

---

**Interrupting a print job**

- 2 Select the Queue menu and choose the Pause command. The print-queue listing for that job now lists the port status as paused.

---

### Resuming a print job

Do the following to continue printing the file:

- 1 Select the Queue menu and choose the Resume command.

---

### Canceling a print job

To cancel a print job, follow these steps:

- 1 Select the filename of the job you want to cancel.
- 2 Select the Queue menu and choose the Terminate command.  
A dialog box appears asking you to confirm the cancellation.
- 3 Choose the Yes button.

**Warning** If you terminate a job that is printing in graphics mode, you may need to reset your printer to ensure that the buffer is cleared.

---

## Spooler Messages

---

### Displaying Spooler messages

Spooler sometimes displays information about the status of your printing jobs. If Spooler needs to display information, but the Spooler window or icon is not selected, the title bar or icon will flash. Select Spooler's window or icon to display the message.

Some of the messages Spooler sends depend on the settings you specify in Control Panel's Setup menu. See the section called "Setting Up Printers" in Chapter 7, "Using Control Panel," for more information.

**Note** You can print from a Windows application without using Spooler. This may be preferable when running Windows on a two-drive system since it conserves disk space. To use this feature, you need to edit your WIN.INI file. See the section called "Settings in [Windows]" in Appendix A, "Customizing Your WIN.INI File," for more information.

---

## Quitting Spooler

After the files in the print queue have been printed, you can quit Spooler. If you quit Spooler while files are still in the print queue, the remaining print jobs will be terminated.

To exit from Spooler, do the following:

- Select the Priority menu and choose the Exit command.

If print jobs remain in the print queue, a dialog box appears asking you to confirm the cancellation.

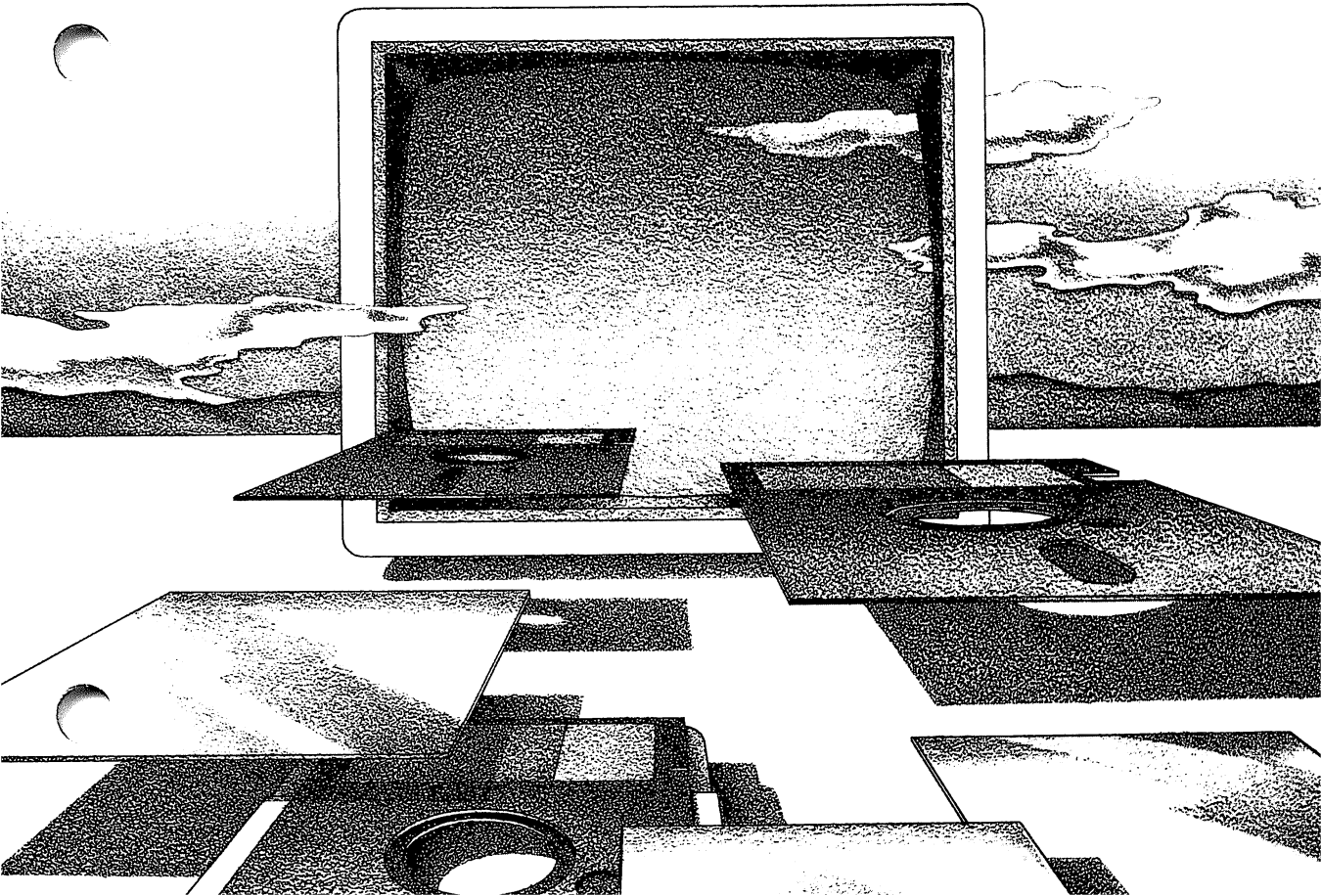
---

## Exiting from Spooler

---

## 9 Using Standard Applications

In earlier chapters, you learned to use applications that were designed to run with Microsoft Windows. This chapter explains how to run applications that were not designed specifically for Windows; these are known as standard applications. Applications that run under DOS — such as Microsoft Multiplan®, Microsoft Word, Lotus 1-2-3, and MultiMate — can run with Windows. You'll find that it is faster, easier, and more efficient to work with your applications when they are run with Windows.



---

## Introduction to Standard Applications

Running standard applications from Windows provides several benefits, including the following:

- You can run several applications simultaneously and switch from one to another.
- You can transfer information from a standard application to another application.
- Often, you can run your standard application in a window and use Control-menu commands to manipulate the application.

**Note** Windows allows you to run only the applications that normally run on your computer. In other words, applications written for operating systems other than DOS (XENIX, for example) will not run with Windows.

## How Windows Displays Standard Applications

When you run standard applications from Windows, they are displayed on the screen in one of two ways: in a window or full-screen. An application that runs in a window looks similar to Windows applications and has many Windows features, including a Control menu and a title bar. These applications are described in more detail in the following section. A full-screen application looks much the same as when you run it without Windows. (Generally, standard applications that display graphics are displayed full-screen.) Details on these applications are given in the section called "Using Full-Screen Applications" later in this chapter.

The way an application appears on the screen is determined by the amount of computer memory that has been reserved for it, the way it uses system resources and hardware, and the way it has been set up to run. Some applications can run either in a window or full-screen, while others can run only full-screen.

### Using Applications That Run in a Window

There are many applications that can run in a window.

---

### How standard applications look

---

### Applications that run in a window

This standard application is running in a window.

The screenshot shows a window titled "Multiplan" with a menu bar and a table of data. The table has columns for "Region", "1985", and "1986". The data is as follows:

Region	1985	1986
North	124	133
South	54	67
East	101	109
West	42	89
Total	321	398

Below the table, the command menu is visible:

```

COMMAND: (F1) Blank Copy Delete Edit Format Goto Help Insert Lock Move
          Name Options Print Quit Run Sort Transfer Value Window Xternal
Select option or type command letter
RIC1                                     100% Free   Multiplan: TEMP
  
```

If your application has any of the following features, it probably can run in a window:

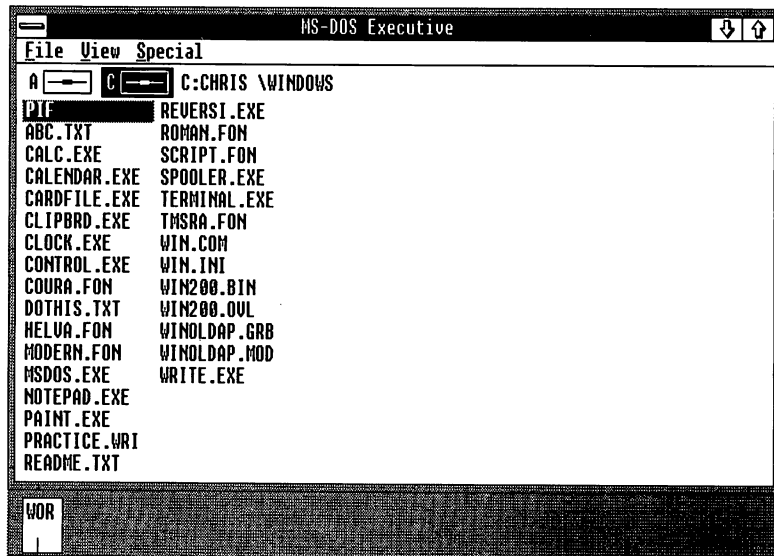
- The application can be set up to run with Windows, TopView, or an American National Standards Institute (ANSI) device driver. Check your application's installation instructions for information on this feature.
- The application software includes a TopView PIF file that allows the application to run in a TopView window.
- The application displays text by using standard DOS, ROM BIOS (read-only memory/basic input and output system), or ANSI call conventions. This feature may be difficult to determine. If you don't know this information, base your decision on the two previously listed features.

If your application has none of the above features, you may need to experiment to determine whether or not it runs in a window. The section called "Determining Whether an Application Can Run in a Window" later in this chapter gives details on how to do this.

When a standard application runs in a window, it has a title bar and a Control menu, just like Windows applications do. However, Windows adds several commands to your standard application's Control menu; this is described in the section called "Transferring Information" later in this chapter.

Standard applications that run in a window can also be run full-screen. Full-screen applications are described in the following section.

**Note** When you use the Minimize command or box to shrink a standard application that is running in a window, you see an icon for the application, just like you do for a Windows application. The icon is a rectangle that contains an abbreviation of the application's name.



*Icon for the standard application*

## Using Applications That Run Full-Screen

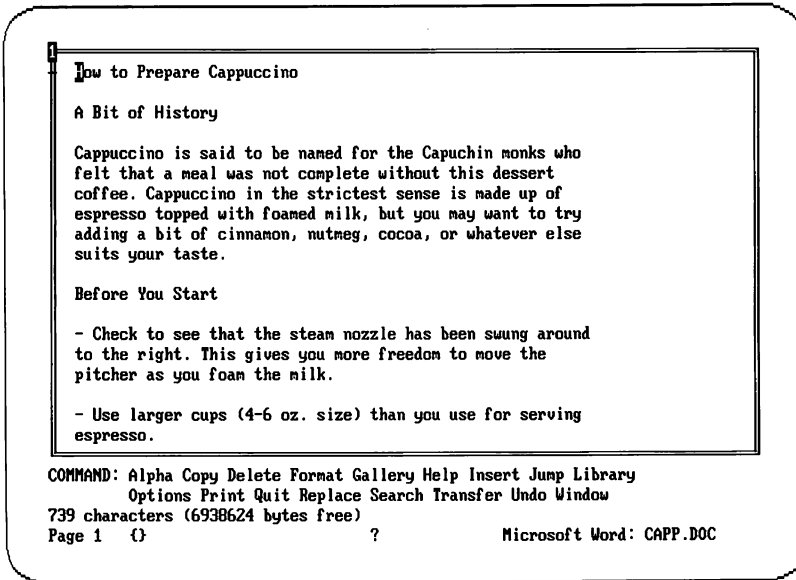
### Full-screen applications

Some standard applications must be run full-screen. Applications that display graphics on the screen, or those that have direct access to the part of memory that is used by the screen, cannot be run in a window.

When an application is running full-screen, Windows temporarily removes itself from the screen. When you switch to another application, the full-screen application becomes an icon. Moving from one application to another is described in the section called "Moving Between Applications" later in this chapter.

When you run a full-screen application, all other applications, including Windows applications, suspend operation. They resume operation when you quit the full-screen application or shrink it to an icon.

*This standard application is running full-screen.*



## Using Memory-Resident Applications

Memory-resident applications are programs such as network servers, pop-up applications, expanded-memory managers, and disk-caching programs such as SMARTDrive. Most memory-resident applications are special programs that extend the power of your computer and add-on cards. They work silently and require no interaction with the user. Pop-up programs, such as Sidekick, are memory-resident applications that let you enter, view, and process information. These programs temporarily suspend your current application while you work with them, then let you return to the suspended application.

If you want to use memory-resident applications, you must start them before you start Windows. Once started, memory-resident applications are always ready for use when you or DOS need them. However, if your memory-resident application is a pop-up program, you may not be able to use it while Windows applications are on the screen. You can, however, use the application while running full-screen standard applications.

Windows Desktop applications provide many of the features found in popular pop-up programs. You should consider using the Desktop applications instead of the pop-ups. If you do decide to run pop-ups, be aware that some of them may not run properly with Windows because they were not designed especially for Windows.

---

### Memory-resident applications

## Using Program Information Files

---

### Using PIF files

Because standard applications were not written for Windows, they require program information (PIF) files to run with Windows. PIF files supply information to Windows about how an application uses the screen, system memory, and other computer resources. For example, Windows uses PIF files to learn how much memory an application needs. You can recognize PIF files by their .PIF extension. For information on creating and editing PIF files, see Chapter 10, "Using PIF Editor."

If there is no PIF file for an application, Windows uses a set of default program characteristics to run the application. However, you are encouraged to use PIF files with your standard applications because a PIF file allows you to run the application in the most efficient way. A PIF file may also give your application more capabilities than it is given when you rely on the default PIF settings. For example, using the default settings prevents you from switching to other applications unless you first exit from the application you are running.

---

### Running standard applications from PIF files

You can start an application by running its PIF file; this process is described in the section called "Starting an Application from a PIF File" later in this chapter. Windows runs the application named in the file and uses the resource settings listed there. A number of PIF files for popular applications are provided on your Windows disks. You may also find that your standard application's disk includes a PIF file.

You can create more than one PIF file for an application so that you can run it in different ways at different times. For example, when you start Microsoft Multiplan to work on business, you may want to be in a directory you've set up for business data. When you start Multiplan to work on personal data, you may want to be in another directory. You can set up Multiplan to run both ways by creating two different PIF files for starting the program, for example, MPWORK.PIF and MPHOME.PIF. Each PIF file starts the same Multiplan program, but the first PIF file opens the program in the MPWORK directory and the second opens it in the MPHOME directory.

---

### Running standard applications from batch files

If you run a standard application from a batch file, you should create an additional PIF file for the batch file. Set the options in the batch PIF file to match those in the application PIF file, and give the PIF file the same base filename as the batch filename (the PIF file will have the .PIF extension).

Occasionally when you are using a batch file to run an application, Windows displays a message saying "Not enough memory to run." This may occur because the application's PIF file does not specify enough memory to run both the batch file and the

application. To correct this, increase the amounts specified in the KB Required and KB Desired text boxes in the PIF file to allow adequate memory to run both files.

---

## Starting Standard Applications

There are two ways to start a standard application. You can run the application's PIF file, or you can run the application file (a file with a .EXE, .COM, or .BAT extension). In both cases, you run the file from the MS-DOS Executive window.

Whenever possible, you should use PIF files to start your standard applications, then you can take advantage of the preset options that make your application run more efficiently. In some cases, you may want to have more than one PIF file for an application, each with different options selected. In such cases in particular, you should use the desired PIF file to start the application. (If you use the application file, Windows by default uses the PIF file with the same base filename and runs your application using those options. These may not be the options you want to use at that time.)

If you start an application from a PIF file, the PIF file must be in the same directory as the application, or the application must be in a directory listed in the PATH variable in your AUTOEXEC.BAT file. As an alternative, you can list the full pathname of the application in the PIF file. See Chapter 10, "Using PIF Editor," for details on changing your PIF file.

### Starting an Application from a PIF File

To use a PIF file to start your application, follow these steps:

- 1 Move to the directory that contains the PIF file. For PIF files supplied with Windows, this is the PIF directory; it is created when you install Windows.
- 2 Copy the PIF file to your standard application's startup disk or directory, or make sure the directory containing the application file is in your PATH variable.
- 3 Select the PIF file and press the ENTER key or, with the mouse, double-click the filename.

---

### Starting applications from PIF files

## Starting an Application by Using Its Filename

If you start the application by using its filename, you must first be sure that any related PIF file has the same base filename so that Windows can locate it. For example, if you use the file named DBASE.COM to start dBASE II, the associated PIF file must be DBASE.PIF.

---

### Starting applications by using their filenames

Follow this step to start an application by using its filename:

- Select the application filename and press the ENTER key or, with the mouse, double-click the filename.

**Note** An application may have more than one .EXE or .COM file on its disk. You should have a separate PIF file for each one.

## Determining Whether an Application Can Run in a Window

You can determine whether a standard application can run in a window by editing the application's PIF file and then running the application.

Before trying the following procedure, you should close all other applications, including Windows applications. Then if your application doesn't run in a window and you have to quit Windows temporarily, you will not lose any information from other applications.

---

### Checking for window capabilities

You can check to see if your application can run in a window by following these steps:

- 1 Turn off the Directly Modifies Screen check box in the application's PIF file. (For information on setting options in the PIF file, see Chapter 10, "Using PIF Editor.")
- 2 Run the application.

If the application displays information outside the window, it cannot run in a window.

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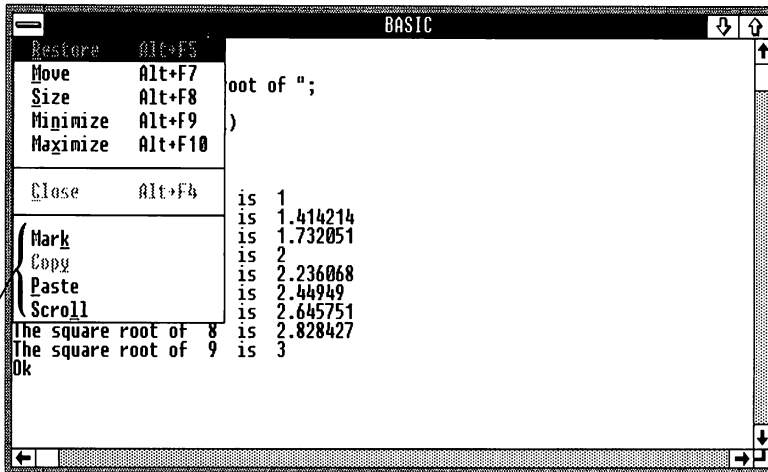
### Returning to Windows

If the application does not run in a window, you can return to Windows and correct the PIF file by doing the following:

- 1 Quit the standard application using its quit or exit command.
- 2 Quit Windows and then restart it.
- 3 Turn on the Directly Modifies Screen check box in the PIF file.

## Displaying the Control Menu

If your standard application is running in a window, Windows adds commands to the Control menu, for example, the Mark, Copy, Paste, and Scroll commands. The other Control-menu commands allow you to manipulate the standard application's window, just as they do for Windows applications.



*These commands are added to the Control menu.*

Even though your application is running full-screen, it may have a Control menu (this usually is true for an application that allows you to switch to other programs without quitting the application).

To see if your full-screen application has a Control menu, follow this step:

- Press ALT, SPACEBAR.

If a full-screen application has a Control menu, you can shrink the application to an icon by choosing the Minimize command from the menu.

In standard applications, the Control menu contains commands for transferring information between applications (Mark, Copy, Paste), in addition to the Close command for closing the window. These commands are described in the sections called "Transferring Information" and "Quitting Standard Applications" later in this chapter.

---

### Checking for a Control menu

**Note** You can use the direct-access method to choose commands from a menu in a full-screen standard application, just as you can with applications that run in a window. The direct-access method lets you choose a command by pressing the key that corresponds to the underlined character in the menu-command name. In full-screen applications, however, the character may not be underlined; the appearance of the character is determined by the display device you are using.

---

## Moving Between Applications

To switch from one standard application to another (or to a Windows application), you can usually follow the regular Windows procedures.

---

### Switching from a full-screen application

If you switch from a full-screen application to another full-screen application, the new application's screen is displayed. If you switch to an application that runs in a window, the application's window or icon is brought to the front of the screen and becomes active. The full-screen application you just left is represented by an icon on the screen and suspends operation until you return to it.

Some full-screen standard applications may not allow you to switch to any other applications until you exit from the application. In this case, the system sounds a warning beep, and the application remains on your screen. When you exit from the application, you return to the Windows screen. You can then switch to the other applications.

---

### Switching from an application that runs in a window

If you are working in an application that runs in a window, you switch to a full-screen application by following these steps:

- 1 Press ALT+ESCAPE. If you're using the mouse, you can click the window or icon (you may need to do this several times). This selects the full-screen application's icon, and the application name is displayed.
- 2 Press ALT, SPACEBAR (or click the icon with the mouse) to display the icon's Control menu.
- 3 Choose the Maximize or Restore command.

---

### Using ALT+TAB

You can also switch between applications by pressing ALT+TAB. When you release ALT+TAB, the application window or screen is restored.

**Note** If you are using a two-drive system and want to keep your data files on separate disks, be sure that the correct data disk is in the drive when you switch programs.

---

## Transferring Information

There are two ways to copy information between applications: you can transfer a complete screenful of information from an application, or you can transfer portions of information.

Information that you are transferring is stored on the Windows Clipboard. For information on Clipboard, see Chapter 6, "Using Clipboard."

### Copying an Entire Screen

To copy the entire screen from a standard application to the Clipboard, follow these steps:

- 1 Make sure that the information you want to copy is on the screen.
- 2 Press ALT + PRINTSCREEN.

This takes a "snapshot" of the screen. The information is now available on the Clipboard and can be transferred to Windows applications.

If you are unable to capture a graphics screen by pressing ALT + PRINTSCREEN, it may be for one of the following reasons:

- In the application's PIF file, the Graphics/Text option in the Screen Exchange section is not selected. This option must be selected to reserve space in memory for storing the screen image.
- If you are trying to copy from a medium-resolution or high-resolution screen, the memory required to store the screen image may be too large for the image to be transferred.

You can experiment to see if your screen can be transferred to the Clipboard. If it cannot be transferred, you will hear a beep when you press ALT + PRINTSCREEN.

### Copying Partial Screens

To transfer selected parts of the screen, use the Mark, Copy, and Paste commands from the Control menu.

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### Copying a screenful of information

## Using the Mark Command

You use the Mark command to select information on the screen so that you can copy it to the Clipboard.

### Selecting information

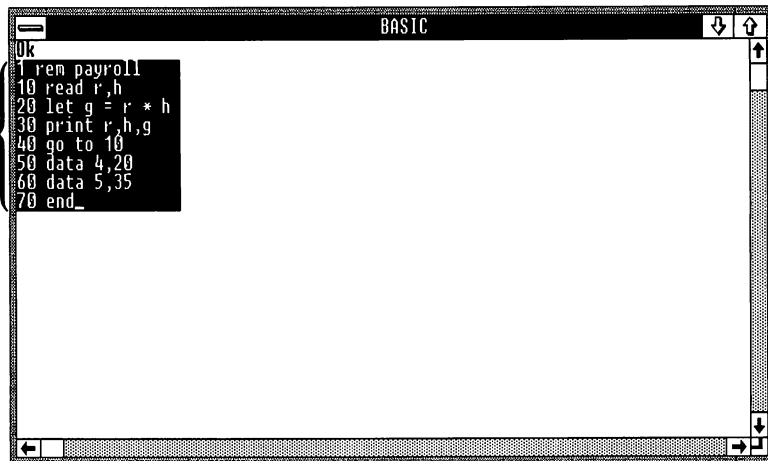
Follow these steps to select information for copying:

- 1 Select the Control menu and choose the Mark command.  
A rectangular cursor appears at the upper-left corner of the window.
- 2 Press the DIRECTION keys to move the cursor to the beginning of the information you want to select. Press and hold down the SHIFT key, then use the DIRECTION keys to select the information.

For example, to select a paragraph, move the cursor to the first character of the paragraph. Press and hold down the SHIFT key. Use the RIGHT key to go to the end of the line, then use the DOWN key to go to the last line of the paragraph.

- 3 Release the SHIFT key.

*You use the Mark command to select text.*



Follow these steps to select information with the mouse:

- 1 Select the Control menu and choose the Mark command.  
A rectangular cursor appears at the upper-left corner of the window.



- 2 Drag the cursor across the information that you want to select.
- 3 Release the mouse button.

To cancel the selection, follow this step:

- Press the ESCAPE key or, with the mouse, click outside the selected area.

## Using the Copy Command

After you've selected the information, you can copy it to the Clipboard by following this step:

- Select the Control menu and choose the Copy command.

## Using the Paste Command

You use the Paste command to transfer compatible information from the Clipboard to another application or to another place in the same application. You can paste text onto a full-screen standard application. However, you cannot paste graphics onto any standard applications.

If an application has more than one mode, it must be in its text-entry mode in order for text to be pasted onto it. For example, it is common for word-processing applications to have a text-entry mode for typing text, and a command mode for controlling format or insertion-point movement. You should change to the text-entry mode before pasting text onto such an application.

To paste information from the Clipboard, follow these steps:

- 1 Move the application's insertion point to the area where you want to insert the information.
- 2 Select the Control menu and choose the Paste command.

If you paste formatted text, the text will transfer but not the formatting.

---

### Canceling a section

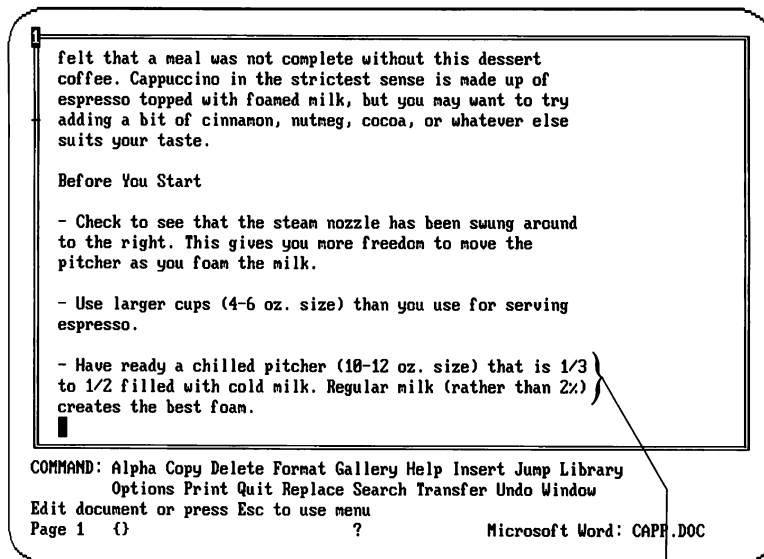
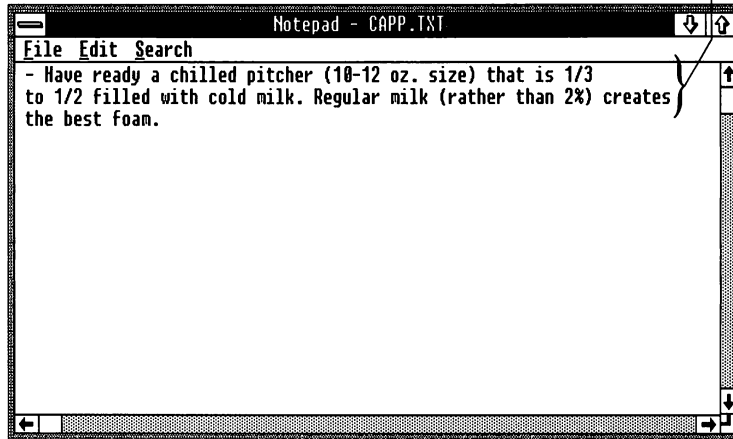
---

### Copying information

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### Pasting information

*This text was copied from Notepad ...*



*... and pasted into Microsoft Word.*

---

## Scrolling the Window

In addition to the Mark, Copy, and Paste commands that Windows adds to a standard application's Control menu, Windows may also add the Scroll command.

When a standard application is running in a window, Windows acts as a kind of viewer, displaying information inside the window which would normally fill the whole screen. As a result, you may not be able to see all the information, especially if the application is sharing the screen with several other windows. You can use the Scroll command to move the information in the window so that you can see other parts of the file.

The Control menu's Scroll command is independent of commands your application may have for scrolling information. The application may have additional scrolling commands or keys for moving to other parts of a file. See the application's manual for this information.

To scroll a window, follow these steps:

- 1 Select the Control menu and choose the Scroll command.
- 2 Use the keys described in the following list to scroll in the desired direction.

Press these keys to scroll through a file:

To scroll	Press
Up one line	UP
Down one line	DOWN
Left one character	LEFT
Right one character	RIGHT
Up one screen	PAGE UP
Down one screen	PAGE DOWN
To the beginning of a line	HOME
To the end of a line	END

To stop scrolling, follow this step:

- ▣ Press the ESCAPE key or the ENTER key.

To scroll with the mouse, you can use the window's scroll bars. See Chapter 4, "Techniques," for details.

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### Scrolling through a file



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## Running Multiple Applications

With Windows, you can run as many applications at the same time as your system will allow. In addition, if you have a hard disk or a memory-expansion card, Windows can run more standard applications than can fit in memory.

---

### Swapping applications

If you try to start a standard application and your system doesn't have enough memory, Windows tries to share available memory by temporarily moving another application (and even parts of Windows itself) to the hard disk. This is referred to as "swapping." When you switch to the application that was swapped, Windows moves another application out of memory and brings the selected application back into memory.

Windows can also swap applications to expanded memory. To use this feature, your expanded-memory manager must support Windows 2.0. You must also edit the [pif] section in your WIN.INI file so that the /E option is specified in the swapdisk= entry. See Appendix A, "Customizing Your WIN.INI File," and Appendix E, "Special Notes on Using Windows," for more information on using expanded memory.

To run multiple applications efficiently, run the largest application first, or specify the size of the swap area in the WIN.INI file. See Appendix A, "Customizing Your WIN.INI File," for details.

When your system has low memory, Windows may excessively swap information from your disk, causing your system to run more slowly than normal. When this occurs, it is recommended that you close any applications that you do not need. This will give Windows more memory to manage your remaining applications.

If you try to run a standard application and Windows displays a message that there is not enough memory, try closing some of the applications you are running, then try to run the program again. You could also choose to reset the KB Required and KB Desired options in the PIF file, as described in the next section.

---

## Running Large Standard Applications

Occasionally, you may want to run a standard application that requires more memory than is available when Windows is running. When you try to run such an application, Windows displays a message saying “Not enough memory to run.” You can free up more memory to run the application by ensuring that Windows automatically swaps out unused parts of itself when you start the application. You can choose between two methods to do this:

- Set the KB Desired amount in the application’s PIF file to –1. When you run the application, Windows automatically frees up additional memory for the application by swapping out unused parts of Windows and any Windows applications; swapping will not occur if the application uses a communications (COM) port.
- Set the Directly Modifies Memory option in the application’s PIF file, then close all Windows programs except MS-DOS Executive and run the application. Windows swaps out unused parts of itself and gives the application most of the available memory. A small amount of memory is reserved for transferring information to the Clipboard. When you are finished using the application, you must quit the application to return to Windows. When you quit the application, the Windows screen returns.

**Note** There may be other cases when you will see the message saying “Not enough memory to run.” For a list of these cases and corrective actions you can take, see the section called “Not Enough Memory to Run” in Appendix B, “System Messages.”

If your application runs in a window, you can set the amount of memory without using a PIF file. To do this, create an entry in the [pif] section of the WIN.INI file, as described in the section called “Settings in [Pif]” in Appendix A, “Customizing Your WIN.INI File.”

---

## Quitting Standard Applications

To quit a standard application, you use the application’s quit or exit command. Normally when you quit an application, it is removed from your screen. However in some cases, information is left on the screen. If the application was running in a window, parentheses surround the application’s name in the title bar.

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### Freeing up memory

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**Exiting from standard applications**

To remove the information from the screen, follow this step:

- Select the Control menu and choose the Close command.

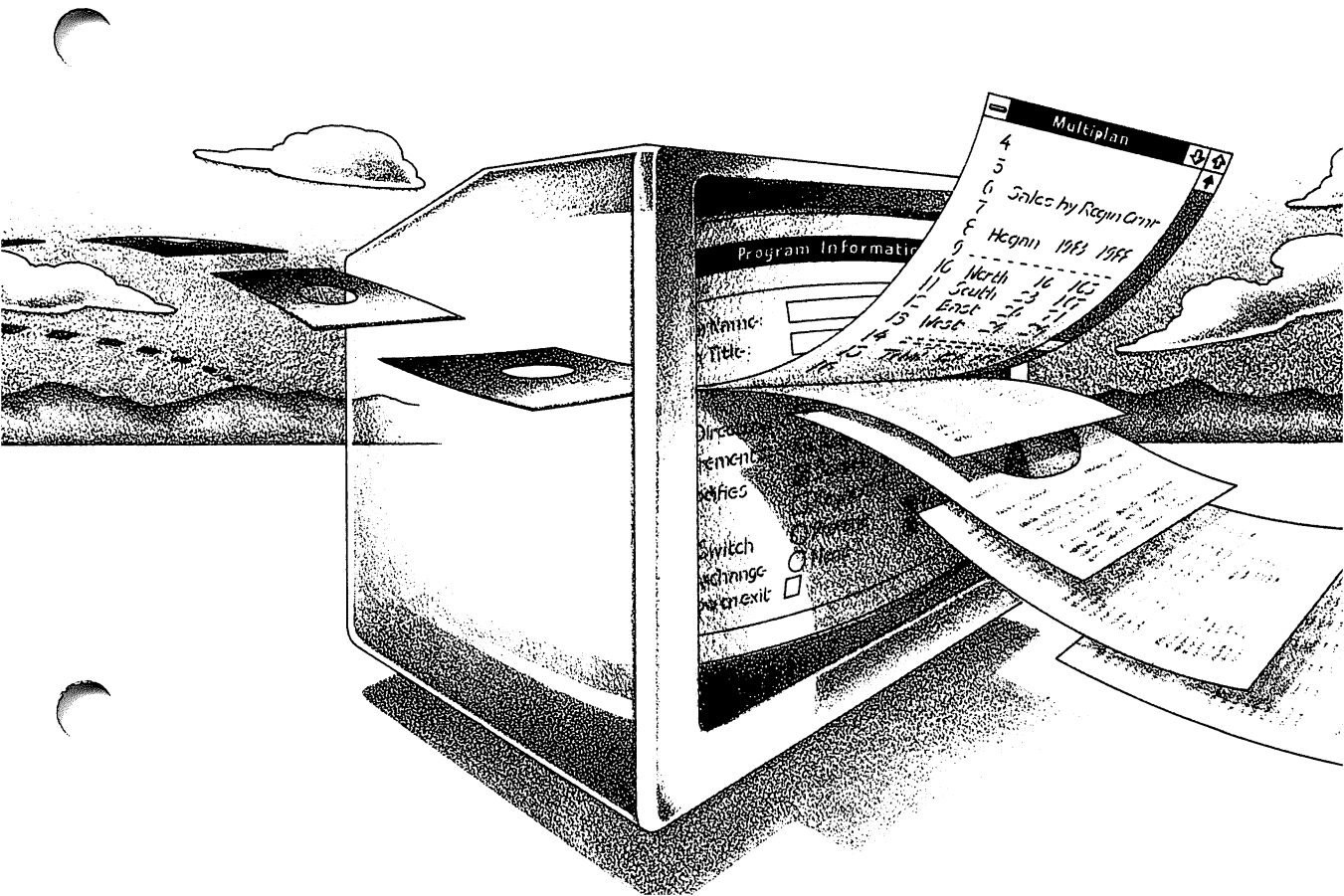
**Note** When closing COMMAND.COM, you must first exit from the program by typing *exit* in the command line. Then you can close the window by using the Control menu's Close command.

## 10 Using PIF Editor

As you learned in the previous chapter, program information (PIF) files are the files that tell Microsoft Windows how to run standard applications in the most efficient way. To create or revise PIF files, you use PIF Editor. For example, you might use PIF Editor to change the program settings in your application's PIF file to give the application more of the machine's available memory.

This chapter explains how to use PIF Editor. For information on using PIF files with your standard applications, see Chapter 9, "Using Standard Applications."

**PIF**



## Creating a PIF File

In some cases, your application will not have a PIF file and you will need to create one. (Be sure to check the PIF directory to see if Windows has supplied a PIF file for your application.)

To create a new PIF file, follow these steps:

- 1 Start PIF Editor by running the PIFEDIT.EXE file from the MS-DOS Executive window. (The PIFEDIT.EXE program may be located in the PIF directory.) Your PIF Editor screen will look something like the following one.

- 2 Type the application's filename in the Program Name text box. Include the original extension (*.exe*, *.com*, or *.bat*). If the application is in a subdirectory, type the full pathname including the drive letter, or make sure the directory is listed in your PATH variable.
- 3 Select the options or values that apply to the program. (For more information, see the section called "PIF File Options" later in this chapter.)
- 4 Select the File menu and choose the Save command to save the new PIF file.

To create another PIF file, do the following:

- 1 Select the File menu and choose the New command. This resets the PIF Editor screen.

---

## Editing a PIF File

Usually you will not need to change the information in your PIF files unless you want to change the settings for a particular program. The following is a partial list of situations that would require editing an application's PIF file:

- You want to set up an application to run in a window.
- You want to give an application the maximum amount of available memory on your machine.
- An application is not running as expected. You want to increase the memory requirements to see if the program will run better.
- You want to free up more memory for running a large application by having Windows swap unused parts of the Windows program to the hard disk when the application is started.
- Your application is located in a subdirectory and the PIF file supplied for the application does not list the full pathname of the program. You need to change the pathname listed in the Program Name text box.
- You want to specify a program parameter or change the default directory that contains your application's data files.

Editing procedures for some of these situations are listed in the section called "Situations Requiring PIF File Changes" at the end of this chapter.

Before editing a PIF file, it is a good idea to make a backup copy of the original. If your edited file does not run as expected, you can go back to the original and start over.

To edit a PIF file, follow these steps:

- 1 Start PIF Editor by running the PIFEDIT.EXE program from the MS-DOS Executive window. (The PIFEDIT.EXE program may be located in the PIF directory.)
- 2 Select the File menu and choose the Open command. You will see a dialog box listing the available PIF files.
- 3 Select the filename or type it in the text box, then choose the Open button or press the ENTER key. If the filename is not listed, type the full pathname of the file in the text box. To open the file with a mouse, double-click the filename.
- 4 Change the options.
- 5 Select the File menu and choose the Save command to save your changes.

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## Changing information in PIF files

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## Editing a PIF file

## PIF File Options

The following sections describe the entries in a PIF Editor window.

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### Program information

**About the Program** There are four entries for information about your application program:

- **Program Name.** Type the application's pathname, including the filename extension — for example, *a.dbase.com*.
- **Program Title.** Type a descriptive name that will appear in the window's title bar when you select the program's icon — for example, *IBM Writing Assistant*.
- **Program Parameters.** Type any parameters your program might need. These are the same parameters you would type after the application's filename when starting the program from outside Windows. For example, to run Microsoft Word in text mode, type */c*.

If you want Windows to prompt you for parameters, type *?*. When you try to run or load the application from the MS-DOS Executive window, you will be prompted for the parameters. Parameters can be filenames, letters, numbers, or any type of information up to 62 characters. If your application requires no parameters, or if you are uncertain, leave this option blank. (You cannot use this entry to redirect I/O or to do piping.)

- **Initial Directory.** Type the drive and directory you want Windows to go to when the application is started. This is usually the location of the application's data files.

Some programs require that certain files used by the program be located in the default directory. You should specify an initial directory for these programs to make certain the program can find the files.

---

### Memory information

**Memory Requirements** These two items describe the memory your application needs:

- **KB Required.** Type the minimum amount of memory in kilobytes (KB) that your application requires. Check the system requirements of your application. If you don't know how much is required, leave the default setting.

If Windows cannot provide the specified amount of memory, and you are running other applications, you will see the message, "Not enough memory to run." You may need to close some applications before continuing.

If you have a hard disk, you may be able to free up additional memory by having Windows swap, or remove itself, temporarily from memory. See the section called “Situations Requiring PIF File Changes” at the end of this chapter for more information on freeing memory.

- **KB Desired.** Type the maximum amount of memory your program can use. Some applications run more efficiently if more than minimal memory is provided.

If you leave this entry blank or type zero, Windows will allocate all available memory to the application.

If you enter `-1` in this field and the application is set up to run full-screen, Windows will attempt to swap itself to the hard disk to make room to run the application. (If any application is running that uses a communications port, Windows will not be able to swap the application or itself.)

**Note** Some utility programs that check available memory may not provide correct results when run from Windows. For example, DISKCOMP may give you the message “Not enough memory to run” when in fact, there is plenty of memory. If you see this message, close some applications and try again, or run the utility program from outside Windows.

**Directly Modifies** Many applications use system resources in ways that cannot be shared with other programs. In the following group, select any options that apply to your application:

- **Screen.** Turn on this check box if the application writes directly to the screen buffer (video memory). Applications that display graphics are in this category. Such applications cannot be run in a window. Selecting this option will run the application full-screen. If you are uncertain, select this option.
- **Keyboard.** Turn on this check box if your application uses the keyboard buffer. The keyboard buffer is the area where keystrokes are saved until they are processed.  
Selecting this option prevents the application from running in a window or switching back to Windows when you press `ALT+ESCAPE`. This option also prevents you from using Control menu’s Mark, Copy, and Paste commands. If you are uncertain, do not select this option.
- **COM1.** Turn on this check box if your application uses serial communications port 1 (COM1). If you select this box, Windows cannot run any other application that uses COM1 until

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**System-resource  
information**

you quit the first application. This prevents two applications from trying to use the same communications port at the same time.

Selecting this option also prevents the application from being swapped to the hard disk. Some programs must remain in memory at all times. Generally, you need to select this option only if you are running a communications application.

- **COM2.** Turn on this check box if your application uses serial communications port 2 (COM2). If you select this box, Windows cannot run any other application that uses COM2 until you quit the first application. This prevents two applications from trying to use the same communications port at the same time.

Selecting this option also prevents the application from being swapped to the hard disk. Some programs must remain in memory at all times. Generally, you need to select this option only if you are running a communications application.

- **Memory.** Turn on this check box if your application uses a memory-resident application (for example, Sidekick). These programs usually load and remain in memory, and are activated while other applications are running. If you are uncertain, do not select this box. For more information on this type of application, see the section called "Using Memory-Resident Applications" in Chapter 9, "Using Standard Applications."

You may wish to set this option in order to run a very large standard application. The option causes Windows to remove itself temporarily from memory to make room to run the program. To return to Windows, you must quit the application.

Selecting this option prevents data transfer to or from your application. You must close this application before switching to another.

---

## Switching applications

**Program Switch** If your application is running full-screen, the following options determine whether you can switch back to Windows by pressing ALT+ESCAPE. If you are uncertain which option to choose, choose Text.

- **Prevent.** Select this option to conserve memory for the application, or if you find that Windows does not switch correctly. If you select this option, you must quit the application to return to Windows.

- **Text.** Select this option if your application works in text mode only, or if it runs in text and graphics modes and you want to conserve memory. Windows will reserve four kilobytes to save the screen image.

If you select this option, you will be able to switch back to Windows only when the application is in text mode. If the application is in graphics mode, you must quit the program to return to Windows; Windows will beep when you press ALT + ESCAPE.

- **Graphics/Multiple Text.** Select this option if your application works in graphics mode. If you select this option, Windows allocates extra memory (16–36K) for you to switch back to Windows when the application is in text or graphics mode.

You may not be able to switch from a standard application that uses high-resolution color modes because of the extensive memory that is required.

**Screen Exchange** These options let you specify the kind of data exchange (text or graphics) between Clipboard and applications that require exclusive access to the screen. As described in the section called “Transferring Information” in Chapter 9, “Using Standard Applications,” you press ALT + PRINTSCREEN to put “snapshots” of the screen on the Clipboard. This copies the entire screen and requires Windows to reserve memory to save the screen image. Text screens do not usually require much memory (two kilobytes). However, low-resolution graphics screens generally require up to 32K of memory. You should keep this in mind as you select options. If you are uncertain, choose Text.

You cannot take a snapshot of a high-resolution color screen because of the extensive memory that is required.

- **None.** Select this option to prevent any exchange of screen data between a full-screen application and Clipboard. This conserves memory.
- **Text.** Select this option to allocate memory to take snapshots of text screens. If your application runs in a window, select the Text option.
- **Graphics/Text.** Select this option to allocate memory to take snapshots of text and graphics screens.

**Close Window on Exit** This option closes the standard application window when you exit the program, rather than leaving information on the screen.

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### Exchanging data using Clipboard

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### Closing a window

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## Default settings

### Default Settings

If you run an application and Windows cannot find a PIF file, Windows uses the following settings:

- Program Title: Ignored
- Initial Directory: Ignored
- Memory Required (KB): 52
- Memory Desired (KB): All available memory
- Directly Modifies: Screen
- Program Switch: Prevent
- Screen Exchange: Text
- Close Window on Exit: Does not close

Be aware that using the default settings for a PIF file may cause problems with some programs. For example, some programs may need an initial directory to run properly. Also, remember that since Program Switch is set to Prevent, you cannot switch from your application to Windows by pressing ALT + ESCAPE.

---

## Situations Requiring PIF File Changes

The following are procedures for some common situations in which you should edit your application's PIF file. See the section called "Editing PIF Files" earlier in this chapter to learn how to use PIF Editor to open a PIF file for editing.

### Listing a Pathname for an Application

When an application is located in a subdirectory, the PIF file that is supplied with Windows will probably not list the full pathname of the program. For example, the PIF file for Microsoft Chart lists CHART.EXE as the program name, yet you may have CHART.EXE in a directory called CHART. You need to change the program name to include the full pathname: \CHART\CHART.EXE.

To edit the PIF file, follow these steps:

- 1 Use PIF Editor to open the PIF file.
- 2 Type the full pathname of the application in the Program Name text box.
- 3 Select the File menu and choose the Save command to save your changes.

---

## Changing a pathname listing

## Setting Up an Application to Run in a Window

Some applications have installation instructions that allow you to set them up to run with Windows, IBM TopView, or an ANSI device driver (ANSI.SYS). If the program offers any of these options, you usually can run it in a window.

To run an application in a window, follow these steps:

- 1 Use PIF Editor to open the PIF file.
- 2 Turn off the Directly Modifies Screen check box.
- 3 Select the File menu and choose the Save command to save your changes.

Do this for all related .COM or .EXE files included in the application.

## Freeing up Additional Memory

You can instruct Windows to swap, or temporarily remove itself, from memory when you run a standard application. This frees additional memory that can be used for the application. You must have a hard disk for Windows to swap to.

To allow Windows to swap, follow these steps:

- 1 Use PIF Editor to open the PIF file.
- 2 Set KB Desired to -1.
- 3 Select the File menu and choose the Save command to save your changes.

**Note** This swapping may not occur if you are running a Windows application that uses a communications port (for example, Terminal). When Windows tries to swap itself to the hard disk, any applications that are running are suspended. Swapping is prevented in order to avoid problems with applications that use communications ports.

---

### Running an application in a window

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### Swapping

## Giving an Application All Available Memory

At times, you may want to give an application the maximum amount of available memory so it will run better with Windows.

To change the amount of available memory, follow these steps:

- 1 Use PIF Editor to open the PIF file.
- 2 Change the amount in the KB Required option by typing *640* (or set the Directly Modifies Memory check box).
- 3 Select None from the Screen Exchange options.
- 4 Select the File menu and choose the Save command to save your changes.
- 5 Close all other applications except MS-DOS Executive and run the application.

---

### Changing available memory

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## Getting Help with PIF Files

You can get on-line information about PIF files or about using PIF Editor.

To read help information, follow these steps:

- 1 Press the F1 function key or click F1 = Help in the menu bar.
- 2 Select a topic, then choose the Help button.

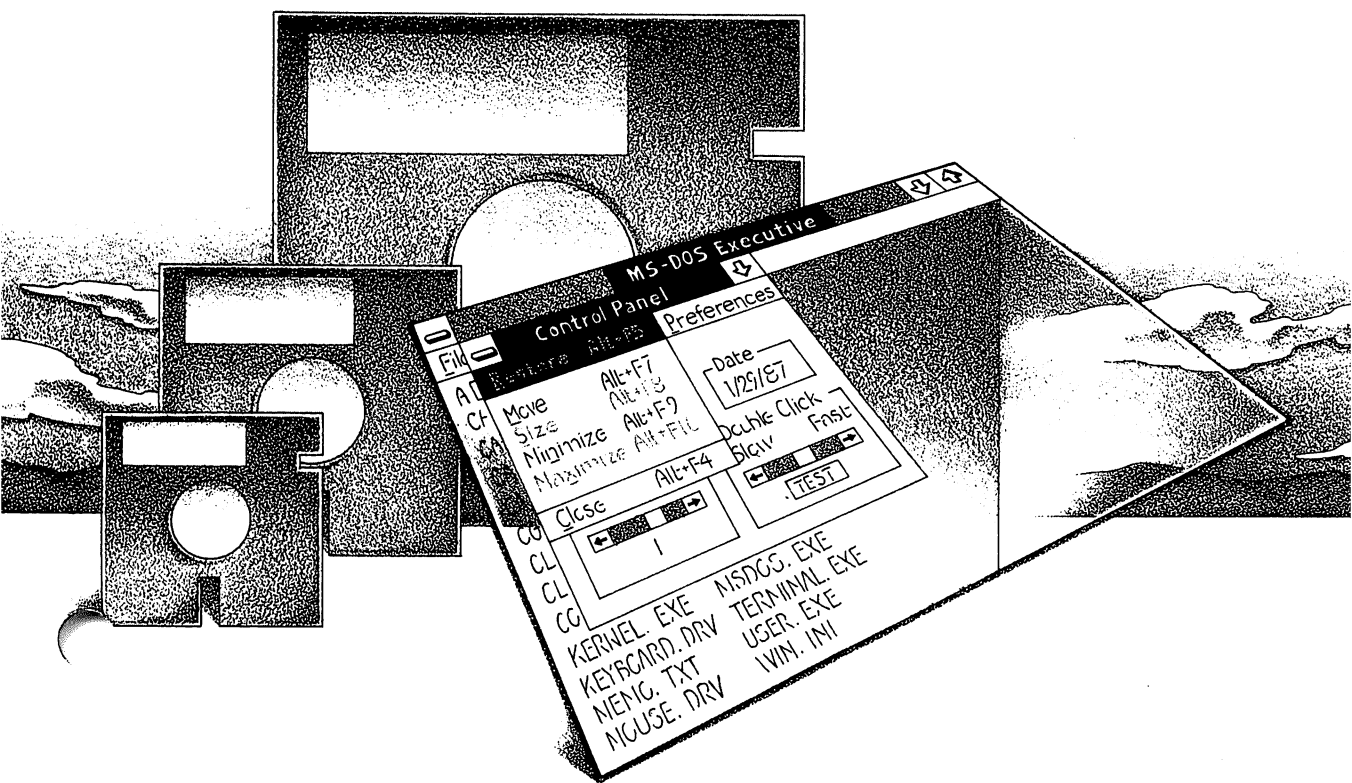
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### Getting help information

# 11 Commands

This chapter describes the commands you use to manipulate windows, to work with files, to adjust your system settings, and to print files. The command summaries are organized by menu; they describe the functions of the commands in the Control menu, MS-DOS Executive, Control Panel, and Spooler.

For details on procedures for these commands, see Chapter 4, "Techniques"; Chapter 5, "Using MS-DOS Executive"; Chapter 7, "Using Control Panel"; and Chapter 8, "Using Spooler."



Restore	Alt+F5
Move	Alt+F7
Size	Alt+F8
Minimize	Alt+F9
Maximize	Alt+F10
Close	Alt+F4

---

## The Control Menu

The Control menu is common to all moveable, sizeable windows. It provides commands that you can use to control the size and position of the window. A Control menu is also displayed in some standard DOS applications when they are run full-screen with Windows.

**Note** Your application may append additional commands to the Control menu. See your application manual for details on these commands. Chapter 9, "Using Standard Applications," contains information on standard commands that an application might append.

**Restore** The Restore command restores a window to the size it was before it was either enlarged to its maximum size or shrunk to an icon.

**Move** The Move command lets you move a window to another position on the screen.

**Size** The Size command lets you change the size of a window.

**Minimize** The Minimize command shrinks the selected window to an icon.

**Maximize** The Maximize command enlarges the selected window to its maximum size (the size depends on the application).

**Close** The Close command closes the application window. If you close the last or main window of an application, it may also cause you to exit from the program.

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## MS-DOS Executive

The MS-DOS Executive window runs automatically when you start Windows. You need to use the MS-DOS Executive commands whenever you want to run an application, end a Windows session, or manage your files. See Chapter 5, "Using MS-DOS Executive," for more detailed information.

## The File Menu

**Run** The Run command runs an application, or a program you have written. Use the Run command when you need to provide additional information, such as a pathname or volume name, for a program in order to run it.

**Load** The Load command starts an application as an icon in the lower-left corner of your screen, instead of automatically running the application in a window.

**Copy** The Copy command copies one or more files to a different directory or disk. You can also use it to copy a single file to a different filename.

**Get Info** The Get Info command displays the selected file's name and extension, its size in bytes, and the date and time the file was created or most recently changed.

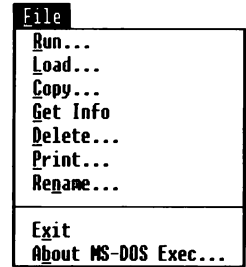
**Delete** The Delete command deletes the selected file, files, or directory.

**Print** The Print command prints the selected file or directory listing on your printer.

**Rename** The Rename command lets you change the name of a selected file.

**Exit** The Exit command quits MS-DOS Executive. If there are no other MS-DOS Executive windows open, the Exit command also ends your Windows session. You will see a dialog box asking you to confirm that you want to end the session.

**About MS-DOS Executive** The About MS-DOS Executive command displays version and copyright information about Windows and shows the amount of space currently available to the system.

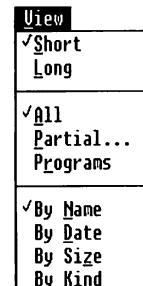


## The View Menu

The View-menu commands let you change the way you display the directory listing. Checkmarks show which commands are active. You can select one style characteristic from each group.

**Short** This is the default. The Short command displays a directory listing horizontally, by filename only.

**Long** The Long command displays a directory listing in one long column, with name, extension, size in bytes, and date and time last changed for each file listed. The information by which the files are sorted (name, date, size, or kind) appears in bold.



**All** This is the default. The All command specifies that all the files in a directory be listed.

**Partial** The Partial command lets you specify which files should appear in a directory listing. For example, you could list all files having the .MSP extension by typing *\*.msp* in the text box.

**Programs** The Programs command specifies that only program files will be displayed in a directory listing—these files have .EXE, .COM, or .BAT extensions.

**By Name** This is the default. The By Name command sorts a directory listing alphabetically by filename.

**By Date** The By Date command sorts a directory listing by the date and time each file was created or most recently changed, listing the most recent first.

**By Size** The By Size command sorts a directory listing according to each file's size in bytes, from largest to smallest.

**By Kind** The By Kind command sorts a directory listing alphabetically by filename extension. Files with the same extension are sorted alphabetically by name.

---

**Special**

End Session  
Create Directory...  
Change Directory...  
Format Data Disk...  
Make System Disk...  
Set Volume Name...

## The Special Menu

**End Session** The End Session command ends your Windows session. You do not need to shrink the windows that are expanded or close the applications that are running before you choose the End Session command.

**Create Directory** The Create Directory command lets you create a new directory.

**Change Directory** The Change Directory command lets you change directories.

To move to a higher-level directory with a mouse, double-click the section of the pathname (near the top of the MS-DOS Executive window) that you want to go to.

**Format Data Disk** The Format Data Disk command lets you format a data disk from the MS-DOS Executive window.

**Make System Disk** The Make System Disk command lets you create a bootable disk (containing the DOS system files) from the MS-DOS Executive window.

**Set Volume Name** The Set Volume Name command lets you give the current disk a descriptive name to identify its contents.

---

## Control Panel

Control Panel controls some system settings. Most changes made with Control Panel are reflected in the WIN.INI file (described in Appendix A, “Customizing Your WIN.INI File”). See Chapter 7, “Using Control Panel,” for more detailed information.

### The Installation Menu

The Installation-menu commands let you add or remove a printer or font without rerunning the Setup program.

**Add New Printer** The Add New Printer command adds a printer to your system by adding a printer-driver file to the specified disk or directory.

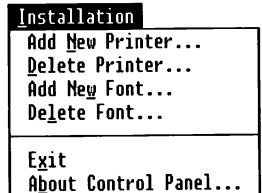
**Delete Printer** The Delete Printer command removes a printer you have already set up.

**Add New Font** The Add New Font command adds a font to your system by adding a new font file to the specified disk or directory.

**Delete Font** The Delete Font command removes a font you have already set up.

**Exit** The Exit command quits Control Panel and removes the program from system memory.

**About Control Panel** The About Control Panel command displays version and copyright information about the Control Panel program.



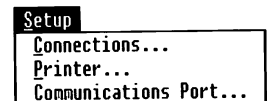
### The Setup Menu

The Setup-menu commands let you change printer-port assignments, set the system default printer and specify its output modes, and set up serial communications ports.

**Connections** The Connections command lets you assign or change printer ports.

**Printer** The Printer command lets you specify a default printer. This command also displays dialog boxes for additional information that a printer might require (type of paper, for example).

**Communications Port** The Communications Port command lets you specify a serial communications port and select parameters, such as baud rate, word length, parity, and stop bits.



**P**references

- Screen Colors...
- Border Width...
- Warning Beep
- Mouse...
- C\_country Settings...

## The Preferences Menu

The Preferences-menu commands let you control screen colors.

**Screen Colors** The Screen Colors command lets you specify color adjustments to your screen.

**Border Width** The Border Width command lets you specify how wide the window borders will be. After you type a number and confirm it by choosing the OK button, all the windows on the screen are redrawn with the new border width.

**Warning Beep** The Warning Beep command lets you turn on or off the beep that sounds in response to an invalid keystroke or mouse click. When a checkmark appears next to the command, the system beep is on. When no checkmark appears, the beep is off.

**Mouse** The Mouse command lets you switch usage between the left and right mouse buttons. It also lets you control the mouse acceleration speed (how fast the mouse pointer moves).

**Country Settings** The Country Settings command lets you set variables (such as the formats for date, number, and time) for a particular country.

---

## Spooler

Spooler controls the printing of files. For more information on Spooler, see Chapter 8, "Using Spooler."

**P**riority

- Low
- High
- Exit
- A\_bout Spooler...

## The Priority Menu

**Low** The Low command prints your file more slowly and frees computer resources for other applications you are working with.

**High** The High command speeds up your printing job. It uses more system resources for printing, so other applications will run more slowly.

**Exit** The Exit command stops the Spooler program. If there are any print jobs still in the queue, you will see a message warning you that they will be terminated. You can either confirm or cancel the Exit command.

**About Spooler** The About Spooler command displays version and copyright information about the Spooler program.

## The Queue Menu

**Pause** The Pause command temporarily halts the job that is printing.

**Resume** The Resume command restarts printing of a job that was halted with the Pause command.

**Terminate** The Terminate command cancels a job that is printing or that is in the queue.

---

<b>Queue</b>
Pause
Resume
<u>T</u> erminate

## Appendix A

# Customizing Your WIN.INI File

Your WIN.INI file contains settings for many Microsoft Windows features and Windows applications. Windows checks the WIN.INI file and uses the settings it finds there every time you start Windows. When you make changes to these settings by using Control Panel, the WIN.INI file is automatically updated to reflect the changes.

You'll rarely need to work directly in your WIN.INI file to make changes; the instructions in this appendix are provided primarily for special system customization. The settings in your WIN.INI file may differ from those shown here.

Since Windows keeps important system settings in the WIN.INI file, you should edit it carefully. Before you attempt to modify the file, make a backup copy; if you find that Windows does not run properly with the modified WIN.INI file, you can revert to your backup copy.

Changes you make directly to WIN.INI do not take effect until Windows is restarted. To make the changes effective immediately, quit Windows, then start it again.

---

### Editing Your WIN.INI File

You can make changes directly to your WIN.INI file by using Notepad. See the *Microsoft Windows Desktop Applications User's Guide* for information on using Notepad.

When you open WIN.INI from Notepad, you will see a series of sections that appear in the following format:

```
[ section name ]  
keyword1 = setting1 setting2 ...  
keyword2 = setting1 setting2 ...
```

---

## Changing WIN.INI settings

To change WIN.INI settings and make them effective immediately, follow these steps:

- 1 Open WIN.INI from Notepad.
- 2 Locate the settings you want to change and edit them.
- 3 Save WIN.INI.
- 4 Quit and restart Windows.

**Note** You can also edit WIN.INI from another word-processing application. When you save WIN.INI, be sure to save it as an ASCII text file (unformatted). Windows will open a formatted text file but may not be able to properly read it.

---

## Using the Setup Program

---

### Retaining settings in the WIN.INI file

At times you may need to run the Setup program again; for example, you will need to do so if you add new hardware such as a mouse or a graphics card, or if you update Windows. Windows is designed so that when you run Setup, your existing WIN.INI file is not automatically replaced. However, you may want to use some information from the new WIN.INI file (the file that would be created if you were running Setup for the first time). Here's how to save information you need from your old WIN.INI file and combine it with information from a new WIN.INI file:

- 1 Make a copy of your old WIN.INI file and rename it WIN.OLD.
- 2 Delete your old WIN.INI file, then run Setup to reinstall the Windows software.
- 3 Using Notepad or another text editor, copy the sections of your new WIN.INI file that you want to keep into your WIN.OLD file.
- 4 Delete your new WIN.INI file and rename WIN.OLD as WIN.INI.
- 5 Quit and restart Windows.

---

## Settings in [Windows]

The [windows] section of WIN.INI contains the following settings:

- Spooler use
- Double-click speed
- Cursor-blink rate
- Programs listed in MS-DOS Executive's directory listing
- Applications that are run automatically when Windows is started
- System default printer selection
- Mouse options
- Printer-problem message delay

Windows automatically modifies the blink rate and double-click speed in WIN.INI any time you change these settings in the Control Panel window. It is easier to change these settings by using Control Panel than by editing WIN.INI. See Chapter 7, "Using Control Panel," for more information.

The following settings are typical for the [windows] section in WIN.INI.

---

### Settings in [windows]

```
[windows]
spooler=yes
DoubleClickSpeed=500
CursorBlinkRate=817
programs=com exe bat
NullPort=none
load=
run=
device=PCL/LaserJet,HPPCL,LPT1:
SwapMouseButtons=No
xMouseThreshold=2
yMouseThreshold=2
MouseSpeed=1
beep=yes
BorderWidth=5
DeviceNotSelectedTimeout=15
TransmissionRetryTimeout=45
```

In the actual WIN.INI file, entries are often separated by comment lines (any line beginning with a semicolon). The comment lines explain how to use the setting.

The numbers that follow the equal sign in the `DoubleClickSpeed` and `CursorBlinkRate` settings are read by Windows as milliseconds, and can range from 0 to 65535. The higher the number, the slower the rate. The device entry indicates the default printer (or plotter), the device's printer-driver filename, and the device's default port.

## Printing Without the Spooler

Windows is designed to print files by using the Spooler program. You can print from a Windows application without using Spooler by editing the `spooler = line` in the `[windows]` section. Printing without Spooler may be preferable when running Windows on a two-drive system since it conserves disk space. However, printing without Spooler slows down Windows' ability to work with other applications while you are printing files.

When you first set up Windows, the `spooler = line` looks like the following example.

```
spooler=yes
```

---

### Changing the spooler = line

To print without Spooler, follow this step:

- Change the `spooler = line` from `yes` to `no`.

## Changing MS-DOS Executive's Programs Listing

When you choose the View menu's Programs command in MS-DOS Executive, only files having the `.EXE`, `.COM`, and `.BAT` extensions are listed. You can add or delete types of files shown by the Programs command by editing the `programs = line` in the `[windows]` section.

After you run Setup, your initial settings for the `programs = line` look like the following example.

```
programs=com exe bat
```

You may want to have other types of files listed, for example, files with the .PIF extension. To change the programs = setting, follow this step:

- Type the filename extension in the programs = line. Do not type a period before the extension. Be sure to include a space between filename extensions.

---

### Changing the programs = line

## Starting Applications Automatically as Icons

MS-DOS Executive runs in a window automatically when you start Windows. You can have Windows automatically start other applications as icons by editing the load = line in the [windows] section. When you first set up Windows, the load = line is blank.

To add applications to the load = line, follow this step:

- Type the filenames of the applications you want Windows to start automatically as icons. The applications will have either a .EXE, .COM, or .BAT filename extension, but you do not need to type the extension. Filenames can be up to eight characters in length. Be sure to include a space or a comma between the filenames.

---

### Adding applications to the load = line

For example, the following entry runs Clock, Control Panel, and Clipboard as icons whenever you start a Windows session.

```
load=clock control clipbrd
```

If the filename that follows the equal sign in the load setting does not represent an application, you must also include the file's extension. Make sure that the file's extension is included as an entry in the [extensions] section of your WIN.INI file. For more information, see the section called "Settings in [Extensions]" later in this chapter.

For example, if you have a Notepad text file of on-going activities that you want to update at the beginning of every Windows session, you would need to put the complete filename into the load = line, as shown in the following entry.

```
load=ongoing.txt
```

When you provide only a filename in the `load =` line, Windows searches the current drive and directory for the file. If the file is not in your current drive or directory, you need to type a path-name as the `load =` entry.

**Note** Do not list any applications that require a large amount of memory or memory-resident applications in the `load =` line. For more information on these applications, see Chapter 9, "Using Standard Applications."

## Starting Applications as Windows

In addition to having some applications start as icons, you can have Windows automatically start some applications as windows. To do this, you add the appropriate filenames to the `run =` line in the `[windows]` section of the `WIN.INI` file. The instructions for adding filenames to the `run =` line are the same as those for adding filenames to the `run =` line.

---

### Adding applications to the `run =` line

To add applications to the `run =` line, follow this step:

- ▣ Type the filenames of the applications that you want Windows to automatically start as windows. The applications will have either a `.EXE`, `.COM`, or `.BAT` filename extension, but you do not need to type the extension. Filenames can be up to eight characters in length. Be sure to include a space or a comma between the filenames.

For example, the following setting runs Clock, Control Panel, and Clipboard as windows whenever you start a Windows session.

```
run=clock,control,clipbrd
```

If the filename that follows the equal sign in the `load` setting does not represent an application, you must also include the file's extension. Make sure that the file's extension is included as an entry in the `[extensions]` section of your `WIN.INI` file. For more information, see the section called "Settings in `[Extensions]`" later in this chapter.

When you provide only a filename in the `run =` line, Windows searches the current drive and directory for the file. If the file is not in your current drive or directory, you need to type a path-name as the `run =` entry.

**Note** Do not list any applications that require a large amount of memory or memory-resident applications in the `run =` line. For more information on these applications, see Chapter 9, “Using Standard Applications.”

## Changing Mouse Options

Several of the settings in the `[windows]` section affect the mouse. In Control Panel, you can adjust the mouse settings by using the Preferences menu’s Mouse command. The following settings are the defaults.

```
SwapMouseButtons=No
xMouseThreshold=2
yMouseThreshold=2
MouseSpeed=1
```

The `SwapMouseButtons` entry switches the mouse-button function from the left to the right button or vice versa.

The `xMouseThreshold =`, `yMouseThreshold =`, and `MouseSpeed =` settings let you change the speed at which the mouse pointer moves across the screen.

The values of `xMouseThreshold` and `yMouseThreshold` set a number of pixels horizontally and vertically. If the mouse movement doesn’t exceed these values, there is a one-to-one correspondence between the movement of the mouse pointer and the mouse itself. If the mouse movement exceeds the values, then the mouse-pointer speed equals 2 raised to the power of the `MouseSpeed` value. The default value of `MouseSpeed` is 1.

## Setting the Warning Beep

The `beep =` line sets the warning beep that sounds when you press the wrong key or select the wrong option. When you set up Windows, the beep option is active. The setting in the `[windows]` section of the WIN.INI file looks like the following entry.

```
beep=yes
```

You can turn this feature off by changing the line in the WIN.INI file to `beep = no`.

In Control Panel, you can use the Preferences menu’s Warning Beep command to turn the feature off or on.

---

### Adjusting mouse settings

---

### Adjusting the warning beep

## Changing the Width of the Window Border

---

### Adjusting the window border width

The `BorderWidth =` line specifies the window border width. The default value is 5. When you set up Windows, the setting in the [windows] section looks like the following entry.

```
BorderWidth=5
```

Higher values correspond to wider borders; smaller values to narrower borders. You can set the border width to any integer value between 1 and 50. In Control Panel, you can change this setting by using the Preferences menu's Border Width command.

## Setting the Printing-Problem Message Delay

---

### Adjusting the printing message delay

There are two additional settings in the [windows] section that affect printing: `DeviceNotSelectedTimeout =` and `TransmissionRetryTimeout =`. These settings determine the number of seconds allowed to correct printing problems before Windows sends you a message about the problem. The default settings are shown in the following example.

```
DeviceNotSelectedTimeout=15  
TransmissionRetryTimeout=45
```

The `DeviceNotSelectedTimeout =` setting specifies the amount of time that passes before you see a message stating that the printer is off-line.

The `TransmissionRetryTimeout =` setting specifies the amount of time that passes before you see a message stating that the device isn't ready. This message may be displayed under various circumstances and means that the printer is not reading the characters that it is being sent.

In Control Panel, you can adjust these settings by using the Setup menu's Printer command.

---

## Settings in [Extensions]

Many applications supply a filename extension to the files you create with them. For example, Cardfile appends the extension .CRD to the files you create with it. Windows puts this extension information in the [extensions] section in the WIN.INI file.

This makes it possible for you to start an application by opening one of the files you've created with it.

The following entries are a typical list of settings in [extensions].

```
[extensions]
cal=calendar.exe ^.cal
crd=cardfile.exe ^.crd
trm=terminal.exe ^.trm
txt=notepad.exe ^.txt
```

You can increase the number of extensions associated with an application by adding entries to the [extensions] section. For example, if you want to be able to open files that have the extension .ASM from Notepad (or open a .ASM file and start Notepad at the same time), you'd type the entry *asm=notepad.exe ^.asm* on its own line.

When you provide only a filename in an entry, Windows searches the current drive and directory for the file. If the file is not in your current drive or directory, you need to type a pathname in the entry instead of just a filename.

---

## Settings in [Colors]

The entries in the [colors] section of WIN.INI reflect the color settings of various parts of the Windows screen. In Control Panel, you can adjust these settings by using the Preferences menu's Screen Colors command. The following entries are typical settings.

---

### Specifying filename extensions

---

### Screen-color settings

```
[colors]
Window=255 255 255
WindowText=0 0 0
Menu=255 255 255
MenuText=0 0 0
WindowFrame=0 0 0
TitleText=255 255 255
ActiveTitle=0 0 0
InactiveTitle=128 128 128
Scrollbar=192 192 192
Background=127 127 127
AppWorkSpace=191 191 191
ActiveBorder=127 127 127
InactiveBorder=127 127 127
```

The three numbers on the right represent RGB (red, green, and blue) settings respectively from 0 to 255. Zero represents no color (black); 255 represents fully saturated color.

---

## Settings in [Pif]

In the [pif] section of WIN.INI, you can specify memory size for standard applications that you run in a window. You can also use this section to list information Windows will use when swapping applications to a disk. When Windows swaps an application, it temporarily transfers it from system memory to a disk.

To set the memory size for a standard application, you list the application in the [pif] section of WIN.INI, as described in the following section. By doing so, you can specify the amount of memory you want the application to use without having to create a PIF file. To run the program, Windows combines the memory setting you listed with a group of default settings. For more information on creating and using PIF files, see Chapter 9, "Using Standard Applications."

**Note** You can create PIF settings in WIN.INI only for programs that you are running in a window.

## Creating a [Pif] Entry

To create a [pif] entry for an application, follow these steps:

- 1 Type `[pif]` on an empty line to create the [pif] section. This entry indicates that the lines in the section contain program information.
- 2 On the next line, type the name of the program, followed by an equal sign, then the amount of memory (in kilobytes) required to run the application. You can find the memory requirements for your application in the application's manual.

For example, if you wanted to create entries for COMMAND.COM, CHKDSK, and EDLIN, the [pif] section of your WIN.INI file would look like the following example.

```
[pif]
command.com=32
chkdsk.com=52
edlin.com=64
```

Once you create a [pif] entry for a program, Windows uses the following default settings:

- Program Title: Filename without extension
- Initial Directory: Ignored
- Parameters: Ignored
- Memory Required: Specified in the [pif] entry as described previously
- Memory Desired: Same as Memory Required
- Directly Modifies: None

## Specifying Swapping Information

The [pif] section in the WIN.INI file also lists the information that Windows uses when swapping applications to a disk (see Chapter 9, "Using Standard Applications," for more information).

The `swapdisk=` and `swapspace=` settings determine where Windows swaps an application and what the minimum swap space

---

### Making [pif] entries

should be. When you set up Windows, the initial settings look like the following entries.

```
swapdisk=?
swapsize=0
```

---

### Changing the swapdisk= line

You can modify the `swapdisk=` line to change how Windows swaps programs to a disk. The `swapdisk=` setting has the following form:

```
swapdisk = drive:
```

This setting causes Windows to swap to the root (\) directory of the given drive.

If you don't use the `swapdisk=` line in WIN.INI, Windows automatically swaps to the drive and directory specified by the TEMP environment variable. You can edit the WIN.INI file to list the drive that contains your TEMP directory (for example, *swapdisk=c:*). If no TEMP directory is defined by the TEMP environment variable, Windows swaps to the first hard disk in your system. For more information on creating a TEMP directory, see Chapter 5, "Using MS-DOS Executive."

**Note** Do not set a floppy-disk drive as the swap disk.

---

### Using expanded memory

If your computer has expanded memory, you can edit the `swapdisk=` line to take advantage of it. For more information on using expanded memory, see Appendix E, "Special Notes on Running Windows." To swap to expanded memory, change the `swapdisk=` entry to the following line.

```
swapdisk=? /e
```

If there is a shortage of expanded memory, Windows swaps to the drive specified in the TEMP environment variable. You can also use the `/E` option when `swapdisk=` is set to a drive; for example, *swapdisk=c:/e*. If there is no expanded memory available, Windows swaps to the TEMP directory or, if no TEMP directory is defined, to the root directory on the drive.

The setting `swapdisk=0` disables swapping completely.

When swapping applications, Windows allocates the amount of memory reserved for swapping based on the first application that is swapped. If `swapsize=0` (the default setting), Windows will set the swapping size to the size of the first application that you run that can be swapped. For this reason, you achieve best performance by running the largest program first.

If you want to reserve a minimum amount of memory for swapping, you can change the `swapsize=` entry to the preferred size in kilobytes. You should reserve the program size and a 2K overhead for saving information about the application's current state.

---

## Changing the `swapsize=` line

---

## Settings in [intl]

The [intl] section in your WIN.INI file contains information about formats for numbers, currencies, time, dates, and measures for the particular country that Windows is installed for on your machine. For example, the [intl] settings for the United States might look something like the following entries.

---

## Country settings

```
[intl]
iCountry=0
iDate=0
iCurrency=0
iDigits=2
iTime=0
iLzero=0
s1159=AM
s2359=PM
sCurrency=$
sThousand=,
sDecimal=.
sDate=/
sTime=:
sList=,
dialog=yes
```

In Control Panel, you change the entries in the [intl] section by using the Preferences menu's Country Settings command. You most likely would edit these settings to supply information for a country not shown in the Country Settings dialog box.

The following list describes the entries in the [intl] section of WIN.INI:

<b>Setting</b>	<b>Description</b>
iCountry =	Country code; see your DOS manual for details
iDate =	0 for mdy (month, day, year), 1 for dmy, 2 for ymd
iCurrency =	0 for currency-symbol prefix, no separation 1 for currency-symbol suffix, no separation 2 for currency-symbol prefix, one-character separation 3 for currency-symbol suffix, one-character separation
iDigits =	Number of significant decimal digits in currency
iTime =	0 for 12-hour clock, 1 for 24-hour clock
iLzero =	0 for no leading zeros, 1 for leading zeros
s1159 =	Trailing string from 0:00 to 11:59
s2359 =	Trailing string from 12:00 to 23:59
sCurrency =	Currency-symbol string
sThousand =	Thousands-separator string
sDecimal =	Decimal-separator string
sDate =	Date-separator string
sTime =	Time-separator string
sList =	List-separator string
dialog =	Always select yes. This adds the Country Settings command to the Preferences menu.

---

## Settings in [Ports]

---

### Port settings

This section of WIN.INI lists the ports available for your system. A typical port setting might look like the following example.

```
[ports]
LPT1:=
LTP2:=
COM1:=9600,n,8,1,p
COM2:=
```

The values to the right of the COM1:= entry represent Baud Rate, Parity, Word Length, and Stop Bits options, in that order. See your DOS manual for an explanation of these options.

The information in the [ports] section is automatically entered in WIN.INI when you run Setup. In Control Panel, you can change these entries by choosing commands from the Setup menu.

## Sending Printer Output to a File

You can send printer (or plotter) output to a file rather than to the printer by adding the file's name to the [ports] section. This is useful if you want to format a document for a printer that you do not have on your system (you don't need to have the printer to use its printer-driver file). For example, in the following [ports] section, the line OUTPUT.PRN= has been added so that output can be sent to the OUTPUT.PRN file.

```
[ports]
LPT1:=
LPT2:=
COM1:=9600,n,8,1
COM2:=9600,n,8,1
OUTPUT.PRN=
```

To send printer output to a file, follow these steps:

- 1 Add the filename to the [ports] sections of your WIN.INI file.
- 2 Quit and restart Windows.
- 3 Run Control Panel.
- 4 Select the Setup menu and choose the Connections command. A dialog box appears. The filename you added to WIN.INI is displayed with the other ports in the Connections list box.
- 5 In the Printer list box, select the printer on which you eventually want to print the file.
- 6 Select the filename in the Connections list box.
- 7 Choose the OK button.

You can list up to eight entries (including your normal port listings) in the [ports] section. Each time that you send printer output to the file, the information that was previously in the file is overwritten.

---

### Sending printer output to a file

---

## Settings in [Devices]

---

### Device settings

The [devices] section in WIN.INI lists your system's output (printing) devices and their printer-driver files and port connections. The settings in [devices] are set when you run the Setup program and can be reset in Control Panel by using the Setup menu commands.

A typical [devices] section looks like the following entries.

```
[devices]
PCL/LaserJet=HPPCL,LPT1:
Postscript Printer=PSCRIPT,LPT2:
```

The left side of the setting specifies the printer name, and the right side specifies the device's printer-driver file and port (if one is assigned).

---

## Settings in [Fonts]

---

### Font settings

The fonts available on your system are listed in the [fonts] section of the WIN.INI file. In the following example of a [fonts] section entry, italics represent characters to be typed exactly as shown and bold represents placeholders whose actual names or numbers you must supply. The format of an entry is as follows:

**fontname** *pointsize(s)* (*Set #number*) = **font filename**

The following line is a typical [fonts] entry.

```
Courier 8,10,12 (Set #2)=coura
```

In Control Panel, you can add and delete fonts by using commands from the Installation menu.

## Appendix B

# System Messages

This appendix describes the messages that may appear with Microsoft Windows in the middle of your window or MS-DOS Executive screen. Messages are divided into two sections: those that are generated by Windows and those that are generated by MS-DOS Executive. The messages are listed alphabetically within each section.

Many of the messages appear in dialog boxes that have an OK and a Cancel button. Choose OK to make the dialog box and the message disappear before you proceed. Some dialog boxes include a Retry button. Choose this if you want to try the operation again.

---

### Windows Messages

#### **Cannot find *program*. Please insert in drive *d***

- *Windows needs a program or file that is not on the disk in the active drive.*

Insert the specified disk and choose the OK button.

#### **Cannot read from device *device***

- *Windows is unable to read from the specified DOS device.*

The specified device was not available for input. Be sure the device is properly set up (and if appropriate, turned on). Choose the Retry button to try the operation again, or the Cancel button to end the operation. Check your DOS manual for further information about device names and errors.

#### **Cannot read from drive *d***

- *There is no disk in the specified drive.*  
Insert a disk in the specified drive. Choose the Retry button to try the operation again.
- *The disk-drive door may be open or the disk may not be inserted properly (if a floppy-disk drive is specified).*  
Check to be sure the disk is inserted properly. Choose the Retry button to try the operation again.

- *Windows could not read the disk in the drive you specified. The disk may be defective, damaged, or unformatted.*  
Choose the Retry button to try the operation again. If you continue to receive this message, choose the Cancel button. You may want to run the DOS CHKDSK program to check the disk. For more information on CHKDSK, see Appendix E, "Special Notes on Running Windows." See your DOS manual for details about disk errors.

#### **Cannot write to device device**

- *Windows is unable to write to the specified DOS device.*  
The specified device was not available for output. Be sure the device is properly set up (and if appropriate, turned on). Choose the Retry button to try the operation again, or the Cancel button to end the operation. Check your DOS manual for further information about device names and errors.

#### **Cannot write to drive d**

- *There is no disk in the specified drive.*  
Insert a disk in the specified drive. Choose the Retry button to try the operation again.
- *The disk-drive door may be open, or the disk may be improperly inserted (if a floppy-disk drive is specified).*  
Check to be sure the disk is inserted properly. Choose the Retry button to try the operation again.
- *Windows could not write to the disk in the drive you specified. The disk may be defective, damaged, or unformatted.*  
Choose the Retry button to try the operation again. If you continue to receive the message, choose the Cancel button. You may want to run the DOS CHKDSK program to check the disk. For more information on CHKDSK, see Appendix E, "Special Notes on Running Windows." See your DOS manual for details about disk errors.

#### **No appropriate data in Clipboard**

- *You have attempted to paste data from the Clipboard into a standard application; however, the data on the Clipboard are not transferrable (they may be graphics).*  
Verify that the data you are attempting to paste are not graphics (graphics cannot be pasted into a standard application).

**Not enough memory for Clipboard**

- *You have too many applications running in Windows.*  
Close some applications. You could also try reducing the amount in the Memory Required option in the application's PIF file. Then try to run your application again.

**Printer not ready**

- *The printer may be out of paper or the printer is not on.*  
Be sure the printer paper is properly installed and that the printer is connected and turned on.

**Write protected disk in drive d**

- *The disk in drive d is write-protected.*  
To write to this disk, remove the write-protect tab and choose the Retry button. Otherwise, choose the Cancel button.

---

**MS-DOS Executive Messages****Application still active**

- *A standard application is still open. This message will appear if you attempt to end the Windows session while a standard application is still running.*  
Quit any standard applications that may be running. Use the application's quit or exit command.

**Cannot change directory to name**

- *You have specified a filename instead of a directory name.*  
Select or type a directory name, then retry the Change Directory command.

**Cannot copy file to itself**

- *You have attempted to copy a file to the same filename on the same disk or in the same directory. This is not allowed because it would destroy the file.*  
Copy the file again, specifying a different filename.

**Cannot copy more than one file to a single file**

- *You have selected more than one filename and specified a single file as the destination.*  
Select the file you want to copy and start again. To copy multiple files, specify a directory to copy them into.

**Cannot create directory directory name**

- *You tried to create a directory using a name that already exists in the current directory.*

Retry the command with a unique directory name.

- *You tried to create a directory on a disk that is write-protected.*

Remove the write-protection tab, then retry the command.

**Cannot create filename**

- *You tried to save your work to a read-only file.*

Specify another filename when you save your work.

**Cannot delete filename**

- *You have tried to delete a file on a write-protected disk.*

Remove the write-protection tab and try again.

- *You have tried to delete a read-only file.*

You cannot delete the file.

**Cannot delete the current directory**

- *You have attempted to delete the current directory. This is not allowed, even if the directory is empty.*

Move to the parent directory and start again.

**Cannot find filename**

- *You have chosen an action that requires a file, and MS-DOS Executive cannot find the file in the directory or on the disk.*

Make sure you typed the filename correctly. You may need to change directories to locate the file, or you may need to type the file's pathname. If the file is not on the disk, insert the disk that contains the file in the drive. Choose the command and try again.

**Cannot format diskette**

- *The disk is probably defective or read-only.*

Replace the disk and try again.

**Cannot print**

- *Your printer is not properly installed (this includes having proper settings in the WIN.INI file).*

Check the printer connections and Control Panel printer settings. Set your printer up properly and start again. (See Chapter 7, "Using Control Panel," for details about printer settings.)

**Cannot put DOS system on the diskette**

- *The disk cannot be formatted with the system files.*

Put a blank formatted disk in the drive and retry the command.

**Cannot rename name**

- *The specified file does not exist in the current directory or on the disk.*

Make sure the filename exists, then retry the Rename command.  
You cannot rename a directory.

**Cannot run filename**

- *An error has occurred while running a program.*

Retry the Run command. If the command still does not work, be sure you are trying to run the correct file.

**Cannot run with other applications**

- *The program you selected is a special application that loads and stays resident or has the Modifies Memory option set in its PIF file.*

You must close all applications except MS-DOS Executive before you can start this program.

**Cannot set volume name**

- *The disk is write-protected.*

Remove the write-protection tab.

- *The disk is full.*

Check the directory to see if any files can be removed, then try again.

**Cannot start this application**

- *The standard application you are attempting to run cannot be run because of an internal error.*

Try to start the application again. If unsuccessful, check to be sure the application runs under DOS. You may need to close Windows, restart DOS, then restart Windows before trying the application again.

**COM1 is not available**

- *The application you have selected requires access to serial communications port 1 (COM1).*

To run the program you selected, you must close any other application that accesses the COM1 port.

- *You do not have a serial communications card installed as COM1.*

If you don't have a serial port, you cannot run the selected program.

### **COM2 is not available**

- *The application that you selected requires access to serial communications port 2 (COM2).*

To run the program you selected, you must close any other application that accesses the COM2 port.

- *You do not have a serial communications card installed as COM2.*

If you don't have a serial port, you cannot run the selected program.

### **COM1 or COM2 is not available**

- *The application that you selected requires access to serial communications port 1 or 2 (COM1 or COM2).*

To run the program you selected, you must close any other application that accesses the COM1 or COM2 port.

- *You do not have a serial communications card installed as COM1 or COM2.*

If you don't have a serial port, you cannot run the selected program.

### **Directory is not empty**

- *The directory that you tried to delete still contains files.*

Delete the files from the directory, or move them to a different location, and start again.

### **directory name has no files in it**

- *You tried to copy files from an empty directory.*

Check to see that you used the correct directory name.

### **Disk is full**

- *You have tried to save a file, or have carried out an action that requires creating a new file (such as copying), and the disk is full.*

Insert another disk, or delete any unwanted files and directories from the disk, and try again.

### **Initial directory not found**

- *The initial directory for this program cannot be found or is invalid.*

Check the PIF file for the program and be sure that the initial directory setting is correct.

### **Multiple destinations not allowed**

- *You have attempted to copy a single file to more than one new file, or to rename a single file with more than one new name.*

Copy or rename the file to a single destination.

**Multiple files not allowed**

- *You have specified too many filenames for a command.*  
Retry the command with only one filename specified.

**Need more disk space**

- *You attempted to load a standard application that required that Windows swap another application to disk. There was insufficient disk space for swapping.*  
Close one of the other standard applications you have running and try the command again. If there is still limited space remaining on the swap disk, you might consider deleting some files.

**Need WINOLDAP files to run program**

- *The program you selected requires the Windows system files WINOLDAP.MOD and WINOLDAP.GRB to run.*  
These files should be in the same directory as your other Windows system files. Check the directory to make certain that they are available, and then try running the program again.

**Not enough memory**

- *You have carried out an action, such as copying a file, that requires more memory than Windows currently has available.*  
Close one or more applications and try again.

**Not enough memory to display entire directory**

- *MS-DOS Executive requires more memory than is currently available to display the directory in full.*  
If you want to see the entire directory, close one or more applications.

**Not enough memory to run filename**

- *Windows tried to run a program that requires more memory than is currently available.*  
See the following section called “Not Enough Memory to Run” for a detailed explanation of this message.

**This will end your Windows session**

- *You chose either the Close, Exit, or End Session command, and Windows is asking you to confirm that you want to end the session.*  
Choose the OK button to end the session. Choose the Cancel button to cancel the Close, Exit, or End Session command and continue working with Windows.

## Not Enough Memory to Run

Since standard DOS applications vary considerably from one to the next, there may be various circumstances under which Windows will display a message stating that there is not enough memory to run an application. This section describes several possible situations, and gives corrective actions you can take to make your standard application run or run better with Windows.

### Not enough memory to run filename

- *Windows tried to run a standard application that requires more memory than is currently available.*

Close one or more applications, then try to run the application again.

- *The Memory Required option in the application's PIF file is set too low. The application fails in its attempt to load and execute.*

Check the amount of memory used by the application and be sure the Memory Required option is set for at least the required amount.

- *The Memory Required option in the application's PIF file is set too high. Windows attempts to allocate that amount of memory from its available system memory; if the amount is more than is available, the application will not load.*

Check the amount of memory used by the application and be sure the Memory Required option is not set excessively higher than the required amount.

- *The swapsize setting in the [pif] section of the WIN.INI file is set too low. Swapsize determines how much memory is set aside to run full-screen standard applications. Swapsize must be set high enough to allow for the program size, plus space for screen exchange, screen switching, any temporary files, and a 2K overhead for saving information about the application's current state.*

Determine the amount of space in kilobytes that you think the application will need, based on the above requirements. Edit the WIN.INI file to set swapsize equal to this amount.

You can also set swapsize = 0 (default setting) and run the largest full-screen standard application first. Windows assigns a partition size that will accommodate the first full-screen standard application.

- *The Memory Desired option in the application's PIF file is set too low. Windows gives the application the necessary memory up to the desired amount. Memory Desired must be set high enough to allow for the program size as well as data space used by the program.*

Set the Memory Desired amount higher.

- *You are attempting to run a standard application that requires more system memory than is available.*

To check available memory, select the File menu from the MS-DOS Executive window and choose the About MS-DOS Executive command. You may need to close some applications, then try running your application again.

- *There may be other applications running that do not swap to the partition (the amount of memory set aside to run full-screen standard applications) because they directly modify memory, communications ports, or the keyboard. (Applications that can be swapped modify the screen.) The system may be running out of memory.*

Close some or all of these applications and try running your application again.

- *You may have one or more memory-resident applications loaded in your system that are causing problems with the application you're attempting to run.*

Close the memory-resident applications before trying to run your application again.

---

## Appendix C Speeding Up Windows with SMARTDrive

SMARTDrive is a disk-caching program for computers that have a hard disk and expanded or extended memory. Disk-caching programs are designed to reduce the amount of time your computer spends reading data from your hard disk. SMARTDrive, unlike other disk-caching programs, cooperates with Microsoft Windows to provide the most effective use of the expanded or extended memory.

SMARTDrive is ideal for users who work with many applications and files at once. It is especially useful when running multiple standard applications that require swapping—copying applications to and from the hard disk to make room for all applications in memory. Although SMARTDrive can be used in conjunction with applications that use expanded or extended memory, it should not be used with other memory-disk or disk-caching programs.

This appendix describes the following:

- What you need to use SMARTDrive and how it works
- How to set up and use SMARTDrive
- The messages you may see from SMARTDrive

---

### Using SMARTDrive

To use SMARTDrive with your computer, you need the following:

- An IBM PS/2, IBM PC XT, IBM PC AT, or IBM PC-compatible with a hard disk
- An expanded memory board or an extended memory board

Expanded memory is memory beyond 640K that uses page-switching technology (such as INTEL Above Board and AST RAMPAGE) and that can be used in most personal computers.

---

### Advantages of SMARTDrive

---

### Hardware requirements

---

### Expanded memory

Installation of the expanded-memory-board hardware and a special program called the expanded memory manager give Windows and its applications access to the additional memory.

---

### **Extended memory**

Extended memory is memory beyond one megabyte on PC AT or compatible systems. This memory is generally not accessible to DOS- and Windows-based programs but can be used by memory-disk programs such as IBM VDISK or Microsoft RAMDrive. Extended memory boards such as the AST RAMPAGE AT or INTEL Above Board/AT can be set up for either expanded or extended memory (or both) if the correct software is installed.

---

### **Determining which memory to use**

SMARTDrive works best with expanded memory, but will also provide good results with extended memory. To determine which type of memory to use with SMARTDrive, follow these rules: if you have only expanded memory, use expanded; if you have only extended memory, use extended; if you have a memory card that can be set up to use as expanded or extended memory, set it up as expanded; and if you have both expanded and extended memory cards, use extended memory for SMARTDrive and leave expanded memory for Windows. When using expanded memory, follow the instructions provided by your memory-board manufacturer for installing the expanded memory manager. It is recommended that you set up your memory board to provide the maximum amount of space for expanded memory.

## **How SMARTDrive Works**

---

### **Saving time and space with SMARTDrive**

SMARTDrive reduces the amount of time it takes for Windows and standard applications to read information from your hard disk. To do this, SMARTDrive saves information read from or written to your hard disk in your computer's expanded or extended memory. SMARTDrive then supplies this information directly from memory whenever an application makes a request to read the information from your hard disk, a relatively time-consuming process. SMARTDrive always copies new or modified information to the hard disk as well as to expanded or extended memory, so there is no danger of losing information when you turn off your computer.

SMARTDrive works closely with Windows to conserve space, saving information in memory only if that information is needed. For example, if you quit an application, SMARTDrive removes any information used by that application and makes the space available for the next application you start.

## SMARTDrive and Other Disk Programs

When running Windows, you should use SMARTDrive as a replacement for any memory-disk program (such as VDISK) or any disk-caching program (such as Vcache or LIGHTNING). Although these programs are designed to make use of your expanded or extended memory, none is designed to work with Windows to make the best use of the memory in your computer.

If you are already using a memory-disk or disk-caching program, you must modify your CONFIG.SYS file to remove any command lines associated with that program. See the documentation provided with the program for information about its CONFIG.SYS command lines.

---

### Replacing other memory-disk programs

---

## Using SMARTDrive for Swapping

SMARTDrive automatically provides its time-saving features whenever you specify your hard disk as the swap disk for standard-application swapping. There are no special settings required in your WIN.INI file to make SMARTDrive work. SMARTDrive carries out its work transparently.

---

## Setting Up SMARTDrive

To set up your system to use SMARTDrive, follow these steps:

- 1 Install your expanded- or extended-memory hardware according to the manufacturer's instructions.
- 2 Add an appropriate SMARTDrive command line to your CONFIG.SYS file. The command-line format is described in the following section.

If you do not have a CONFIG.SYS file, use a text editor to create one in your hard disk's root directory. For information about CONFIG.SYS, see your DOS reference manual.

If you have an expanded memory board, the SMARTDrive command line must follow any CONFIG.SYS command lines that are used to install and prepare the software required to use the expanded memory. For information about these command lines, see the documentation provided with your expanded memory board.

---

### Running SMARTDrive

- 3 Delete any command lines associated with other memory-disk or disk-caching programs from the CONFIG.SYS file.
- 4 Save the CONFIG.SYS file in your hard disk's root directory.
- 5 Copy the SMARTDRV.SYS file from the Windows Utilities disk to the directory specified in your SMARTDrive command line.
- 6 Restart your computer to start SMARTDrive. From now on, SMARTDrive will start each time you start DOS.

## Using the SMARTDrive Command Line

---

### The SMARTDrive command line

You add a SMARTDrive command line to your CONFIG.SYS file to tell your computer where the SMARTDrive program file is, how much memory you want SMARTDrive to use, and whether SMARTDrive should use expanded or extended memory. In the following description of the SMARTDrive command line, brackets ( [ ] ) surround optional fields and italics represent names to be typed exactly as shown (any combination of uppercase and lowercase can be used).

The SMARTDrive command line has the following form:

*device* = [d:][path]smartdrv.sys [size] [/a]

**DEVICE** = Tells DOS to install a device driver. In this case, SMARTDrive is the device-driver program.

**d:** The disk drive where you store the SMARTDRV.SYS file. If the file is on the disk you use to start DOS, you don't need to include a disk-drive designation.

**path** The directory where you store the SMARTDRV.SYS file. If the file is in the directory you use to start DOS, you don't need to include a pathname.

**SMARTDRV.SYS** The name of the SMARTDrive program file. You must include this part of the command line.

**size** The amount of memory you want SMARTDrive to have. If you don't specify an amount of memory, SMARTDrive will receive 256K (the default size). If you plan to run a standard application that uses expanded or extended memory, you should specify a size that leaves enough memory for that application.

**/A** Use this switch if you have expanded memory or if you want to use your extended memory board as expanded memory.

## Sample SMARTDrive Command Lines

---

### SMARTDrive samples

The following are two sample SMARTDrive command lines with explanations of their effects.

#### Sample One

```
device=c:\win\smartdrv.sys 1024 /a
```

This command line gives SMARTDrive 1024K (one megabyte) of expanded memory. DOS looks for the SMARTDRV.SYS file in the WIN directory on drive C:.

When SMARTDrive is set up, the following message will appear:

```
Microsoft SMARTDrive RAM Cache version x.xx  
Cache Size: yyyK in Expanded Memory
```

In this message, *yyyK* is the amount of memory in kilobytes that SMARTDrive was able to obtain.

If the memory specified is not all of the available memory, then the memory remaining can be used by other programs running with Windows.

#### Sample Two

```
device=smartdrv.sys
```

This command line gives SMARTDrive all available extended memory. DOS looks for the SMARTDRV.SYS file in the drive or directory you start DOS from.

When SMARTDrive is set up, the following message will appear:

```
Microsoft SMARTDrive RAM Cache version x.xx  
Cache Size: yyyK in 80286 Extended Memory
```

In this message, *yyyK* is the amount of memory in kilobytes that SMARTDrive was able to obtain.

---

## SMARTDrive Messages

The following messages may appear when you start the SMARTDrive program. Most messages indicate some problem that needs correction before SMARTDrive can be installed and operate properly. Messages are listed in alphabetical order.

### **Bad or missing d:path SMARTDRV.SYS**

- *The drive letter (d:) or the pathname (path) is incorrect. The SMARTDRV.SYS file is not in the drive or directory shown in the SMARTDrive command line.*

Edit your CONFIG.SYS file and type the correct drive and pathname in the SMARTDrive line.

### **Microsoft SMARTDrive RAM Cache version x.xx Cache Size: yyyyK in Expanded Memory**

- *This SMARTDrive message appears when DOS sets up SMARTDrive; x.xx is the version of SMARTDrive and yyyy is the amount of memory in kilobytes that SMARTDrive was able to obtain.*

### **SMARTDrive: Expanded Memory Manager not present**

- *You included the /A switch in the SMARTDrive command line but SMARTDrive could not find the expanded memory manager. Your system boot disk did not install the expanded memory manager. Your CONFIG.SYS file did not contain the appropriate information.*

Consult the documentation for your expanded memory hardware for correct installation instructions.

### **SMARTDrive: Expanded Memory Manager Status shows error**

- *While trying to set up SMARTDrive in expanded memory, DOS detected an error. DOS will not install the SMARTDrive program.*

Run your expanded memory diagnostics to check your expanded memory. Take the appropriate corrective action as instructed in your expanded memory manual.

### **SMARTDrive: Computer must be PC-AT, or PC-AT compatible**

- *You do not have extended memory because you don't have an IBM PC AT or PC AT-compatible computer. DOS will not install the SMARTDrive program.*

If you have expanded memory, use /A on the SMARTDrive command line. If you have neither extended nor expanded memory, you can't use SMARTDrive.

**SMARTDrive: Incorrect DOS version**

- *SMARTDrive runs only on 2.x and 3.x versions of DOS. DOS will not install the SMARTDrive program.*

Because Microsoft Windows requires DOS 2.x or later, you need to switch to a 2.x or later version of DOS so that you can run Windows as well as SMARTDrive.

**SMARTDrive: Insufficient memory**

- *Your system has insufficient memory available for SMARTDrive. DOS will not install the SMARTDrive program.*

If you want to use the SMARTDrive program, you must add memory to your system.

**SMARTDrive: Invalid parameter**

- *The command line contains too many parts, such as more than one number or more than one pathname.*
  - *The size number is out of the range of permitted numbers. For example, you may have the SMARTDrive size set for 8K, which is too small. DOS will not install the SMARTDrive program.*
- Edit your CONFIG.SYS file and change the incorrect SMARTDrive line.

**SMARTDrive: I/O error accessing drive memory**

- *DOS detected an error while trying to set up SMARTDrive. DOS will not install the SMARTDrive program.*

Run memory tests to check the memory where SMARTDrive is set up.

**SMARTDrive: No extended memory available**

- *Your system has no memory available for SMARTDrive. DOS will not install the SMARTDrive program.*

If you want to use the SMARTDrive program, you must add memory to your system.

**SMARTDrive: No hard drives in system**

- *Your system has no hard disk. DOS will not install the SMARTDrive program. SMARTDrive only works with hard disks.*

If you want to use the SMARTDrive program, you must add a hard disk to your system.

**SMARTDrive: Too many bytes per track on hard drive**

- *Your system has a hard disk that SMARTDrive does not understand. DOS will not install the SMARTDrive program.*

You can't use SMARTDrive on your system.

---

## Appendix D

# Using Special Characters

You can add special characters such as a fraction, an accented letter, a foreign currency symbol, or a ligature to the documents you create in Microsoft Windows.

Your computer uses character sets to translate your keystrokes into the symbols you see on your screen or in the files you create. These sets vary between computer manufacturers.

Windows uses the American National Standards Institute (ANSI) 8-bit character set, which allows you to represent up to 256 characters (0–255). The ANSI character set is split into two parts: 0–127 and 128–255.

The first part of most 8-bit character sets (0–127) matches the ANSI character set and corresponds to the letters and symbols you see on a standard US keyboard. The second 128 characters (128–255) represent special characters such as letters in foreign alphabets, accents, currency symbols, or fractions. Computer manufacturers often differ in their definitions of the second part of 8-bit character sets.

This appendix explains how to do the following:

- Type special characters in Windows using the ANSI character set
- Use your computer's character set with Windows applications
- Type special characters in standard applications

---

### Using Special Characters in a Windows Application

Since Windows uses the extended ANSI character set, you can type any of the ANSI characters in files you create with Windows. The ANSI character set is shown on the following chart.

---

#### The ANSI character set

## ANSI Character Set

## ANSI character chart

0	*	32		64	@	96	'	128	■	160		192	h	224	à
1	*	33	!	65	A	97	a	129	■	161	j	193	í	225	á
2	*	34	"	66	B	98	b	130	■	162	ç	194	Â	226	â
3	*	35	#	67	C	99	c	131	■	163	ê	195	Ë	227	ã
4	*	36	\$	68	D	100	d	132	■	164	Ë	196	Ä	228	ä
5	*	37	%	69	E	101	e	133	■	165	ÿ	197	Å	229	å
6	*	38	&	70	F	102	f	134	■	166	ÿ	198	Æ	230	æ
7	*	39	'	71	G	103	g	135	■	167	ÿ	199	Ç	231	ç
8	**	40	(	72	H	104	h	136	■	168	¨	200	È	232	è
9	**	41	)	73	I	105	i	137	■	169	©	201	É	233	é
10	*	42	*	74	J	106	j	138	■	170	ª	202	Ê	234	ê
11	*	43	+	75	K	107	k	139	■	171	«	203	Ë	235	ë
12	*	44	,	76	L	108	l	140	■	172	¬	204	Ì	236	ì
13	**	45	-	77	M	109	m	141	■	173	-	205	Í	237	í
14	*	46	.	78	N	110	n	142	■	174	®	206	Ï	238	ï
15	*	47	/	79	O	111	o	143	■	175	-	207	Ï	239	ï
16	*	48	0	80	P	112	p	144	■	176	°	208	Ð	240	ð
17	*	49	1	81	Q	113	q	145	■	177	±	209	Ñ	241	ñ
18	*	50	2	82	R	114	r	146	■	178	²	210	Ò	242	ò
19	*	51	3	83	S	115	s	147	■	179	³	211	Ó	243	ó
20	*	52	4	84	T	116	t	148	■	180	´	212	Ô	244	ô
21	*	53	5	85	U	117	u	149	■	181	µ	213	Õ	245	õ
22	*	54	6	86	V	118	v	150	■	182	¶	214	Ö	246	ö
23	*	55	7	87	W	119	w	151	■	183	·	215	■	247	■
24	*	56	8	88	X	120	x	152	■	184	,	216	Ø	248	ø
25	*	57	9	89	Y	121	y	153	■	185	¹	217	Ù	249	ù
26	*	58	:	90	Z	122	z	154	■	186	º	218	Ú	250	ú
27	*	59	;	91	[	123	{	155	■	187	»	219	Û	251	û
28	*	60	<	92	\	124		156	■	188	¼	220	Ü	252	ü
29	*	61	=	93	]	125	}	157	■	189	½	221	Ý	253	ý
30	*	62	>	94	^	126	~	158	■	190	¾	222	Þ	254	þ
31	*	63	?	95	_	127	■	159	■	191	¿	223	ß	255	ÿ

\*No conversion for this character.

\*\*Values 8, 9, and 13 convert to the backspace, tab, and carriage-return characters, respectively.

To type a special character while you are using Windows, follow these steps:

- 1 Locate the character you want on the ANSI chart and its corresponding numeric value in the column to left.
- 2 Press and hold down the ALT key.
- 3 Using the numeric keypad to the right of your keyboard, type 0 and then the 3-digit number from the ANSI chart.
- 4 Release the ALT key.

For example, to type the English pound symbol (£) in a Windows file or a text box, follow these steps:

- 1 Find the number on the ANSI chart that corresponds to the symbol (163).
- 2 Press and hold down the ALT key.
- 3 Type 0163 on the numeric keypad.
- 4 Release the ALT key.

The £ symbol appears on your screen.

**Note** If you want to save a file using a special ANSI character in the filename, make sure the character exists in your computer's character set as well. If the character does not exist in your computer's character set, Windows substitutes another character.

---

## Using Your Computer's Character Set in Windows

You can continue to use your computer's character set when you work in Windows, as long as the special characters you use have an ANSI equivalent. Windows performs the conversion to ANSI for you. If there is no corresponding ANSI character, Windows displays an arbitrary character.

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### Typing special characters in Windows

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### Typing a sample special character

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### Typing characters with your computer's character set

To type a character from your computer's character set in Windows, follow these steps:

- 1 Check your computer's manual for the character's value.
- 2 Check the preceding ANSI chart to make sure the character is included.
- 3 Press and hold down the ALT key.
- 4 Using the numeric keypad on the right of your keyboard, type the three-digit number from your computer's character set.
- 5 Release the ALT key.

Windows converts the special character to its ANSI equivalent and the character appears on your screen.

As an example, the following chart shows part of the IBM PC extended character set. These characters have a corresponding ANSI character.

---

#### IBM PC Extended Character Set

---

#### PC character chart

128	ç	144	é	160	á	176	192	†	208	†	224	_	240	_
129	ü	145	æ	161	í	177	193	†	209	†	225	ß	241	‡
130	é	146	ff	162	ó	178	194	†	210	†	226	_	242	_
131	â	147	ô	163	ú	179	195	†	211	†	227	¶	243	_
132	ä	148	ö	164	ñ	180	196	-	212	†	228	_	244	_
133	à	149	ò	165	ñ	181	197	†	213	†	229	_	245	_
134	â	150	û	166	â	182	198	†	214	†	230	µ	246	_
135	ç	151	ù	167	o	183	199	†	215	†	231	_	247	_
136	ê	152	ÿ	168	ç	184	200	†	216	†	232	_	248	°
137	ë	153	ÿ	169	_	185	201	†	217	†	233	_	249	·
138	è	154	ü	170	¬	186	202	†	218	†	234	_	250	·
139	ï	155	ç	171	½	187	203	†	219	235	_	251	_	
140	î	156	£	172	¼	188	204	†	220	236	_	252	n	
141	ì	157	¥	173	½	189	205	=	221	237	_	253	²	
142	ñ	158	þ	174	«	190	206	†	222	238	_	254	''	
143	â	159	ƒ	175	»	191	207	†	223	239	_	255		

Here's how to type the English pound symbol (£) in Windows using the IBM PC extended character set:

- 1 Press and hold down the ALT key.
- 2 Type 156.
- 3 Release the ALT key.

Windows converts the £ symbol's value in the computer's character set to its equivalent value in ANSI, and the ANSI £ symbol is displayed on your screen.

**Note** If, after typing special characters in Windows, you work on your files with a non-Windows application, you may find that different characters are substituted for your special characters. This is because the ANSI character values correspond to different values in your computer's character set.

---

## Using Special Characters in a Standard Application

Applications that were not written specifically for Windows (standard applications) use your computer's character set, but the procedure for typing the character's value differs slightly from what you may be used to.

In a standard application, type a special character by following these steps:

- 1 Check your computer's manual for the character's value.
- 2 Press and hold down the ALT key.
- 3 Using the numeric keypad on the right of your keyboard, type 0 and the 3-digit number from your computer's character set.
- 4 Release the ALT key.

The special character appears on your screen.

---

### Typing a sample special character

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### Special characters in standard applications

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### **Typing a sample special character**

For example, to type the English pound symbol ( £ ) in a Word document on a computer that uses the preceding IBM PC extended character chart, you do the following:

- 1 Press and hold down the ALT key.
- 2 Type *0156*.
- 3 Release the ALT key.

The £ symbol appears in your Word document.

---

### **Using Special Characters in a Non-Windows Document**

If you work in Windows on files created with other applications, you may find that any special characters appear as arbitrary characters—for example, a black rectangle (■). Windows attempts to translate these characters, but you will probably need to convert each character to its corresponding ANSI character.

Microsoft Write has an automatic conversion feature that converts characters in non-Windows files to the ANSI character set. See the *Microsoft Windows Write User's Guide* for more information.



## Appendix E Special Notes on Running Windows


This appendix contains additional information on the following topics:

- Running Microsoft Windows with certain hardware
- Running certain standard applications
- Using expanded memory with Windows
- Using CHKDSK with Windows
- Using SHIFT + PRINTSCREEN with Windows

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### Notes on Hardware

#### Maynard Hard Disk




If you have a Maynard hard disk, it is recommended that you use only version 2.4 or greater of the hard-disk software. An early version of the Maynard hard-disk software may contain an error that prevents it from working correctly with Windows.

#### Pointing Devices

If you have a Microsoft Bus Mouse, and Windows does not respond to mouse movements, you may need to change the jumper on the Bus Mouse Adapter. Generally, you should set the jumper to IRQ2 for the IBM PC XT and IRQ5 for the IBM PC AT. See the *Microsoft Mouse User's Guide* for details on how to change the jumper.

#### TI Printers



If you have a TI850 or 855 printer, set the mode switch for draft-quality text when you use the printer with Windows. On the TI-855, you can only use the default character set since this is the one supported by the Windows device driver. Font cartridges for the TI855 are not supported.

## Running Applications with Display Adapters

Your display adapter may have additional features beyond those supported by the display driver, and your standard application may use some of these features. If so, you will probably be able to run the application, but screen switching and taking "snapshots" of the screen won't work correctly. To correct this problem, set up the software when you install it so that it does not use the display adapter's special features.

If you are using a standard application with an enhanced graphics adapter (EGA) card that is running in high-resolution mode, your application will not switch. If you want your application to be able to switch, you should install or run the application in character/text or low-resolution graphics mode.

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## Notes on Standard Applications

Since these applications were not originally designed to run with Windows, there are some tips you should follow to make them run smoothly.

### Running BASIC and BASICA with Windows

The PIF files for BASIC that are included with Windows, BASIC.PIF and BASICA.PIF, have been set up to prevent conflicts between BASIC and other communications programs you may be running. (COM options have been set in these PIF files.) There are two results that you should be aware of:

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#### Running multiple copies of BASIC

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#### Running BASIC without a communications port

- Setting the COM options prevents you from running multiple copies of BASIC at the same time. If you wish to run more than one copy of BASIC, use PIF Editor to turn off the COM check boxes.
- When you attempt to run BASIC or BASICA without a communications port installed on your system, you will receive a message indicating that the communications ports are unavailable. Although the message itself does not cause any action, you may want to avoid getting this message each time you start BASIC. If so, use PIF Editor to turn off the COM check boxes.

## Using Lotus Symphony with Windows

When using the Symphony program with Windows, be aware that the Paste command (Control menu) will not work for character strings longer than 40 characters. Symphony doesn't process characters until the end of the string and Symphony's internal buffer limit is 40 characters.

## Using Lotus 1-2-3 with Windows

When run with Windows, Lotus 1-2-3 may not close the printer file properly. To print over a network, you will need to press CONTROL+ALT+PRINTSCREEN, which closes the printer file.

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## Using Expanded Memory with Windows

You can use your computer's expanded memory to store and run applications with Windows. Expanded memory, found on expanded memory boards, increases the size of your computer's available memory beyond the 640K that DOS makes available to applications. Computers that use expanded memory must load and run a special program called an expanded memory manager. Windows can use expanded memory for applications and data if your computer's expanded memory manager has special support for Windows.

If you plan to use expanded memory with Windows, you may want to change the memory configuration of your computer to take the best possible advantage of your expanded memory board. Sometimes expanded memory works best if you disable some of your computer's main memory. For tips on whether you should change your memory configuration and for an explanation of how to change the configuration, see the README.TXT file provided on the Microsoft Windows Write Program disk.

**Note** Windows cannot use extended memory. Extended memory is memory used with computers such as IBM PC AT and compatibles that provides program and data storage beyond the one megabyte limit of these computers. If your computer has extended memory, you can use it indirectly with Windows by using the SMARTDrive program. SMARTDrive is a disk-caching program that uses your extended or expanded memory to reduce the amount of time that is required for Windows to read information from your hard disk. See Appendix C, "Speeding Up Windows with SMARTDrive," for more information about SMARTDrive.

## Setting up Expanded Memory for Use with Windows

To use expanded memory with Windows, follow these steps:

- ① Check the README.TXT file included on your Microsoft Windows Write Program disk or consult the documentation for your expanded-memory hardware to make sure your expanded memory manager supports Windows. Although your manufacturer provides an expanded memory manager with your board, not all managers support Windows.
- ② Install the expanded memory board according to your manufacturer's instructions.
- ③ Install the expanded memory manager according to your manufacturer's instructions. You may be required to modify your computer's CONFIG.SYS file. If so, follow your manufacturer's instructions carefully and be prepared to restart your computer to make sure the expanded memory manager is loaded.

When installing the expanded memory manager, reserve as much of your expanded memory as possible to use with Windows (and SMARTDrive). Avoid reserving memory for programs, such as memory disks and print spoolers, that may compete with Windows for expanded memory. The more expanded memory you let Windows have, the more efficiently Windows can use the memory for your applications.

Once expanded memory has been installed, you can start Windows. Windows will then use expanded memory automatically — there are no additional steps you need to take.

## Running Standard Applications that Use Expanded Memory Specifications

The special expanded memory manager that is required for Windows support is upwardly compatible with popular expanded memory specifications (EMS). This means that standard applications that access memory using the expanded memory specifications supported by INTEL Above Board or AST RAMPAGE can still access memory to store data when they are run with Windows. If expanded memory is available, Windows provides the application with the memory it requests through the EMS interface.

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## Using CHKDSK with Windows

It is recommended that you not use the DOS CHKDSK program in Windows. If you do run it from Windows, do not use the /F parameter. CHKDSK was not designed to run with Windows, and using the /F parameter will close any files your Windows applications are using (such as temporary files).

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## Using SHIFT + PRINTSCREEN with Windows

Windows does not change the operation of SHIFT + PRINTSCREEN, which is used to print images of standard applications. Since Windows uses the graphics mode, you should see your DOS manual for information on how to print a graphics screen. (You should not press SHIFT + PRINTSCREEN unless you have a printer attached and on line.) For general information on using SHIFT + PRINTSCREEN, see your DOS manual.

# Terms

**Active** Describes a window or icon that is selected; the window or icon to which the next keystroke or command will apply.

**ANSI character set** The American National Standards Institute 8-bit character set. It contains 256 characters.

**Application** A program used for a particular kind of work, such as word processing or database management. See *Windows application*, *Standard application*, *Memory-resident application*.

**ASCII character set** The American Standard Code for Information Interchange 8-bit character set. The set consists of the first 128 (0–127) characters of the ANSI character set.

**Boot** To start up your computer, or to restart it, loading the DOS operating system.

**Check box** A small square box that appears in a dialog box and that can be turned on or off. Check boxes generally represent multiple options that you can set.

**Choose** To perform an action that carries out a command in a menu or dialog box. See *Select*.

**Click** To press and release a mouse button quickly. When you click a mouse button, you may hear and feel a faint click.

**Clipboard** A storage area for holding text or data that you are copying or moving.

**Command** A word or phrase, usually found in a menu, that you choose in order to carry out an action.

**Command button** A large rectangular button that appears in a dialog box and carries out or cancels an action when chosen. The Cancel button always cancels the command. The OK button carries out the command. Occasionally, instead of OK, the button that carries out the action will have a label that describes the action—for example, Open.

**Control menu** The menu that appears on every application that runs in a window and on some full-screen standard applications. Icons and some dialog boxes also have a Control menu. For

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**A**

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**B**

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**C**

applications running in a window and for icons and dialog boxes, Control-menu commands move, change the size of, and close windows. For full-screen standard applications, the Control-menu commands are used for transferring information as well as for other miscellaneous functions.

**Control-menu box** The small box that is located at the left in a window's title bar. If you have a mouse, you can click this box to display the Control menu or double-click it to quit Windows.

**Copy** To put a copy of the selected text or item on the Clipboard so you can transfer it to another location. Many Windows applications have a Copy command that performs this task. If you are using a standard application, Windows adds the Copy command to the Control menu.

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**D**

**Default** Describes an option, command, or device that is automatically selected or chosen by the system. For example, in most dialog boxes that contain command buttons, one of the buttons is selected when the dialog box appears, indicating that it is the default and will be chosen automatically if you press the ENTER key. You can override a default by selecting the appropriate option, command, or device.

**Device driver** A program that controls how your computer and a device, such as a printer or monitor, interact. A device driver enables you to use devices with your computer.

**Dialog box** A rectangular box that appears when Windows needs further information before it can carry out a command or when Windows is providing you with certain information. For instance, if you choose the Delete command from the File menu in the MS-DOS Executive window, a dialog box appears asking for the name of the file that you want to delete.

**Direct-access method** A way to choose a command or to select a menu or option by pressing the key that corresponds to the underlined letter in the command, menu, or option name.

**Directory** Part of a structure for organizing your files into convenient groups. A directory is like a file drawer that holds a particular group of files. A directory can contain both files and subdirectories.

**Double-click** To rapidly press and release a mouse button twice without moving the mouse. This action carries out a command.

**Drag** To press and hold down the mouse button while moving the mouse. For example, you can move a window to another location on the screen by dragging its title bar.

**Drive icon** The small symbol in the upper-left corner of the MS-DOS Executive window that represents your computer's disk drive.

**Expanded memory** Memory beyond the 640 kilobytes that DOS makes available to applications. To use it you must install an expanded memory board and special software.

**Extend** To select more than one item in a window.

**Extended memory** Memory beyond the usual 1-megabyte limit of computers such as the IBM PC AT and compatible models. To use it you must install an extended memory board and special software. Extended memory generally is not accessible to DOS-based applications (which include Windows applications) but can be used by memory-disk programs such as IBM VDISK and Microsoft RAMDrive.

**Extension** The period and three letters at the end of a filename. An extension identifies what kind of information a file contains. For example, the extension .EXE, .COM, or .BAT indicates that a file contains an application. Some applications append an extension to the files that you create with them. For example, files that you create with Calendar have the extension .CAL.

**Filename** The name of a file. Windows uses DOS filenames conventions; therefore filenames usually consist of a base name containing no more than eight characters and a three-character extension. For example, TERMINAL.EXE is the name of the file that contains the Terminal application. See *Extension*.

**Format** To prepare a disk so that it can hold information. Formatting a disk erases whatever information was previously on it.

**Full-screen** Describes a standard DOS application that takes up the entire screen when it is run with Windows. It is not displayed in a window.

**Grayed** Describes a command or option that is listed in a menu or dialog box but cannot be chosen or selected. The command or option appears in gray type. For example, after you have enlarged a window to its full size, the Maximize command in the Control menu is grayed.

**Highlighted** Indicates that the object is selected and will be affected by your next action. A highlighted object appears in reverse video. A highlighted icon is outlined in white and the application's name is displayed.

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E

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F

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G

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H

I

**Icon** A small symbol that represents an application that is running in memory. You can enlarge an icon to a window when you want to use the application. See *Drive icon*.

**Inactive** Describes a window or icon that is not selected. See *Select*.

**Insertion point** The place that text will be inserted when you type. The insertion point usually appears as a flashing vertical line in an application's window or in a dialog box. The text you type appears to the left of the insertion point, which is pushed to the right as you type.

L

**List box** A box within a dialog box that lists all items that a command could affect—for example, the filenames of all printer drivers on a disk. Files are indicated by their filenames. Drives and directories are indicated with brackets. Hyphens distinguish drives from directories. For example, [-A-] represents drive A; [MYDIR] represents the MYDIR directory. The parent directory (the next higher directory) is represented by two periods within brackets ([..]). If there are more choices than can fit in the list box, the list box will have a vertical scroll bar.

M

**Maximize box** The small box containing an up arrow that is located at the right of the menu bar. Mouse users can click the Maximize box to enlarge a window to its maximum size.

**Memory-resident application** An application that is loaded into the system and stays there until you remove it or turn off your computer (also known as a terminate-and-stay-resident application). You should start this kind of application before you start Windows and use it from a full-screen standard application.

**Menu** A group listing of available Windows or application commands. Menu names appear in the menu bar near the top of the window. You use a command from a menu by selecting the menu, then choosing the command.

**Menu bar** The horizontal bar that lists the names of an application's menus. The menu bar appears below the title bar of a window.

**Minimize box** The small box containing a down arrow that is located at the right of the menu bar. Mouse users can click the Minimize box to reduce a window to an icon.

N

**Non-switching** Describes a full-screen standard application that you must quit before you can return to Windows. See *Standard application*.

**Open** To make a file's contents available to work in; it usually refers to a file you created with an application and not to an application file. For example, while working in Notepad, you could open MEMO.TXT, a text file you created with Notepad. You could also open MEMO.TXT and start Notepad at the same time by running MEMO.TXT from the MS-DOS Executive window.

**Option button** A small round button that appears in a dialog box and selects an option when set. Within a group of related option buttons, you can make only one selection.

**Paste** To transfer the contents of the Clipboard to an application. Many applications have a Paste command that performs this task.

**Pathname** A description of the location of a directory or file within the system. For example, the pathname of a file consists of a drive letter, followed by a directory name, one or more sub-directory names if applicable, and a filename. Each name is separated from the previous one by a backslash.

**PIF file** A program information file; it contains information about how a standard application uses system resources and memory. If Windows cannot find a PIF file for an application, it uses default PIF settings to run the application.

**Point** To move the pointer on the screen until it rests on the item you want to select or choose.

**Pointer** A small symbol that appears if you have installed a mouse and that indicates which area of the screen will be affected when you click the mouse button. The pointer usually is shaped like an arrow but changes shape during certain tasks.

**Restore box** The small box containing down and up arrows that appears at the right of the menu bar after you have enlarged a window to its full size. Mouse users can click the Restore box to return the window to its previous size.

**Run** To start an application.

**Save** To store a file or changes to a file on a disk.

**Scroll** To move text or graphics up or down, or left or right, to see parts of the file that cannot fit on the screen.

**Scroll bar** A bar that appears at the right side and/or bottom of some windows and in some dialog boxes. The scroll bar contains a scroll arrow at either end and a scroll box that moves within the scroll bar, reflecting your position in a file. Mouse users can click parts of the scroll bar to scroll a file.

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O

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P

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R

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S

**Select** To indicate the item that the next command you choose will affect. See *Choose* and *Highlighted*.

**Shortcut key** A special key or key sequence available for some commands that you can press to execute the command without first selecting a menu.

**Spooler** A Windows program that is automatically run when you choose a print command. It allows you to print files and to view and control the jobs in the print queue.

**Standard application** An application that runs under DOS but was not designed especially for Windows.

**Swap** To temporarily transfer an application or information from system memory to your computer's hard disk.

**Switch** To move from one application to another, bringing the second application to the front of the screen and making it active. This usually refers to moving from a standard application to another standard application or to a Windows application. See *Non-switching*.

**Text box** A box in a dialog box in which you type information needed to carry out a command. The text box may be blank when the dialog box appears or may contain text if there is a default option or if you have selected something applicable to that command.

**Title bar** The horizontal bar across the top of each window that contains the name of the application and/or file in that window. The title bar also contains the Control-menu box and the Maximize and Minimize boxes or the Minimize and Restore boxes.

**Wildcard character** A character that can be included in a filename to indicate any character or group of characters that might match that position in other filenames. In Windows you can use the asterisk (\*) as a wildcard character. For example, \*.EXE represents all files in the directory that end with the .EXE filename extension.

**Window** A rectangular area on your screen in which you view an application. Every window has a title bar and may have a menu bar and one or two scroll bars.

**Windows application** An application that was designed especially for Windows and uses all Windows features (such as menus and dialog boxes).

**Work area** The area of a window that displays the information contained in the file.

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T

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W

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## **Desktop Applications**

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# Microsoft® Windows Desktop Applications User's Guide

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Version 2.0

Microsoft Corporation

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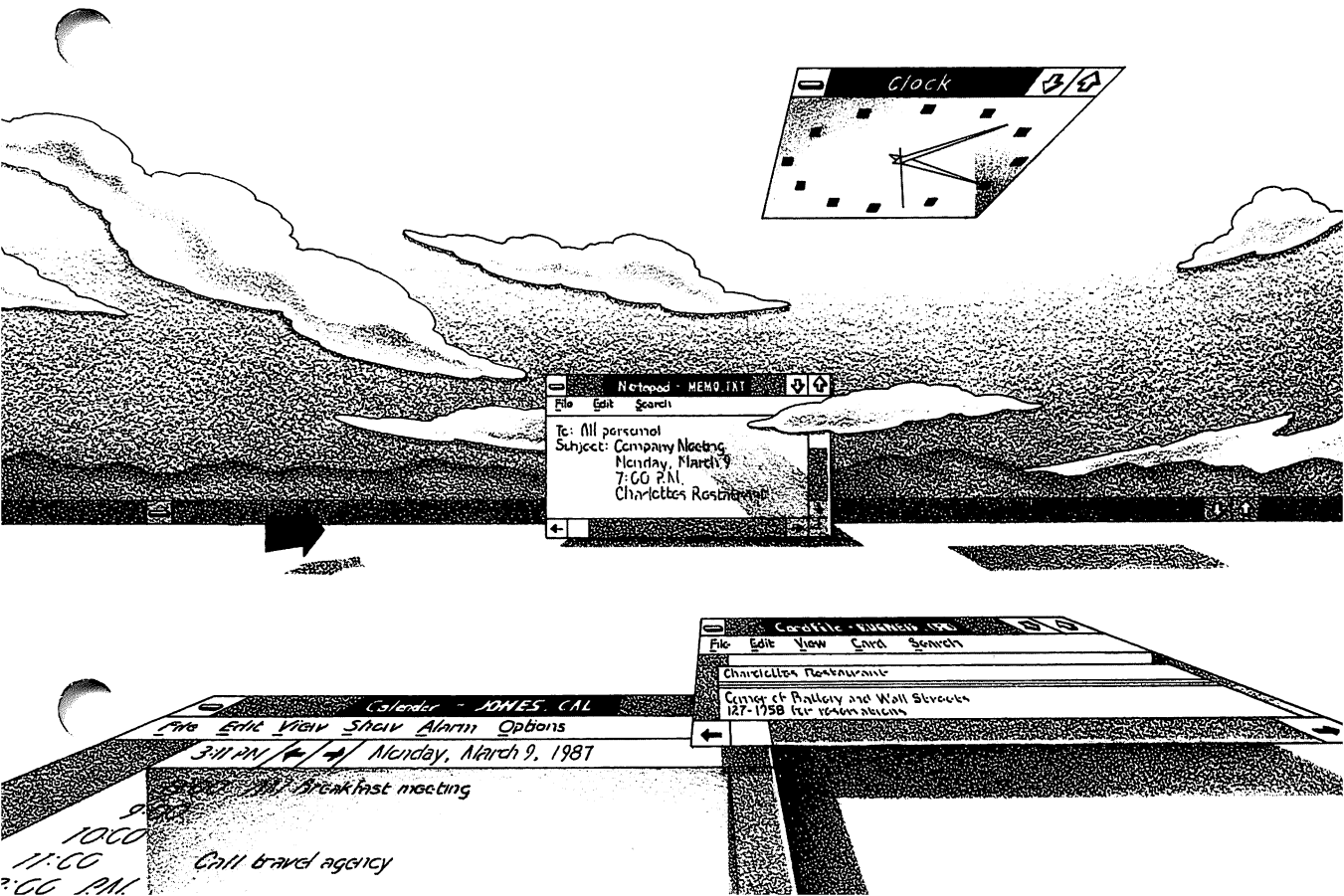
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# Introduction

Microsoft® Windows comes with seven desktop applications that make working at your desk more efficient and more enjoyable.

You can use these applications to jot down notes, write memos, schedule appointments, calculate numbers, organize files, and gather information from online information services. You can also move and copy information from one desktop application to another.

You can even take a break with Reversi — a unique and challenging game that you play with your computer.



## About This Guide

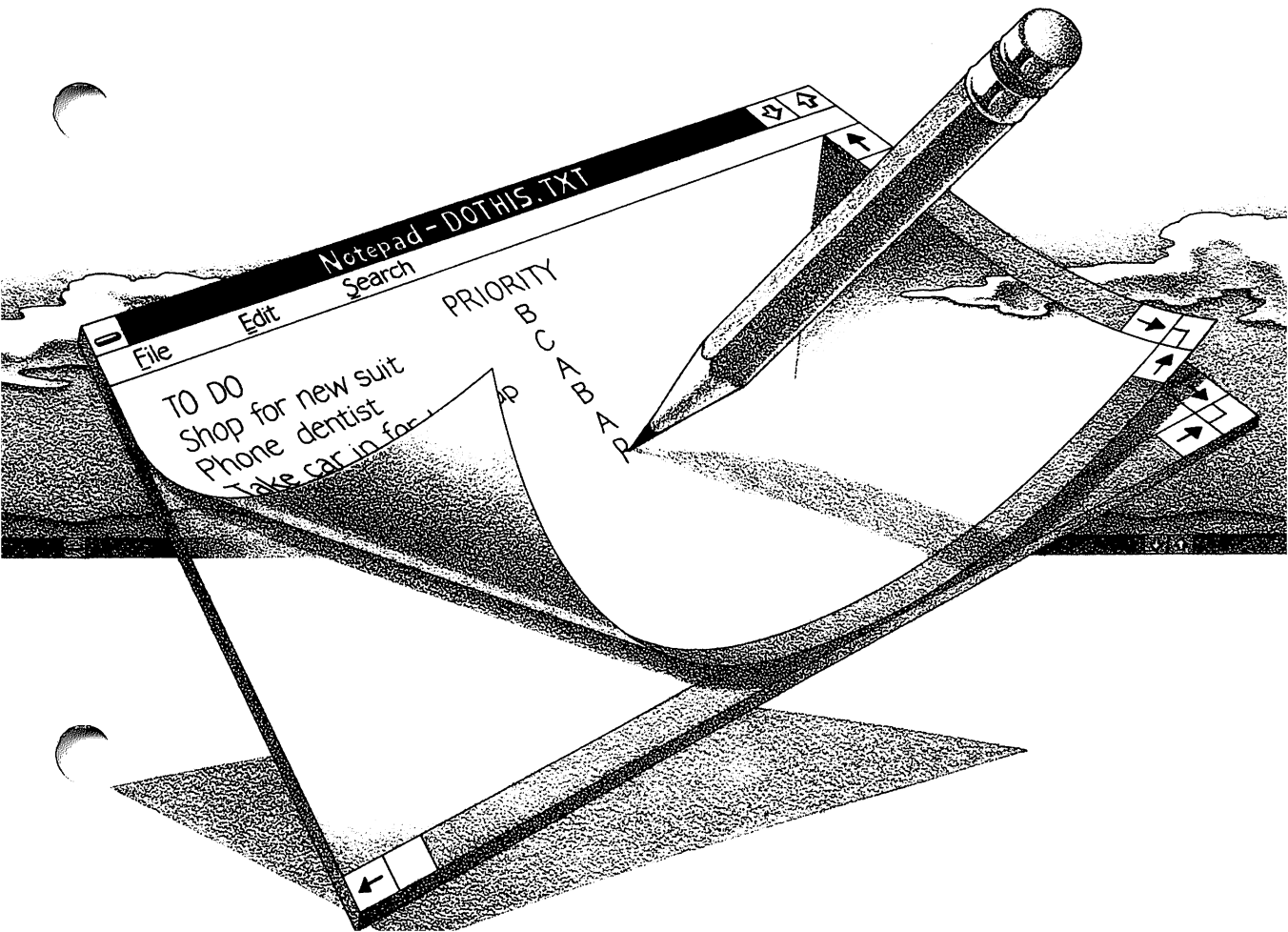
This guide is divided into seven chapters—one for each application—and two appendixes. You don't have to read the entire guide to use a single application. Everything you need to know about each application is contained in one chapter.

- Chapter 1, "Notepad," explains how to use Notepad to jot down notes and write memos.
- Chapter 2, "Cardfile," describes how to use Cardfile to enter and sort information that you would normally store on index cards.
- Chapter 3, "Calendar," discusses how to use Calendar to schedule and keep track of daily appointments.
- Chapter 4, "Calculator," describes how to use Calculator to perform standard arithmetic operations, and to calculate percentages and square roots.
- Chapter 5, "Clock," explains how to use Clock to display the time on your screen.
- Chapter 6, "Reversi," shows you how to play Reversi—an intriguing game.
- Chapter 7, "Terminal," describes how you can use Terminal to connect your computer to other computers so that you can gather information from sources such as Dow Jones News/Retrieval and CompuServe.
- Appendix A, "ANSI/VT52 Terminal Emulation," explains how to use your keyboard to emulate an ANSI/VT52 terminal.
- Appendix B, "Shortcut Keys," lists shortcut keys you can use to choose some menu commands.

**Note** Before you begin to use this guide, you should know how to use Microsoft Windows. See the *Microsoft Windows User's Guide* for information on how to move between windows, expand a window, start an application from the MS-DOS® Executive window, choose a command, select an option from a dialog box, and perform other window actions.

# 1 Notepad

Microsoft Windows Notepad is a text editor you can use to create, modify, and display text files. Although Notepad is primarily a place to jot down notes or short memos, you can also use Notepad to create and edit batch files and to edit your WIN.INI file.



---

## Starting Notepad

---

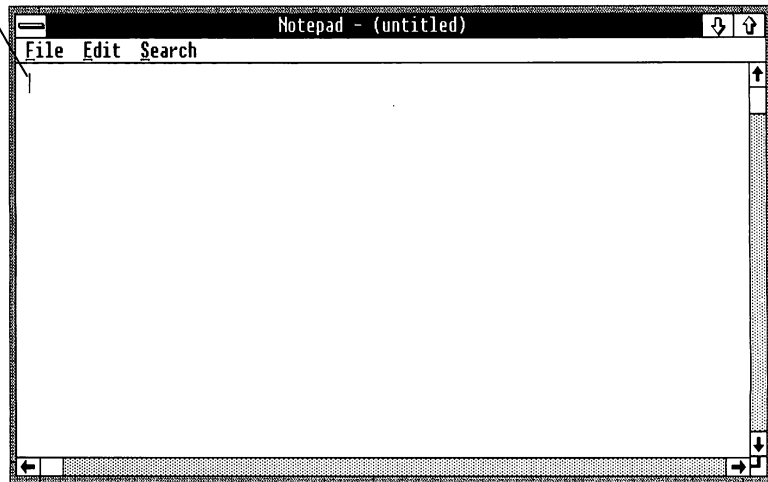
### Running Notepad

Here's how you start Notepad:

- Select and run NOTEPAD.EXE in the MS-DOS Executive window.

When you start Notepad, it automatically creates an empty, untitled window where you can start typing text.

*Flashing insertion point*



---

## Typing and Formatting Text

---

### Typing text

You can type in the Notepad window whenever it is active; just start typing. The insertion point moves to the right as you type.

If your typing goes beyond the borders of the window, Notepad automatically scrolls the text to the left so that the insertion point always remains visible in the window.

### Wrapping Text

If you don't want the text you type to go beyond the borders of the window, you can set the Word Wrap option. This option automatically wraps text at the right edge of the window so that you do not need to press the ENTER key at the end of each line.

Here's how you set the Word Wrap option:

- ❑ Select the Edit menu and choose the Word Wrap command. After you've set the Word Wrap option, a checkmark will appear by the Word Wrap command the next time you select the Edit menu.

Here's how you cancel the Word Wrap option:

- ❑ Select the Edit menu and choose the Word Wrap command.

## Moving the Insertion Point

When you start Notepad or open a file in the Notepad window, the insertion point initially appears in the upper-left corner. If you work in another window and then come back to Notepad, the insertion point reappears where you left it. You can move the insertion point to wherever you want to insert or edit text.

To move the insertion point with the keyboard, press the following keys:

To	Press
Move the insertion point to the right in a line of text	RIGHT
Move the insertion point to the left in a line of text	LEFT
Move the insertion point up in a body of text	UP
Move the insertion point down in a body of text	DOWN
Move the insertion point to the beginning of a line of text	HOME
Move the insertion point to the end of a line of text	END
Move the insertion point to the beginning of the document	CONTROL + HOME
Move the insertion point to the end of the document	CONTROL + END

---

## Setting the Word Wrap option

---

## Relocating the insertion point

## Relocating the insertion point



To move the insertion point with the mouse, move the pointer to the area in a body of text where you want the insertion point to appear and click the mouse button.

## Formatting Text

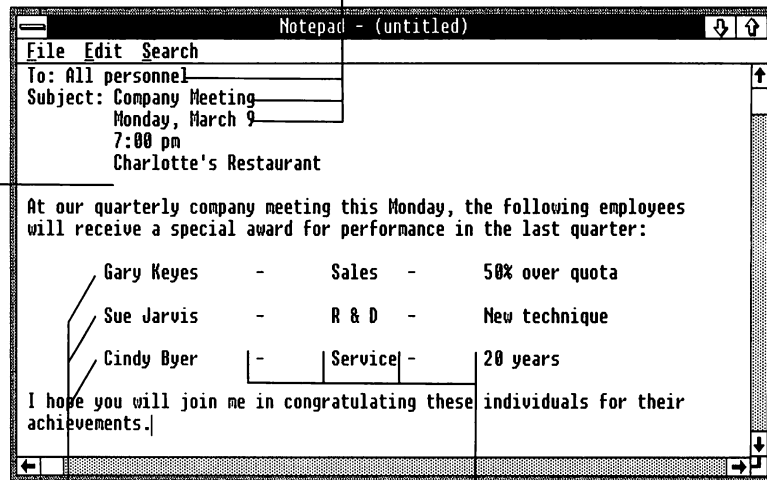
### Arranging text

Type the text exactly as you want it to appear using the following keys to place your text where you want it:

To	Press
Insert a space	SPACEBAR
Delete a character to the left	BACKSPACE
Delete a character to the right	DELETE
End a line	ENTER
Insert a space between paragraphs	ENTER twice
Indent a line	TAB
Insert a tab stop	TAB

*Pressing the ENTER key twice inserts a space between paragraphs.*

*Pressing the ENTER key ends a line.*



*Pressing the TAB key indents a line.*

*Pressing the TAB key inserts tab stops.*

To insert a blank line, move the insertion point to the beginning of a line and press the **ENTER** key. Notepad inserts a line above the insertion point.

To split a line, move the insertion point to the beginning of the text that you want to move to the line below and press the **ENTER** key. Notepad inserts a blank line and places the text on it.

To join two lines, move the insertion point to the beginning of the line that you want to move and press the **BACKSPACE** key. Notepad joins the current line with the line above it.

---

## Scrolling

If the text in the file is longer or wider than can be shown at one time, you can scroll through the file to view the text.

To scroll through a file with the keyboard, use the **DIRECTION** keys to move the insertion point in the direction you want to scroll. When you reach the edge of the window, press a **DIRECTION** key again to scroll the window, as described in the following list:

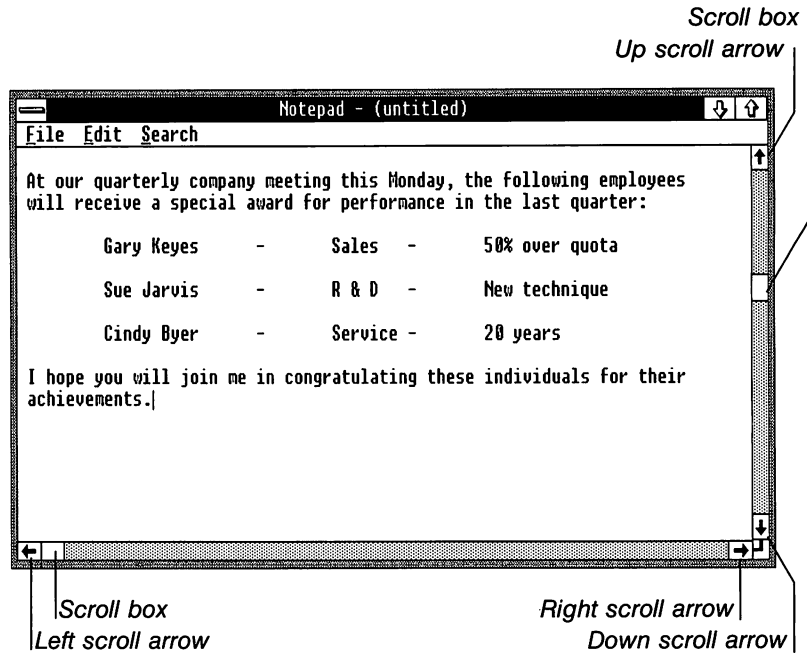
To scroll	Press
Up one line	UP
Down one line	DOWN
To the right one character	RIGHT
To the left one character	LEFT
Up one screen	PAGE UP
Down one screen	PAGE DOWN

To scroll a Notepad file with the mouse, use the scroll boxes and scroll arrows shown in the following example.

---

### Scrolling through a file





The following list explains how to scroll with the mouse:

To scroll	Click
Up one line	Up scroll arrow
Down one line	Down scroll arrow
Right one character	Right scroll arrow
Left one character	Left scroll arrow
Up one screen	Area above the scroll box in the vertical scroll bar
Down one screen	Area below the scroll box in the vertical scroll bar
Fifteen characters to the right	Area to the right of the scroll box in the horizontal scroll bar
Fifteen characters to the left	Area to the left of the scroll box in the horizontal scroll bar

You can quickly scroll through your file by positioning the mouse pointer on a scroll box and dragging it. Drag the scroll box in the vertical scroll bar to scroll up or down. Drag the scroll box in the horizontal scroll bar to scroll to the left or to the right.

---

## Editing in Notepad

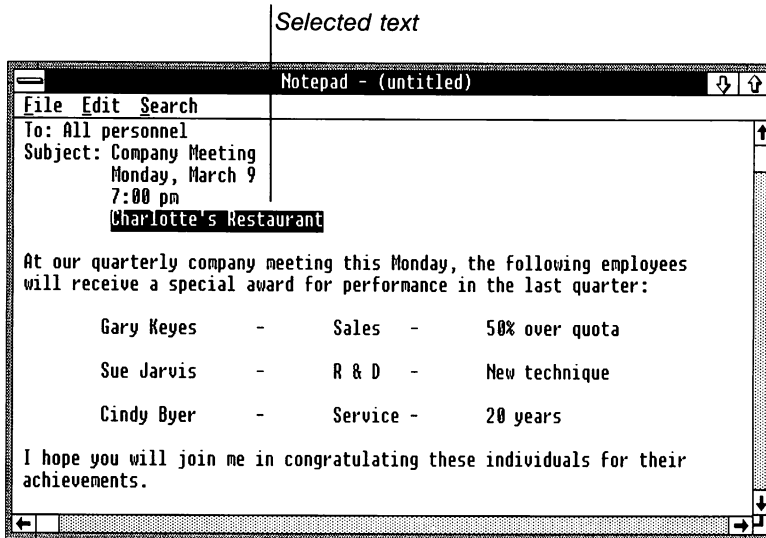
You edit text in the Notepad window using commands from the Edit menu. You can delete text, move or copy text to a new location, and search for text within a Notepad file. If you change your mind after editing, you can cancel your last edit.

You can also transfer text between Notepad and other applications by using Clipboard. When you delete or copy text using the Notepad Cut or Copy command, Notepad puts the text on the Clipboard. The Notepad Paste command copies information from the Clipboard to your Notepad file.

For more information about Clipboard, see the *Microsoft Windows User's Guide*.

## Selecting Text

Before you use a command from the Edit menu to edit text, you must first select the text you want to affect.



---

## Selecting text for editing

Here's how you select text with the keyboard:

- 1 Use the **DIRECTION** keys to move the insertion point to the beginning of the text you want to select.
  - 2 Press and hold down the **SHIFT** key and use the **DIRECTION** keys to move the insertion point to the end of the text you want to select. Release the **SHIFT** key.
- If you want to cancel the selection, just press a **DIRECTION** key.



Here's how you select text with the mouse:

- 1 Move the pointer to the beginning of the text you want to select.
  - 2 Drag the pointer to the end of the text you want to select and release the mouse button.
- If you want to cancel the selection, just click the mouse button.

---

## Selecting all of the text in a file

You may want to select all of the text in a file — to copy it, for example. Here's how to do so:

- Select the **Edit** menu and choose the **Select All** command.

## Replacing Text

Once you've selected the text you want to change, you can replace it immediately by typing the new text. The selected text is deleted as soon as you type the first character of the replacement text.

---

## Replacing text

To replace text, follow these steps:

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

## Deleting Text

Follow these steps to delete text from a Notepad file:

- 1 Select the text you want to delete.
- 2 Select the **Edit** menu and choose the **Clear** command.

---

## Removing text

You can replace deleted text by choosing the **Undo** command, as described later in the section "Undoing an Edit."



## Moving Text


You can move text from one place to another in a Notepad file by first putting it on the Clipboard using the Cut command and then pasting it to its new location using the Paste command.

Follow these steps to move text:

- 1 Select the text you want to move.
- 2 Select the Edit menu and choose the Cut command. Notepad puts the selected text on the Clipboard.
- 3 Move the insertion point to the area where you want the text to appear.
- 4 Select the Edit menu and choose the Paste command.

You can paste text from the Clipboard to any part of any document. Note, however, that each time you put something on the Clipboard, it replaces whatever was previously there.

## Copying Text




If you want to use the same text more than once in a document, you don't have to type it over each time. You can copy the text to the Clipboard with the Copy command from the Edit menu; then you can paste the text in as many places as you want by using the Paste command.

Follow these steps to copy text:

- 1 Select the text you want to copy.
- 2 Select the Edit menu and choose the Copy command. Notepad copies the selected text to the Clipboard.
- 3 Move the insertion point to the area where you want the copied text to appear.
- 4 Select the Edit menu and choose the Paste command.

## Undoing an Edit

You can use the Undo command to cancel the last edit you made. For example, you may have deleted text that you wanted to keep, or you may have copied text to the wrong place. Choosing Undo immediately after your last edit restores the text to the way it was before you changed it.



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### Relocating text

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### Duplicating text

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## Undoing the last edit

To undo your last edit, follow this step:

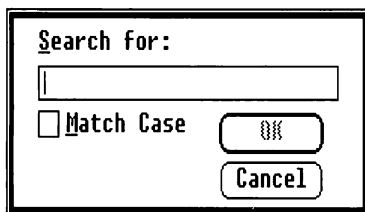
- Select the Edit menu and choose the Undo command.

## Finding Text

You can find specific text in a Notepad file by using the Find commands from the Search menu. When you use a Find command, you can start the search at any point in a file. You can also specify whether Notepad should match the uppercase and lowercase characters of the text you specify.

Follow these steps to find text:

- 1 Move the insertion point to the area where you want the search to begin.
- 2 Select the Search menu and choose the Find command. Notepad displays the Search For dialog box.



- 3 In the Search For text box, type the characters or words you want Notepad to find.
- 4 Notepad is preset to ignore capitalization when it searches for text. If you want to find only occurrences with the same arrangement of uppercase and lowercase letters you typed, turn on the Match Case check box.
- 5 Choose the OK button. Notepad searches forward from the insertion point and selects the first occurrence of the specified text or tells you if the text does not occur after the insertion point.

To find further occurrences of the specified text, select the Search menu and choose the Find Next command.

If you choose the Find Next command, Notepad does not display the Search For dialog box but immediately searches for the last text you typed in the Search For text box.

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## Working with Notepad Files

You create, open, save, and print Notepad files with commands from the File menu in the Notepad window. You delete Notepad files with commands from the File menu in the MS-DOS Executive window.

### Determining File Size

As you work on a file, Notepad keeps track of how big it is. Notepad shows the size of the file as the percentage of free space. When a file has less than 10 percent free space, you should consider splitting the file and working on it as two different files.

Here's how you find out a file's free space:

- 1 Select the File menu and choose the About Notepad command. Notepad displays an informational dialog box that includes a listing of the amount of free space.
- 2 When you have finished reading the information displayed in the dialog box, choose the OK button.

---

### Determining free space

### Opening a File

You can open a new or an existing file in the Notepad window. If you open a file when there is another file already open, Notepad closes the current file. If you have unsaved changes in the current file, a dialog box asks if you want to save your changes before closing the file. Use the following information to determine your response:

To	Choose
Save changes	Yes
Discard changes	No
Continue working in the current file	Cancel

### Creating a New File

Here's how you open a new, blank Notepad file:

- Select the File menu and choose the New command. Notepad opens a new file in the Notepad window.

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### Creating files

### Opening an Existing File

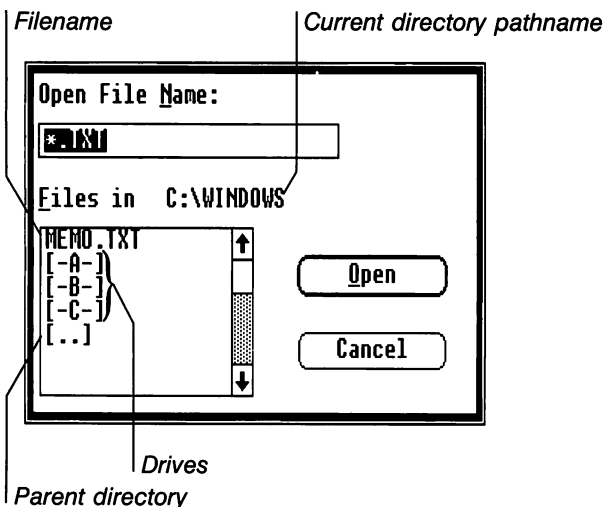
Although you can open any file in Notepad, opening the wrong file could cause serious problems, including a loss of information or applications. You should open only text (ASCII) files. Windows text files generally have one of the following extensions: .TXT, .BAT, or .INI. You can open an existing file either from the Notepad window or from the MS-DOS Executive window.

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#### Opening files from Notepad

To open an existing file from the Notepad window, follow these steps:

- 1 Select the File menu and choose the Open command. Notepad displays the Open dialog box. Note that directories and drives are enclosed in brackets.



- 2 Select the name of the file you want to open from the list box, or type a pathname and filename in the text box at the top of the dialog box.
- 3 Choose the Open button.

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With the mouse, you can select and open a file listed in the list box in one step:

- 1 Double-click the filename of the file you want to open.



To open an existing file from the MS-DOS Executive window, follow this step:

- Select the filename and press the ENTER key or, with the mouse, double-click the filename.  
Windows starts Notepad and opens the file.

### Creating a Time Log File

You can use Notepad to create a log to keep track of how you spend your time:

- Type *.LOG* in capital letters as the first line in a Notepad file. Notepad automatically adds the current time and date to the end of the file every time you open it.

(Notepad uses the time and date you set when you start your computer. You can reset the time and date using Control Panel. For details on Control Panel, see the *Microsoft Windows User's Guide*.)

To add the current time and date to a file you already have open, do the following:

- Select the Edit menu and choose the Time/Date command.

To keep an accurate log of how you spend your day, type notes about your daily activities after each time and date.

### Viewing a File in Another Directory

The Open dialog box initially lists only drives, directories, and files with the .TXT extension. You can view different files or groups of files as well.

To view different files, follow these steps:

- 1 Select the drive, directory, or group of files you want to view from the list box, or type this information in the text box at the top of the Open dialog box. For example, you can type *\*.bat* to see a list of all the files having that extension.
- 2 Choose the Open button.  
The Open dialog box lists the files in the drive, directory, or group of files you specified.

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### Opening files from MS-DOS Executive

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### Keeping a time log

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### Viewing files in different directories

You can view any number of directories or groups of files. The Open dialog box remains on the screen until you open a file or choose the Cancel button.

## Saving a File

When you create a new file, or when you have finished working in a file for the moment, you can save it and come back to it later. There are two commands you can use to save a Notepad file: Save As and Save.

### Saving a New File

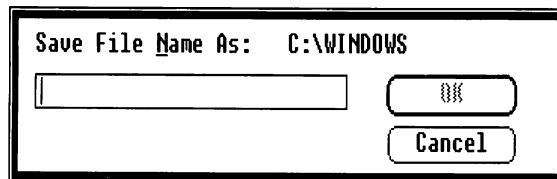
Use the Save As command to name and save a new file. You can also use Save As to save the current file under a new filename, and keep the original copy of the file on your disk under the old filename.

---

## Saving new files

Follow these steps to save a new file:

- 1 Select the File menu and choose the Save As command. Notepad displays the Save As dialog box.



- 2 Type a filename for the file in the text box. If you don't type an extension, Notepad automatically adds .TXT to the filename.
- 3 Choose the OK button. Notepad saves the file on your disk.

The file remains on the screen so that you can continue working in it, and the name of the file now appears in the title bar of the Notepad window.

**Note** If you type the name of a file that already exists, a dialog box asks if you want to replace the existing file with the file you are saving. If you want to replace the existing file, choose the Yes button. Otherwise, choose the No button and type a different filename.

## Saving Changes

The Save command saves the changes you made to the current file on your disk.

To save changes to the current file, do the following:

- Select the File menu and choose the Save command.  
Notepad replaces the file on your disk with the current file.

## Printing a File

If you have connected and installed a printer, you can print your Notepad files. See the *Microsoft Windows User's Guide* for information about installing printers.

To print the current file, follow this step:

- Select the File menu and choose the Print command.  
A dialog box tells you that Notepad is sending your file to Spooler.

If you want to stop printing your file, do the following:

- Choose the Cancel button.

## Deleting a File

You can delete a Notepad file when you no longer want it or when you want to make room for other files on your disk. You delete a file using the Delete command from the File menu in the MS-DOS Executive window. For information on MS-DOS Executive and deleting files, see the *Microsoft Windows User's Guide*.

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### Saving file changes

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### Printing files

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### Removing files

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## Ending a Notepad Session

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### Quitting Notepad

Use the Exit command to end your Notepad session:

- Select the File menu and choose the Exit command.

If you have unsaved changes to the file, a dialog box appears asking if you want to save your changes before closing the window. Choosing the Cancel button allows you to continue working in your file in the Notepad window. Choosing the Yes or No button closes the Notepad window.

---

## Using Shortcut Keys

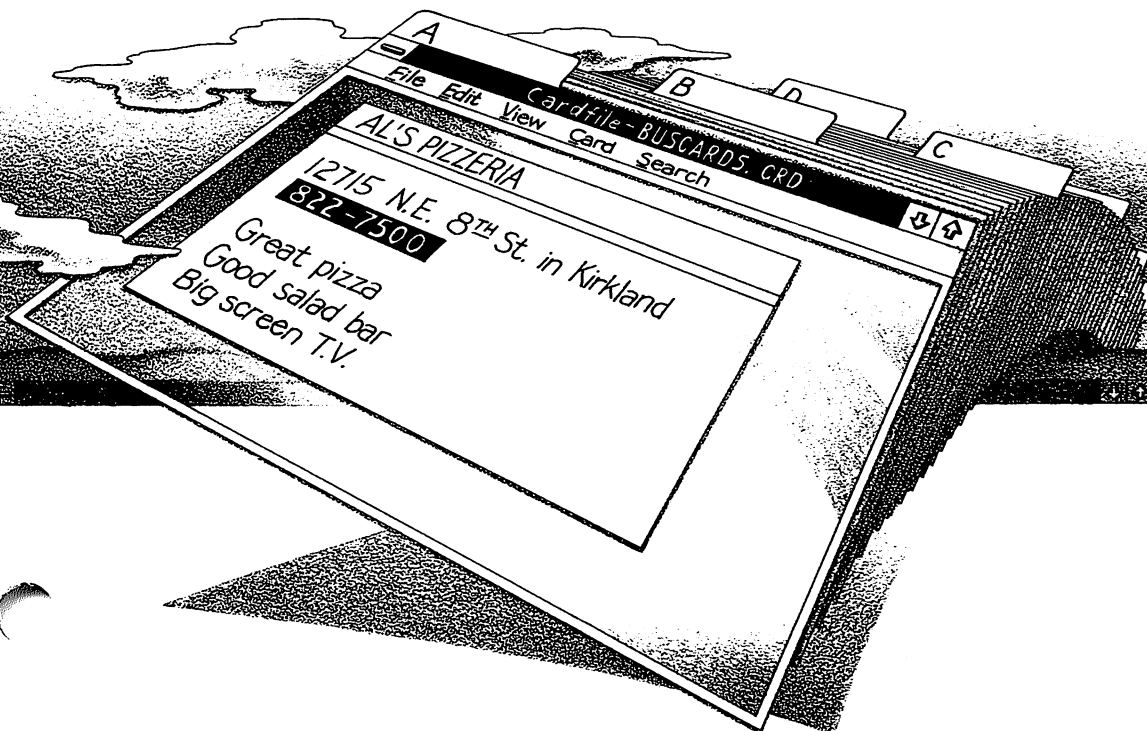
---

### Keyboard shortcuts

See Appendix B, "Shortcut Keys," for a list of the shortcut keys you can use to choose some of Notepad's commands.

## 2 Cardfile

Microsoft Windows Cardfile is a filing application you can use to keep track of names, addresses, phone numbers, directions, or anything else you want quick access to. Cardfile is like a set of index cards that sorts itself.



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## Starting Cardfile

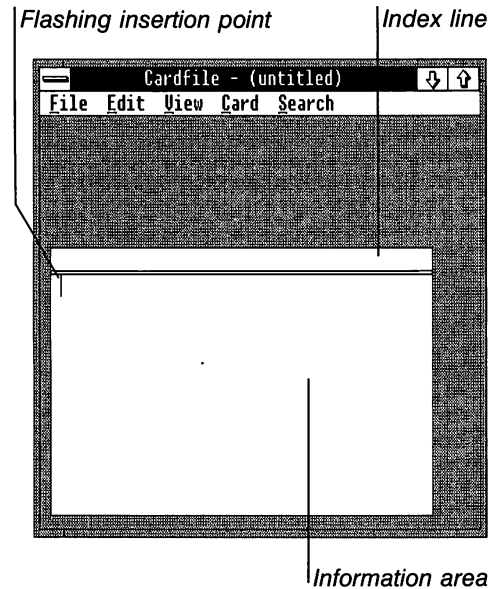
---

### Running Cardfile

Here's how you start Cardfile:

- Select and run `CARDFILE.EXE` in the MS-DOS Executive window.

When you start Cardfile, it displays an untitled window containing a single, blank card.



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## Creating a Cardfile

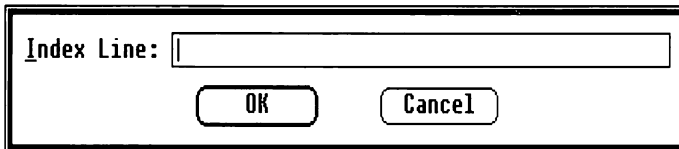
To create a cardfile, just fill in the blank card that appears when you start Cardfile, and then add more cards as you need them.

### The Index Line

The index line is the bar at the top of each card. Cardfile uses the text you put in the index line to sort the cards alphabetically.

To put text in the index line, follow these steps:

- 1 Select the Edit menu and choose the Index command or, with the mouse, double-click the card's index line. Cardfile displays the Index dialog box.



The image shows a dialog box titled "Index Line:". It contains a single-line text input field with a vertical cursor at the beginning. Below the input field are two buttons: "OK" and "Cancel". The dialog box has a double-line border.

- 2 Type the index-line text in the Index Line text box. If you make a mistake while typing, use the BACKSPACE key and then retype.
- 3 Choose the OK button.

After you type the index line, you can add text to the rest of the card.

## Typing and Formatting Text

You can type in the Cardfile window whenever it is active. Just start typing at the insertion point in the information area. The insertion point moves to the right as you type. When your typing reaches the right edge of the card, Cardfile automatically wraps the text to the next line. When you have more than one card in your file, Cardfile puts what you type on the front card.

### Moving the Insertion Point

When you start Cardfile or open a file in the Cardfile window, the insertion point initially appears in the upper-left corner of the front card. If you work in another window and then come back to Cardfile, the insertion point reappears where you left it. You can move the insertion point on the front card to wherever you want to insert or edit text.

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## Filling in the index line

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## Typing text

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## Relocating the insertion point

To move the insertion point with the keyboard, use the keys described in the following list:

To	Press
Move the insertion point to the right in a line of text	RIGHT
Move the insertion point to the left in a line of text	LEFT
Move the insertion point up in a body of text	UP
Move the insertion point down in a body of text	DOWN
Move the insertion point to the beginning of a line of text	HOME
Move the insertion point to the end of a line of text	END



To move the insertion point with the mouse, move the pointer to the area within a body of text where you want the insertion point to appear and click the mouse button.

## Formatting Text

Type the text exactly as you want it to appear using the following keys to place your text where you want it:

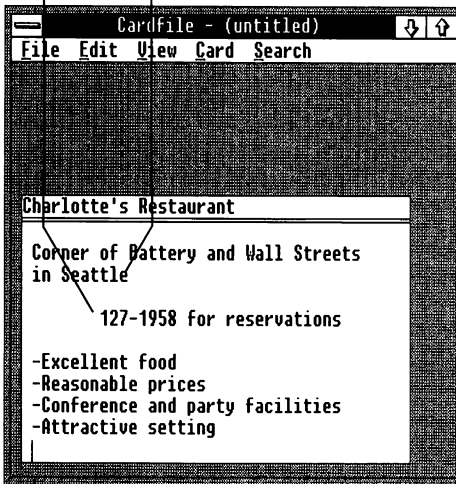
To	Press
Insert a space	SPACEBAR
Delete a character to the left	BACKSPACE
Delete a character to the right	DELETE
End a line	ENTER
Insert a space between paragraphs	ENTER twice
Indent a line	TAB
Insert a tab stop	TAB

---

## Arranging text

Pressing the **TAB** key indents a line.

Pressing the **ENTER** key ends a line.



To insert a blank line, move the insertion point to the beginning of a line and press the **ENTER** key. Cardfile inserts a line above the insertion point.

To split a line, move the insertion point to the beginning of the text that you want to move to the line below and press the **ENTER** key. Cardfile inserts a blank line and places the text on it.

To join two lines, move the insertion point to the beginning of the line that you want to move and press the **BACKSPACE** key. Cardfile joins the current line with the line above it.

## Adding a Card

You can add a new card to a file at any time. Just follow these steps:

- 1 Select the **Card** menu and choose the **Add** command. Cardfile displays the **Add** dialog box.
- 2 Type the text for the new card's index line in the **Add** text box.
- 3 Choose the **OK** button.  
Cardfile adds the new card to your file in alphabetical order. It then scrolls the file to display the new card at the front so that you can add text.

---

## Adding new cards

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## Moving Through a File

Cardfile commands affect only the front card. To type, look at, or change information on a card, you need to move through the file and bring the card to the front.

You can scroll through a file, bring a specific card directly to the front of a file, or search for a specific occurrence of text in a file. No matter which method you use, Cardfile always keeps the cards in alphabetical order.

### Scrolling

You can scroll through a Cardfile file with either the keyboard or the mouse. Here's how to scroll through the cards with the keyboard:

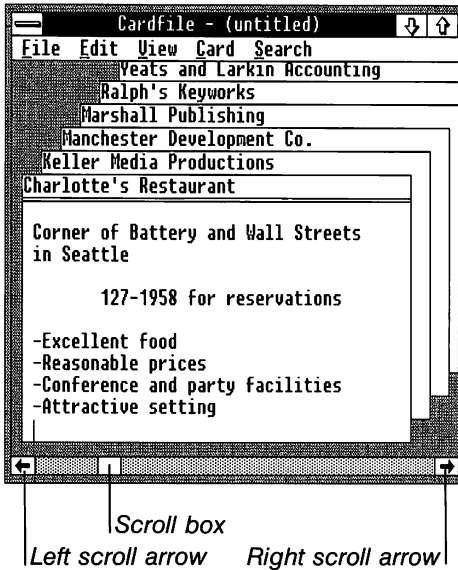
To	Press
Scroll forward one card	PAGE DOWN
Scroll backward one card	PAGE UP
Bring the first card in the file to the front	CONTROL+HOME
Bring the last card in the file to the front	CONTROL+END

---

### Scrolling through your cards

To scroll through a Cardfile file with the mouse, use the scroll box and scroll arrows shown in the following example.





The following list explains how to scroll with the mouse:

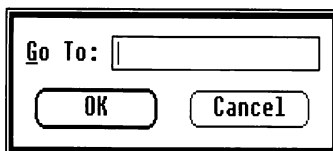
To	Click
Scroll forward one card	Right scroll arrow
Scroll backward one card	Left scroll arrow

You can quickly scroll through your file by positioning the mouse pointer on the scroll box and dragging it. Drag the scroll box to the right or left to scroll forward or backward through a file.

## Bringing a Card to the Front of a File

To bring a specific card to the front of a file, follow these steps:

- 1 Select the Search menu and choose the Go To command. Cardfile displays the Go To dialog box.



## Moving a card to the front

- 2 In the text box, type the text of the index line for the card you want to bring to the front. You don't have to type the entire index line, only enough to distinguish it from the other cards.
- 3 Choose the OK button.

You can also use the CONTROL key to bring a card to the front of a file. When you hold down the CONTROL key and press a letter on the keyboard, Cardfile scrolls to display the first card that has that letter at the beginning of its index line.

If a card's index line is visible, you can bring the card to the front of the file with the mouse by clicking the index line.

---

## Editing a Card

You edit text on a card by using commands from the Edit menu. You can change or delete text, or move or copy it to a new location.

You can also transfer text between Cardfile and other applications by using Clipboard. When you cut or copy text using the Cut or Copy command, Cardfile puts the text on the Clipboard. The Paste command copies information from the Clipboard to the front card in your file.

For more information about Clipboard, see the *Microsoft Windows User's Guide*.

## Changing the Index Line

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### Editing the index line

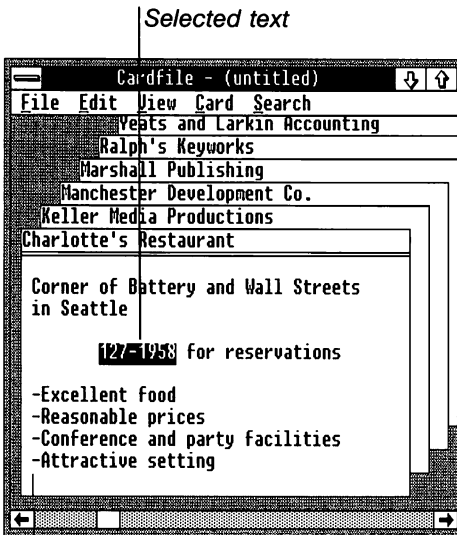
To change the text in the index line, follow these steps:

- 1 Bring the card you want to change to the front of the file.
- 2 Select the Edit menu and choose the Index command or, with the mouse, double-click the card's index line. The Index dialog box appears with the current index-line text selected in the text box.
- 3 Type the new text. The old text is deleted as soon as you type the first character of the new text.
- 4 Choose the OK button.

Cardfile automatically replaces the card in the correct alphabetical order in the file. It then scrolls the file to display that card at the front.

## Selecting Text

Before you use the Cut or Copy command from the Edit menu, you must select the text you want to affect.



Here's how you select text with the keyboard:

- 1 Use the DIRECTION keys to move the insertion point to the beginning of the text you want to select.
- 2 Press and hold down the SHIFT key and use the DIRECTION keys to move the insertion point to the end of the text you want to select. Release the SHIFT key.

If you want to cancel the selection, just press a DIRECTION key.

Here's how you select text with the mouse:

- 1 Move the pointer to the beginning of the text you want to select.
- 2 Drag the pointer to the end of the text you want to select. Release the mouse button.

If you want to cancel the selection, just click the mouse button.

---

### Selecting text for editing



Whether you have selected text with the keyboard or the mouse, you can quickly extend the selection to the beginning of the line by pressing **SHIFT+HOME**, or to the end of the line by pressing **SHIFT+END**.

## Replacing Text

Once you've selected the text you want to change, you can replace it immediately by typing the new text. The selected text is deleted as soon as you type the first character of the replacement text.

---

### Replacing text

To replace text, follow these steps:

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

## Deleting Text

You can delete text by using the **BACKSPACE** key or the **Cut** command. If you delete text using the **BACKSPACE** key, you can replace it only by retyping it.

---

### Removing text

Follow these steps to delete text from a card:

- 1 Select the text you want to delete.
- 2 Select the **Edit** menu and choose the **Cut** command.

## Moving Text

You can move text from one place to another in Cardfile by first putting it on the Clipboard and then pasting it to its new location.

### Moving Text on the Same Card

To move text on the same card, follow these steps:

- 1 Select the text you want to move.
- 2 Select the **Edit** menu and choose the **Cut** command. Cardfile puts the selected text on the Clipboard.
- 3 Move the insertion point to the area where you want to put the text.
- 4 Select the **Edit** menu and choose the **Paste** command.

---

### Relocating text on the same card

## Moving Text to Another Card

You can move text from one card to another by following these steps:

- 1 Select the text you want to move.
- 2 Select the Edit menu and choose the Cut command.
- 3 Bring the card to which you want to move the text to the front of the file.
- 4 Move the insertion point to the area where you want the text to appear.
- 5 Select the Edit menu and choose the Paste command.

You can paste text from the Clipboard to any part of any card. Note, however, that each time you put something on the Clipboard, it replaces whatever was previously there.

## Copying Text

If you want to use the same text more than once in a file, you don't have to type it over each time. You can copy the text to the Clipboard by using the Copy command from the Edit menu; then you can paste the text in as many places as you want.

### Copying Text to the Same Card

To copy text to the same card, follow these steps:

- 1 Select the text you want to copy.
- 2 Select the Edit menu and choose the Copy command. Cardfile copies the selected text to the Clipboard.
- 3 Move the insertion point to the area where you want the copied text to appear.
- 4 Select the Edit menu and choose the Paste command.

### Copying Text to Another Card

You can copy text from one card to another by doing the following:

- 1 Select the text you want to copy.
- 2 Select the Edit menu and choose the Copy command.
- 3 Bring the card to which you want to copy the text to the front of the file.

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### Relocating text to other cards

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### Duplicating text on the same card

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### Duplicating text on other cards

- 4 Move the insertion point to the area where you want the text to appear.
- 5 Select the Edit menu and choose the Paste command.

## Undoing an Edit

You can use the Undo command to cancel the last edit you made. For example, you may have deleted text that you wanted to keep, or you may have copied text to the wrong card. Choosing Undo immediately after your last edit restores the text to the way it was before you changed it.

---

### Undoing the last edit

To undo the last edit, follow this step:

- 1 Select the Edit menu and choose the Undo command.

## Finding Text

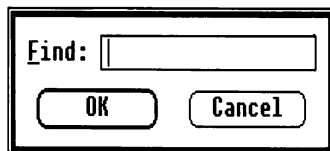
You can find specific text on cards by using the Find command from the Search menu. When you use the Find command, you can start the search at any point in the file. When finding text, Cardfile ignores capitalization.

---

### Searching for specific text

Follow these steps to find text:

- 1 Bring the card from which you want the search to begin to the front of the file.
- 2 Move the insertion point to the area where you want to start the search.
- 3 Select the Search menu and choose the Find command. Cardfile displays the Find dialog box.



- 4 In the Find text box, type the characters or words you want Cardfile to find.
- 5 Choose the OK button.

Cardfile searches from the insertion point on the front card and selects the first occurrence of the specified text. Cardfile tells you if the text does not occur in the file.

After Cardfile has found the first occurrence of the specified text, you can find further occurrences by selecting the Search menu and choosing the Find Next command.

If you choose the Find Next command, Cardfile does not display the Find dialog box but immediately searches for the last text you typed in the Find text box.

## Adding Information from Another Application

One of Cardfile's most useful features is the ability to transfer both text and artwork from another application to a card, or from a card to another application. For example, you might want to create a small map using Microsoft Windows Paint, then transfer it to a card with a friend's address on it.

To add information from other applications, follow these steps:

- 1 Put the information on the Clipboard by using the appropriate command from the application, usually the Cut or Copy command from the Edit menu.
- 2 If you are pasting a picture, move to the Cardfile window then select the Edit menu and choose the Picture command.
- 3 Move the insertion point to the area where you want the information to appear on the card.
- 4 Select the Edit menu and choose the Paste command.
- 5 If you pasted a picture, select the Edit menu and choose the Text command to reset that option.

**Note** You can only paste as much material as will fit on a card.

## Restoring a Card

If you change your mind about recent editing you've done to a card, you can restore the card to its original condition as long as it is still at the front of the file. Once you scroll through the file, you cannot reverse your changes.

Here's how you restore a card:

- Select the Edit menu and choose the Restore command.

## Deleting a Card

You can also delete cards from a file. Be careful about which card you delete, however, because you can replace a deleted card only by retyping the entire card.

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**Inserting information from other applications**

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**Restoring an edited card**

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### Removing a card

Follow these steps to delete a card:

- 1 Bring the card you want to delete to the front of the file.
- 2 Select the Card menu and choose the Delete command.  
Cardfile deletes the front card.

### Copying a Card

---

### Duplicating a card

Follow these steps to copy a card in your file:

- 1 Bring the card you want to copy to the front of the file.
- 2 Select the Card menu and choose the Duplicate command.  
Cardfile adds an exact copy of the front card to the front of the file.

---

## Working with Cardfile Files

You create, open, save, and print files with commands from the File menu in the Cardfile window. You delete files by using the Delete command from the File menu in the MS-DOS Executive window.

### Determining File Size

As you work on a file, Cardfile keeps track of how big it is. Cardfile shows the size of a file as the number of cards in the file.

To find out how many cards are in a file, follow these steps:

- 1 Select the File menu and choose the About Cardfile command.  
An informational dialog box appears with the number of cards in the file listed at the bottom.
- 2 After you have finished reading the information in the dialog box, choose the OK button.

---

### Determining the number of cards in a file

### Opening a File

You can open new or existing files in the Cardfile window. If you open a file when there is another file already open, Cardfile closes the current file. If you have unsaved changes in the current file, a dialog box appears asking if you want to save your changes before closing the file. Use the following information to determine your response:

To	Choose
Save changes	Yes
Discard changes	No
Continue working in the current file	Cancel

### Creating a New File

To create a new file from the Cardfile window, do the following:

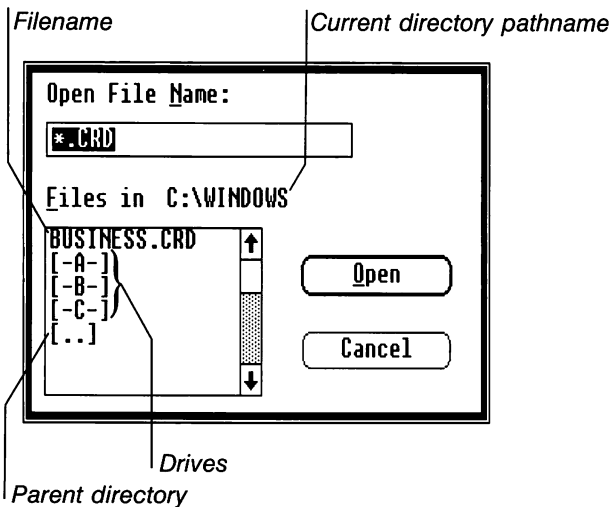
- 1 Select the File menu and choose the New command.  
Cardfile opens a new file in the Cardfile window.

### Opening an Existing File

You can open an existing file from the Cardfile window or from the MS-DOS Executive window.

Here's how you open an existing file from the Cardfile window:

- 1 Select the File menu and choose the Open command. Cardfile displays the Open dialog box. Note that directories and drives are enclosed in brackets.



### Creating files

### Opening files from Cardfile

- 2 In the list box, select the name of the file you want to open, or type a pathname and filename in the text box at the top of the dialog box.
- 3 Choose the Open button.

---

### Opening files



With the mouse, you can select and open a file listed in the list box in one step:

- Double-click the filename of the file you want to open.

---

### Opening files from MS-DOS Executive

Here's how you open an existing file from the MS-DOS Executive window:

- Select the filename and press the ENTER key or, with the mouse, double-click the filename.  
Windows automatically runs Cardfile and opens the file.

### Viewing a File in Another Directory

The Open dialog box initially lists only drives, directories, and files with the .CRD extension. You can view different files or groups of files as well.

To view different files, follow these steps:

- 1 Select the drive, directory, or group of files you want to view from the list box, or type this information in the text box at the top of the Open dialog box. For example, you can type *\*.txt* to see a list of all the files having that extension.
- 2 Choose the Open button.  
Cardfile lists the files in the drive, directory, or group of files you specified.

You can view any number of directories or groups of files. The Open dialog box remains on the screen until you open a file or choose the Cancel button.

### Saving a File

When you create a new file, or when you are finished with a file for the moment, you can save it and come back to it later. There are two commands you can use to save a file: Save As and Save.

---

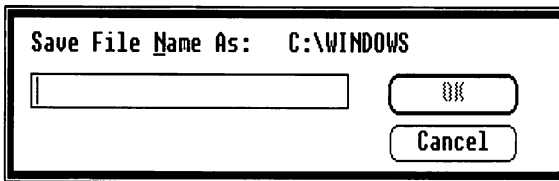
### Viewing files in different directories

## Saving a New File

Use the Save As command to name and save a new file. You can also use Save As to save the current file under a new filename and keep the original copy of the file on your disk under the old filename.

Follow these steps to save a new file:

- 1 Select the File menu and choose the Save As command. Cardfile displays the Save As dialog box.



- 2 Type a filename. If you don't type an extension, Cardfile automatically adds .CRD to the filename.
- 3 Choose the OK button.  
Cardfile saves the file on your disk.

The file remains on the screen so that you can continue working in it. The name of the file now appears in the title bar of the Cardfile window.

**Note** If you type the name of a file that already exists, a dialog box asks if you want to replace the existing file with the file you are saving. If you want to replace the existing file, choose the Yes button. Otherwise, choose the No button and type a different filename.

## Saving Changes to a File

The Save command saves the changes you made to the current file on your disk.

To save changes to a file, do the following:

- 1 Select the File menu and choose the Save command.  
Cardfile replaces the file on your disk with the current file.

---

### Saving new files

---

### Saving file changes

## Printing a File

If you have connected and installed a printer, you can print a single card or an entire file using the Print commands from the File menu. See the *Microsoft Windows User's Guide* for information about installing printers.

---

### Printing a card

Here's how you print a single card:

- 1 Bring the card you want to print to the front of the file.
- 2 Select the File menu and choose the Print command.

---

### Printing an entire file

Here's how you print an entire file:

- Select the File menu and choose the Print All command.

Whether you choose to print a single card or an entire file, a dialog box appears telling you that Cardfile is sending your file to Spooler.

To stop printing a card or file, do the following:

- Choose the Cancel button.

## Deleting a File

---

### Removing files

You can delete a file to make room for other files on your disk. You delete a file using the Delete command from the File menu in the MS-DOS Executive window. For information on MS-DOS Executive and deleting files, see the *Microsoft Windows User's Guide*.

## Merging Files

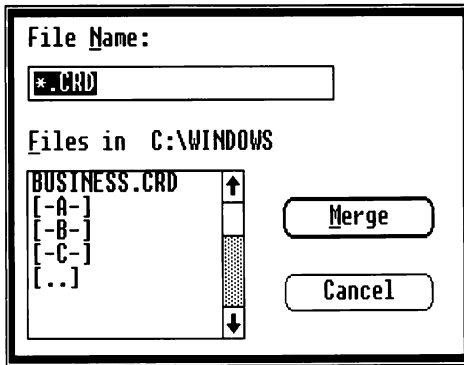
If you want to consolidate your cards, you can merge another Cardfile file into the file you are currently working in.

Follow these steps to merge two Cardfile files:

- 1 Select the File menu and choose the Merge command. Cardfile displays the Merge dialog box.

---

### Consolidating files



- 2 Select the file you want to merge with the current file from the list box, or type the name of the file in the Filename text box.
- 3 Choose the Merge button.  
Cardfile merges the cards from the other file with the cards in the current file and sorts them alphabetically.

## Viewing a File as a List

Cardfile has two viewing options—Cards view and List view—so that you can display your file as a series of cards or as a list. The Cards view is active when you start Cardfile. In the List view, Cardfile displays alphabetically the index line of every card in the file. You can use the List view to create a phone directory by simply including a name and phone number in the index line of each card in a file and then displaying the file as a list.

Here's how you display cards as a list:

- Select the View menu and choose the List command.

To scroll through the list, use the DIRECTION keys.

## Automatic Dialing

If you have a Hayes or Hayes-compatible modem, Cardfile will dial a phone number for you.

Follow these steps to have Cardfile dial automatically:

- 1 Select the entry you want in the List view, or, if the Cards view is active, bring the card you want to the front of the file.

---

**Displaying cards as a list**

---

**Dialing a number automatically**

- 2 Select the Card menu and choose the Autodial command. Cardfile displays a dialog box containing phone settings that you can accept or change.

Dial: 127-1958

Dial Type  Tone  Pulse

Port  COM1  COM2

Baud Rate  1200  300

OK Cancel

- 3 If necessary, change the settings. For an explanation of the settings, see the list following this procedure.
- 4 Choose the OK button. Cardfile dials the number in the Dial text box.

---

### Selecting phone options

The following options can be selected in the Phone Settings dialog box:

**Dial** This setting allows you to specify the phone number you want Cardfile to dial. Cardfile searches from the beginning of the selected card, starting with the index line, and puts the first phone number it finds into the Dial text box. If you want Cardfile to use another number on the card, select that number before you choose the Autodial command. If you want to change the number in the Dial text box, retype the number or edit it.

**Dial Type** This setting requires that you select the dial type of your phone. If you normally hear a tone for each number you dial, you have a tone telephone. If you hear a clicking sound, you probably have a pulse telephone.

**Port** This setting requires that you select the port to which your modem is connected.

**Baud Rate** This setting is determined by your modem. For the correct setting, consult the owner's manual for your modem.

---

## Ending a Cardfile Session

Use the Exit command to end your Cardfile session:

- Select the File menu and choose the Exit command.

If you have unsaved changes to the file, a dialog box appears asking if you want to save your changes before closing the window. Choosing the Cancel button allows you to continue working in your file in the Cardfile window. Choosing the Yes or No button closes your Cardfile window.

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## Using Shortcut Keys

See Appendix B, “Shortcut Keys,” for a list of the shortcut keys you can use to choose some of Cardfile’s commands.

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## Quitting Cardfile

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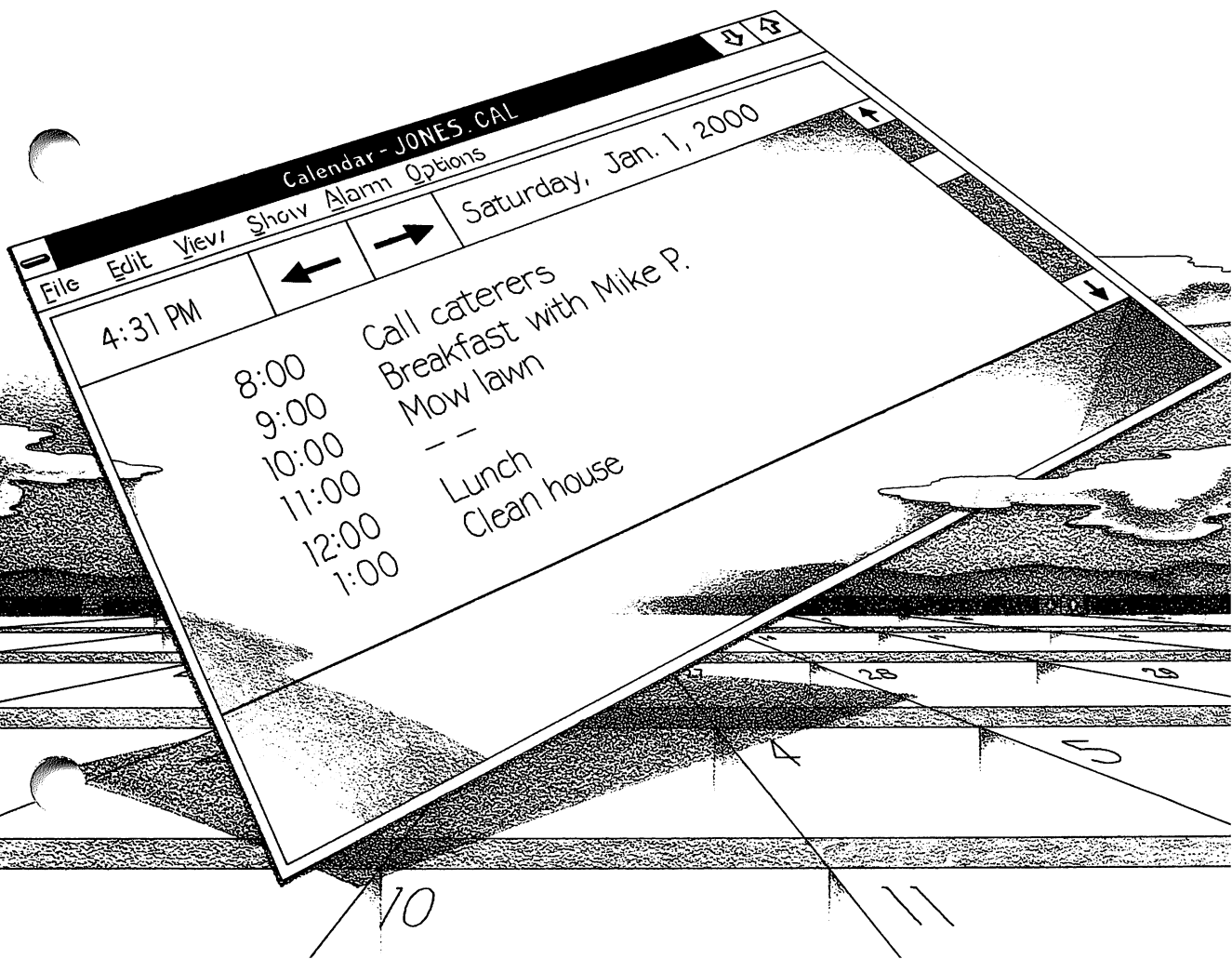
## Keyboard shortcuts

## 3 Calendar

Microsoft Windows Calendar is like a desktop calendar and appointment book.

You can maintain more than one Calendar file to keep track of more than one person's appointments. You can also set alarms to remind you of particular appointments.

Calendar gives you two views of time. In the Day view, you enter, display, or edit your appointments for each day. In the Month view, you select the day for which you want to see appointments.



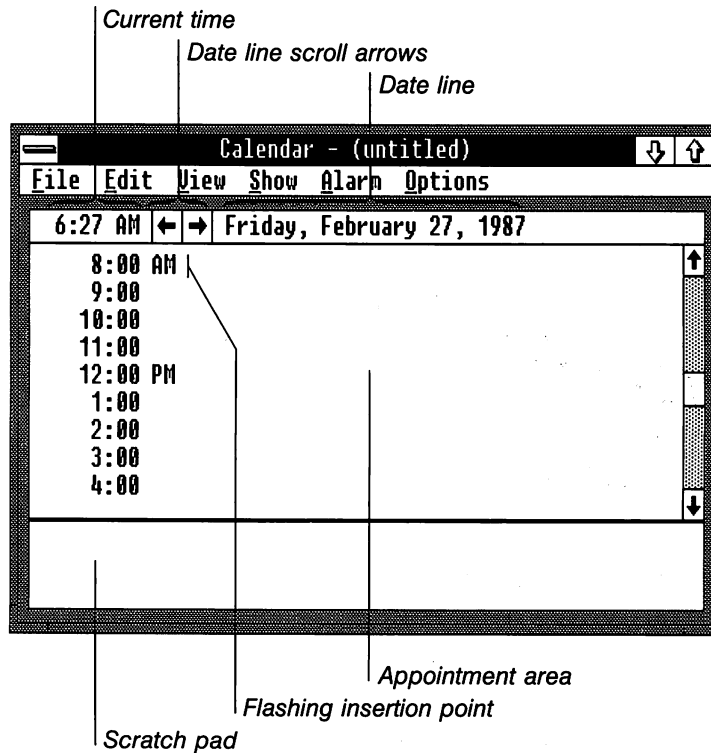
## Starting Calendar

### Running Calendar

Here's how you start Calendar:

- ☐ Select and run CALENDAREXE in the MS-DOS Executive window.

When you first start Calendar, it displays the daily appointment window — the Day view — for the current date.



Calendar uses the time and date you set when you start your computer. You can reset the time and date using Control Panel. For details on Control Panel, see the *Microsoft Windows User's Guide*.

---

## Filling In the Day View

You enter appointments in the Day view. If you have switched to the Month view, choose the Day command from the View menu.

### Selecting an Appointment Time

The Day view initially shows you a list of times at one-hour intervals, beginning with 8 A.M. Before typing the description of an appointment, you need to select the appointment time. You can select a time using either the keyboard or the mouse.

Here's how you select a time with the keyboard:

- ▣ Press the DOWN key to move to the next hour. Press the UP key to move to the previous hour.

Here's how you select a time with the mouse:

- ▣ Click the time.

If you want to schedule an appointment for a time not currently on the screen, you need to scroll the display before selecting the time. For details on scrolling, see “Viewing a Different Time” later in this chapter.

### Entering an Appointment

To type an appointment in the Day view, follow these steps:

- 1 Select the time of the appointment.
- 2 Type a description of the appointment. For example, type *Lunch with Lydia*. Use the BACKSPACE key to correct typing errors.

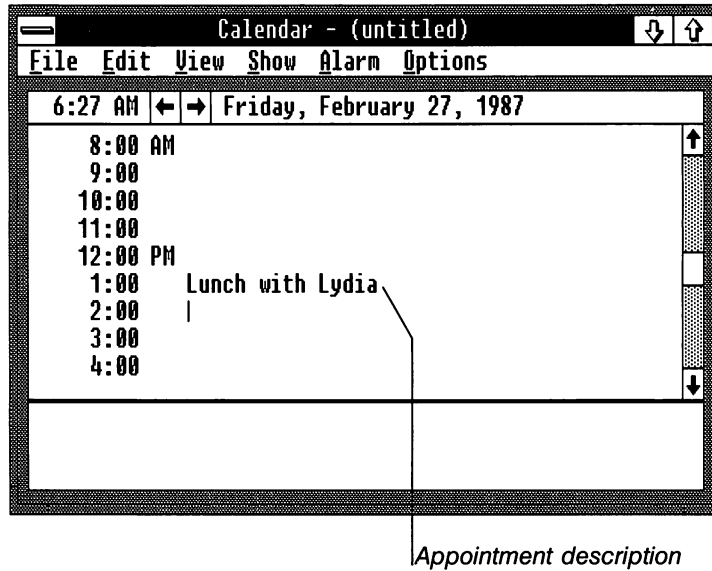
---

### Selecting a time



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### Typing appointment descriptions



- 3 Press the ENTER key, or select the time for the next appointment you want to enter.

## Editing an Appointment

You can change the text of any appointment description you've typed. You can move the insertion point in an entry to insert additional text or to select text for editing.

### Moving the Insertion Point

To move the insertion point with the keyboard, use the keys described in the following list:

---

### Relocating the insertion point

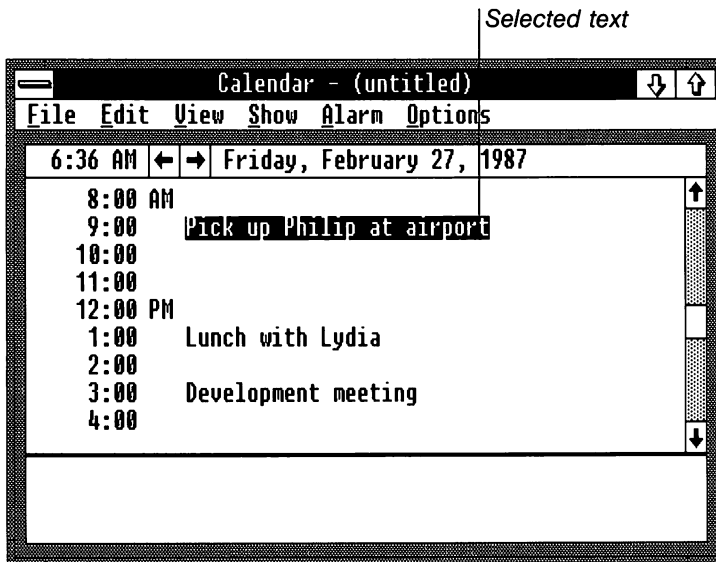
To	Press
Move the insertion point to the right in an entry	RIGHT
Move the insertion point to the left in an entry	LEFT
Move the insertion point to the beginning of an entry	HOME
Move the insertion point to the end of an entry	END

To move the insertion point with the mouse, move the pointer to the area where you want the insertion point to appear and click the mouse button.



### Selecting Text

Before you use the Cut or Copy command from the Edit menu, you must select the text you want to affect. You can select text with the keyboard or the mouse.



---

## Selecting text for editing

Here's how you select text with the keyboard:

- 1 Move the insertion point to the beginning of the text you want to select.
- 2 Press and hold down the **SHIFT** key and press the **RIGHT** key to select the remainder of the text. Release the **SHIFT** key.  
If you want to cancel the selection, just press a **DIRECTION** key.



Here's how you select text with the mouse:

- 1 Move the pointer to the beginning of the text you want to select.
- 2 Drag the pointer to the end of the text you want to select and release the mouse button.  
If you want to cancel the selection, just click the mouse button.

Whether you have selected text with the keyboard or the mouse, you can quickly extend the selection to the beginning of the line by pressing **SHIFT + HOME**, or to the end of the line by pressing **SHIFT + END**.

## Replacing Text

Once you've selected the text you want to change, you can replace it immediately by typing the new text. The selected text is deleted as soon as you type the first character of the replacement text.

---

## Replacing text

To replace text, do the following:

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

## Deleting Text

Follow these steps to delete text from an appointment entry:

- 1 Select the text you want to delete.
- 2 Select the **Edit** menu and choose the **Cut** command.

---

## Removing text

## Moving Text

You can move text from one place to another in a Calendar file by first putting it on the Clipboard using the **Cut** command and then pasting it into its new location using the **Paste** command.

Follow these steps to move text:

- 1 Select the text you want to move.
- 2 Select the Edit menu and choose the Cut command. Calendar puts the selected text on the Clipboard.
- 3 Move the insertion point to the area where you want the text to appear.
- 4 Select the Edit menu and choose the Paste command.

You can paste text from the Clipboard to any part of any document. Note, however, that each time you put something on the Clipboard, it replaces whatever was previously there.

### Copying Text

If you want to use the same text more than once in a Calendar file, you don't have to type it over each time. You can copy the text to the Clipboard with the Copy command from the Edit menu; then you can paste the text in as many places as you want using the Paste command.

Follow these steps to copy text:

- 1 Select the text you want to copy.
- 2 Select the Edit menu and choose the Copy command. Calendar copies the selected text to the Clipboard.
- 3 Move the insertion point to the appointment time where you want the copied text to appear.
- 4 Select the Edit menu and choose the Paste command.

### Setting the Alarm

Calendar has an alarm you can set to remind yourself of particular appointments. You can set the alarm for as many appointments as you want.

Follow these steps to set the alarm:

- 1 Select the appointment time when you want the alarm to ring.
- 2 Select the Alarm menu and choose the Set command.

---

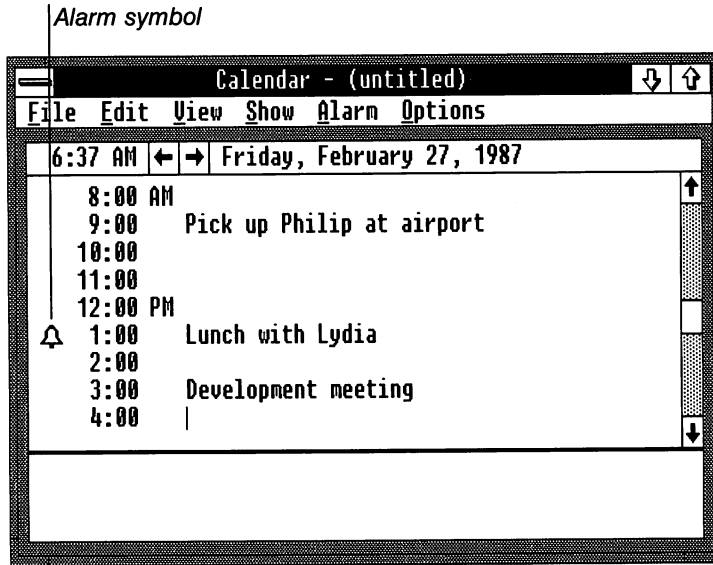
### Relocating text

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### Duplicating text

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### Turning on the alarm



The alarm symbol (a small bell) appears to the left of the time you selected. The next time you select the Alarm menu, a checkmark will appear by the Set command. When the alarm goes off, Calendar displays a dialog box reminding you of the appointment. If the Calendar window is inactive, the title bar at the top of the Calendar window flashes. If Calendar is an icon when the alarm goes off, the icon flashes.

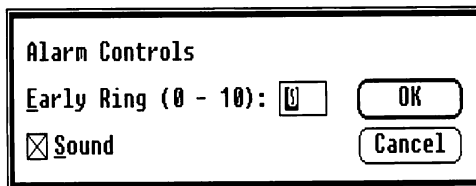
### Changing the Sound Option

You can control whether or not the alarm makes a sound, in addition to displaying the dialog box or flashing the title bar or icon. Initially, the alarm is set for sound, so it will beep unless you have set it to be silent.

### Setting the alarm for silence

If you want a silent alarm, follow these steps:

- 1 Select the Alarm menu and choose the Controls command. The Alarm Controls dialog box appears.



- 2 Turn off the Sound check box.
- 3 Choose the OK button.

To reset the alarm for sound, just turn on the Sound check box.

### Setting the Alarm for an Early Ring

You can set the alarm to sound before the appointment time by following these steps:

- 1 Select the Alarm menu and choose the Controls command. The Alarm Controls dialog box appears.
- 2 Type a number from 1 to 10 in the Early Ring text box. This is the number of minutes before your appointment that you want the alarm to sound.
- 3 Choose the OK button.

### Turning Off the Alarm

The Alarm dialog box is displayed only if the Calendar window is active. If the Calendar window is inactive, the title bar flashes. If Calendar is an icon, the icon flashes. The Alarm dialog box will remain on your screen until you “turn off” the alarm.

To turn off the alarm when the Calendar window is active, follow this step:

- ▣ Choose the OK button in the Alarm dialog box.

To turn off the alarm if the window is inactive, or if Calendar is an icon, follow these steps:

- 1 Press ALT+ESCAPE until the window becomes active or until you select the icon. Calendar displays the Alarm dialog box.
- 2 Choose the OK button.

To turn off the alarm with the mouse when the Calendar window is active, do the following:

- ▣ Click the OK button in the Alarm dialog box.

---

### Setting the alarm to sound early

---

### Turning off the alarm



If the window is inactive, or if Calendar is an icon, follow these steps:

- 1 Click the window or icon. Calendar displays the Alarm dialog box.
- 2 Click the OK button to turn off the alarm.

### Removing an Alarm

If you change your mind about setting an alarm, you can remove it by following these steps:

- 1 Select the time the alarm is set for.
- 2 Select the Alarm menu and choose the Set command.  
Calendar removes the alarm symbol next to the appointment time.

---

### Canceling an alarm

---

## Viewing a Different Time or Date

You may want to move through your Calendar file to display the appointments you have entered or to select a day other than the one currently displayed in the Day view.

### Viewing a Different Time

You enter, edit, and view appointments in the Day view. The screen is not big enough to display all of the day's appointments, but you can scroll the Day view to see an appointment not currently visible on the screen.

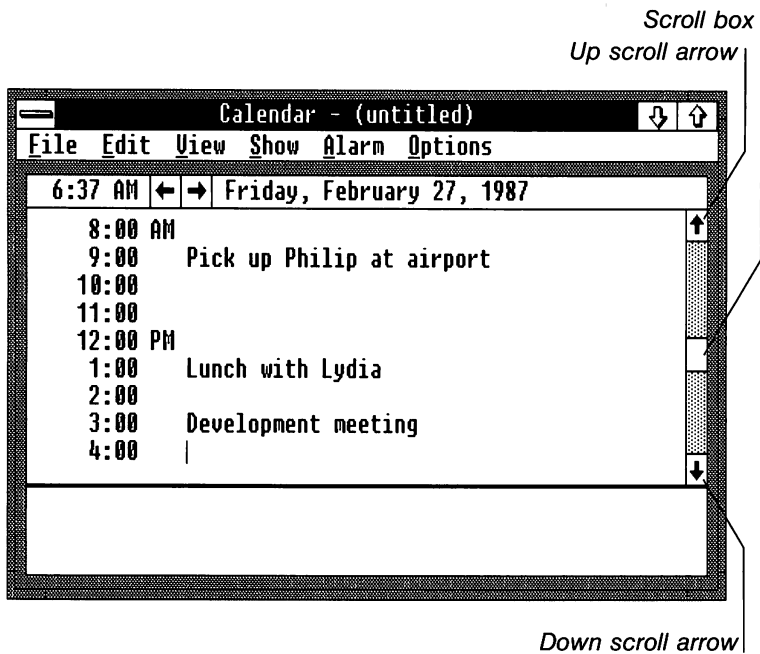
To view a different time with the keyboard, press the UP or DOWN key to move from one appointment to another. When you reach the last visible appointment, use the following keys to scroll the window to the next appointment:

---

### Viewing other times

To scroll	Press
Up one appointment	UP
Down one appointment	DOWN
Up one screen	PAGE UP
Down one screen	PAGE DOWN
To the starting time	CONTROL+HOME
To 12 hours after the starting time	CONTROL+END

To view a different time with the mouse, use the scroll box and scroll arrows shown in the following example.



The following list explains how to scroll with the mouse:

<b>To scroll</b>	<b>Click</b>
Up one appointment	Up scroll arrow
Down one appointment	Down scroll arrow
Up one screen	Area above the scroll box in the scroll bar
Down one screen	Area below the scroll box in the scroll bar

You can quickly scroll through your appointments with the mouse by dragging the scroll box up or down.

## Viewing a Different Date

### Viewing other dates

You can change the day or month that is displayed by using the commands from the Show menu. The commands in the Show menu apply to days when you are using the Day view and to months when you are using the Month view.

To return to the current day or month, do the following:

- Select the Show menu and choose the Today command.

To display the day or month before the one currently displayed, follow this step:

- Select the Show menu and choose the Previous command.

To display the day or month after the one currently displayed, do the following:

- Select the Show menu and choose the Next command.

When you are using the Day view, you can also press the following keys to display the previous or next day:

<b>To select</b>	<b>Press</b>
The previous day	CONTROL + PAGE UP
The next day	CONTROL + PAGE DOWN

If you have a mouse, you can quickly display the next or previous day in the Day view by clicking one of the scroll arrows in the date line. If you click anywhere else in the date line, Calendar displays the Month view.



### Viewing a Different Date with the Month View

You can use the Month view to select the day for which you want to enter, edit, or view appointments. Selecting the day using the Month view may be faster than scrolling through the days one at a time by choosing the Previous or Next command or by clicking the scroll arrows in the date line of the Day view.

To change from the Day view to the Month view, follow this step:

- ▣ Select the View menu and choose the Month command or, with the mouse, click the date line.

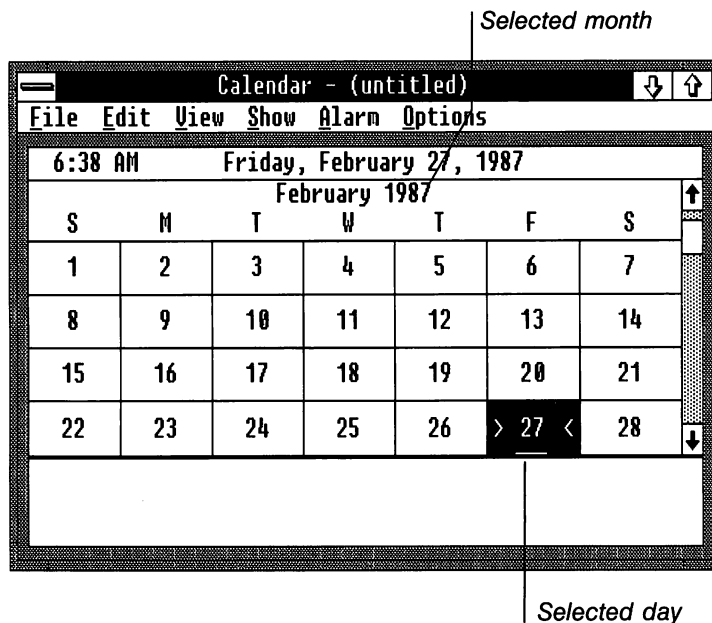
The following two lists describe how to move around in the Month view and how to select the day you want with the keyboard or the mouse.

With the keyboard, you use the DIRECTION keys to select the day you want:

To select	Press
The next day	RIGHT
The previous day	LEFT
The day directly below the currently selected one	DOWN (If the current date is in the bottom row of dates on the calendar, the DOWN key selects the next month.)
The day directly above the currently selected one	UP (If the current date is in the top row of dates on the calendar, the UP key selects the previous month.)
The next month	CONTROL + PAGE DOWN
The previous month	CONTROL + PAGE UP

### Changing to Month view

### Moving in Month view



### Moving in Month view



If you are using a mouse, you can click the day you want to select:

To select	Click
Another day	Any day other than the current selection
The next month	Down scroll arrow
The previous month	Up scroll arrow
The next year	Area below the scroll box in the scroll bar
The previous year	Area above the scroll box in the scroll bar

Once you have selected the day you want, you can display its appointments by returning to the Day view. You move to the Day view by pressing the ENTER key or, if you are using a mouse, by double-clicking the selected day.

Whether you use the keyboard or a mouse, you can also move back to the Day view by selecting the View menu and choosing the Day command.

## Viewing a Specific Date

You can display a specific date in either the Day view or the Month view by following these steps:

- 1 Select the Show menu and choose the Date command. Calendar displays the Show Date dialog box.
- 2 Type the date you want Calendar to display in the text box.
- 3 Choose the OK button.

You can type any date between January 1, 1980 and December 31, 2099. Type dates in the following format: mm/dd/yyyy or mm-dd-yyyy. You do not need to type leading zeros for days or months. If you type a two-digit number for the year, Calendar assumes the 20th century. The following samples represent acceptable entries:

Type	For
<i>3/9/87</i>	March 9, 1987
<i>11-17-87</i>	November 17, 1987
<i>1/1/2010</i>	January 1, 2010

---

## Customizing Your Calendar

You can customize the Day view of your calendar by using commands from the Options menu.

### Changing the Day Settings

The day settings determine the time interval, hour format, and starting time displayed in the Day view.

---

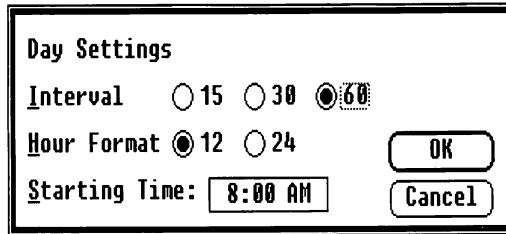
### Viewing specific dates

---

## Customizing the Day view

To change the day settings, follow these steps:

- 1 Select the Options menu and choose the Day Settings command. Calendar displays the Day Settings dialog box.



- 2 Select the options you want. For an explanation of the options, see the list following this procedure.
- 3 Choose the OK button.

The following options can be set in the Day Settings dialog box:

**Interval** This setting determines the interval between daily appointments. You can select 15-minute, 30-minute, or 60-minute intervals.

**Hour Format** This setting allows you to select either a standard 12-hour clock or a 24-hour clock.

**Starting Time** This setting allows you to specify the earliest time Calendar lists when displaying the Day view.

## Adding a Special Time

You can enter appointments for special times. A special time is any time that falls between the interval you set with the Day Settings command in the Options menu. For example, 11:10 is a special time.

Follow these steps to add a special time:

- 1 Select the Options menu and choose the Special Time command. Calendar displays the Special Time dialog box.
- 2 Type the special time in the text box.
- 3 Choose the Insert button.

---

## Inserting special times

Follow these steps to delete a special time:

- 1 Select the time you want to delete.
- 2 Select the Options menu and choose the Special Time command. The Special Time dialog box appears with the selected time in the text box.
- 3 Choose the Delete button.

## Adding a Note

The daily appointment window has a scratch pad at the bottom in which you can type reminders.

Follow these steps to add notes:

- 1 Press the TAB key to move to the scratch pad. An insertion point appears in the upper-left corner.
- 2 Type your notes. If your typing goes beyond the right border of the scratch pad, Calendar automatically wraps the text to the next line. Press the ENTER key if you want to end a line. Use the BACKSPACE key to correct typing errors.
- 3 Press the TAB key to return to the appointment area.

Try to keep your notes as short as possible. Only three lines of text will fit in the scratch pad.

## Marking a Date

You can mark special days, such as birthdays or anniversaries, in the Month view.

Follow these steps to mark a special date:

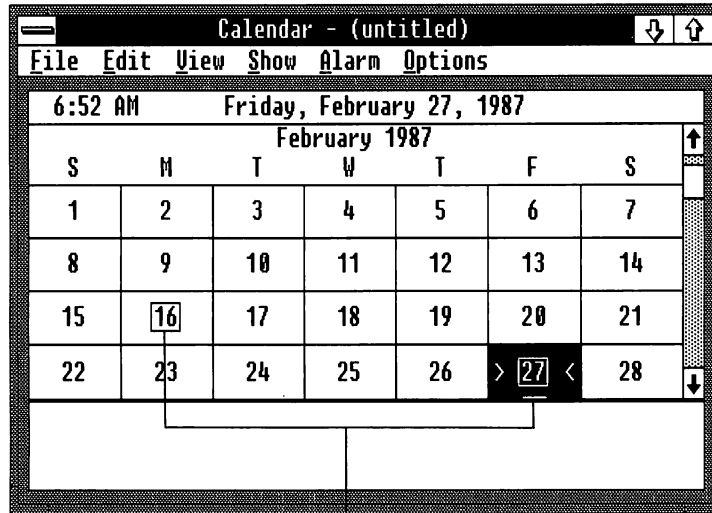
- 1 Select the day you want to mark.
- 2 Select the Options menu and choose the Mark command. Calendar puts a small box around the number.

---

### Including notes

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### Marking special dates



Marked dates

After you have marked a date, a checkmark will appear by the Mark command the next time you select the Options menu.

To cancel a mark, follow these steps:

- 1 Select the marked date.
- 2 Select the Options menu and choose the Mark command.  
Calendar removes the box around the number.

---

## Working with Calendar Files

You create, open, save, and print Calendar files by using commands from the File menu in the Calendar window. You delete Calendar files by using the Delete command from the File menu in the MS-DOS Executive window.

### Opening a File

You can open new or existing files in the Calendar window. If you open a Calendar file when there is another file already open, Calendar closes the current file. If you have unsaved changes in the current file, a dialog box asks you if you want to save your changes before closing the file. Use the following information to determine your response:

To	Choose
Save changes	Yes
Discard changes	No
Continue working in the current file	Cancel

### Creating a New File

To create a new Calendar file, do the following:

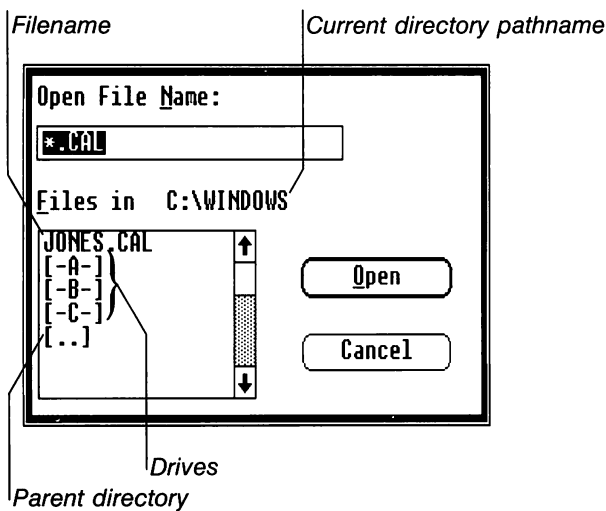
- Select the File menu and choose the New command. Calendar opens a new file in the Calendar window.

### Opening an Existing File

You can open an existing file from the Calendar window or from the MS-DOS Executive window.

Here's how you open an existing file from the Calendar window:

- Select the File menu and choose the Open command. Calendar displays the Open dialog box. Note that directories and drives are shown in brackets.



### Creating files

### Opening files from Calendar

- 2 Select the filename of the file you want to open from the list box, or type a pathname and filename in the text box at the top of the dialog box.
- 3 Choose the Open button.

---

## Opening files



With the mouse, you can select and open a file listed in the list box in one step:

- ▣ Double-click the filename of the file you want to open.

---

## Opening files from MS-DOS Executive

Here's how you open an existing Calendar file from the MS-DOS Executive window:

- ▣ Select the filename and press the ENTER key or, with the mouse, double-click the filename.  
Windows automatically starts Calendar and opens the file.

## Viewing a File in Another Directory

The Open dialog box initially lists only drives, directories, and files with the .CAL extension. You can view different files or groups of files as well.

To view different files, follow these steps:

- 1 Select the drive, directory, or group of files you want to view from the list box, or type this information in the text box at the top of the Open dialog box. For example, you can type *\*.txt* to see a list of all the files with that extension.
- 2 Choose the Open button.  
Calendar lists the files in the drive, directory, or group of files you specified.

You can view any number of directories or groups of files. The Open dialog box remains on the screen until you open a file or choose the Cancel button.

## Saving a File

When you create a new file, or when you are finished with a file for the moment, you can save it and come back to it later. There are two commands you can use to save a Calendar file: Save As and Save.

---

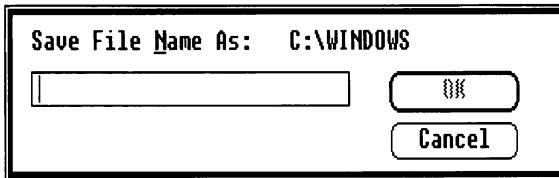
## Viewing files in different directories

## Saving a New File

Use the Save As command to name and save a new file. You can also use Save As to save the current file under a new filename and keep the original copy of the file on your disk under the old filename.

Follow these steps to save a new file:

- 1 Select the File menu and choose the Save As command. Calendar displays the Save As dialog box.



- 2 Type a filename for the file.  
If you don't type an extension, Calendar automatically adds .CAL to the filename.
- 3 Choose the OK button.  
Calendar saves the file on your disk.

The file remains on the screen so that you can continue working in it. The name of the file now appears in the title bar of the Calendar window.

**Note** If you type the name of a file that already exists, a dialog box asks if you want to replace the existing file with the file you are saving. If you want to replace the existing file, choose the Yes button. Otherwise, choose the No button and type a different filename.

## Saving Changes

The Save command saves the changes you made to the current file on your disk.

To save changes to the current file, do the following:

- 1 Select the File menu and choose the Save command.  
Calendar replaces the file on your disk with the current file.

---

## Saving new files

---

## Saving file changes

## Printing Appointments

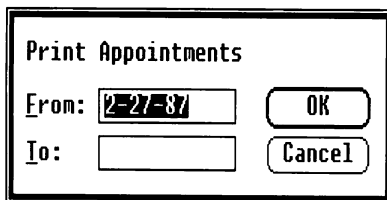
You can print your appointments using the Print command from the File menu.

---

### Printing files

Follow these steps to print appointments:

- 1 Select the File menu and choose the Print command. Calendar displays the Print Appointments dialog box.



- 2 In the From text box, type the first date of the appointments you want to print.
- 3 In the To text box, type the last date of the appointments you want to print.  
To print a single day's appointments, leave the To text box blank.
- 4 Choose the OK button.

Whether you choose to print a single day's appointments or several days' appointments, a dialog box appears telling you that Calendar is sending your file to Spooler.

If you want to stop printing your appointments, do the following:

- 1 Choose the Cancel button.

## Removing an Appointment Day

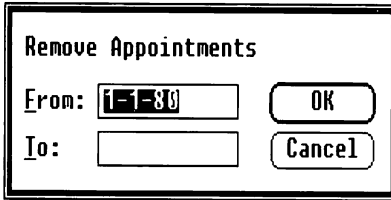
You can remove a single day or a range of days to make room on your disk for other days.

Follow these steps to remove an appointment day:

- 1 Select the File menu and choose the Remove command. Calendar displays the Remove Appointments dialog box.

---

### Deleting appointment days



- 2 In the From text box, type the first date you want to remove.
- 3 In the To text box, type the last date you want to remove.  
To remove one day's appointments, leave the To text box blank.
- 4 Choose the OK button.

## Deleting a File

You can delete a file to make room for other files on your disk. You delete a file using the Delete command from the File menu in the MS-DOS Executive window.

See the *Microsoft Windows User's Guide* for information about MS-DOS Executive and deleting files.

---

## Removing files

---

## Ending a Calendar Session

Use the Exit command to end your Calendar session:

- Select the File menu and choose the Exit command.

If you have unsaved changes to the file, a dialog box appears asking if you want to save your changes before closing the window. Choosing the Cancel button allows you to continue working in your Calendar file. Choosing the Yes or No button closes your Calendar window.

---

## Quitting Calendar

---

## Using Shortcut Keys

See Appendix B, "Shortcut Keys," for a list of the shortcut keys you can use to choose some of Calendar's commands.

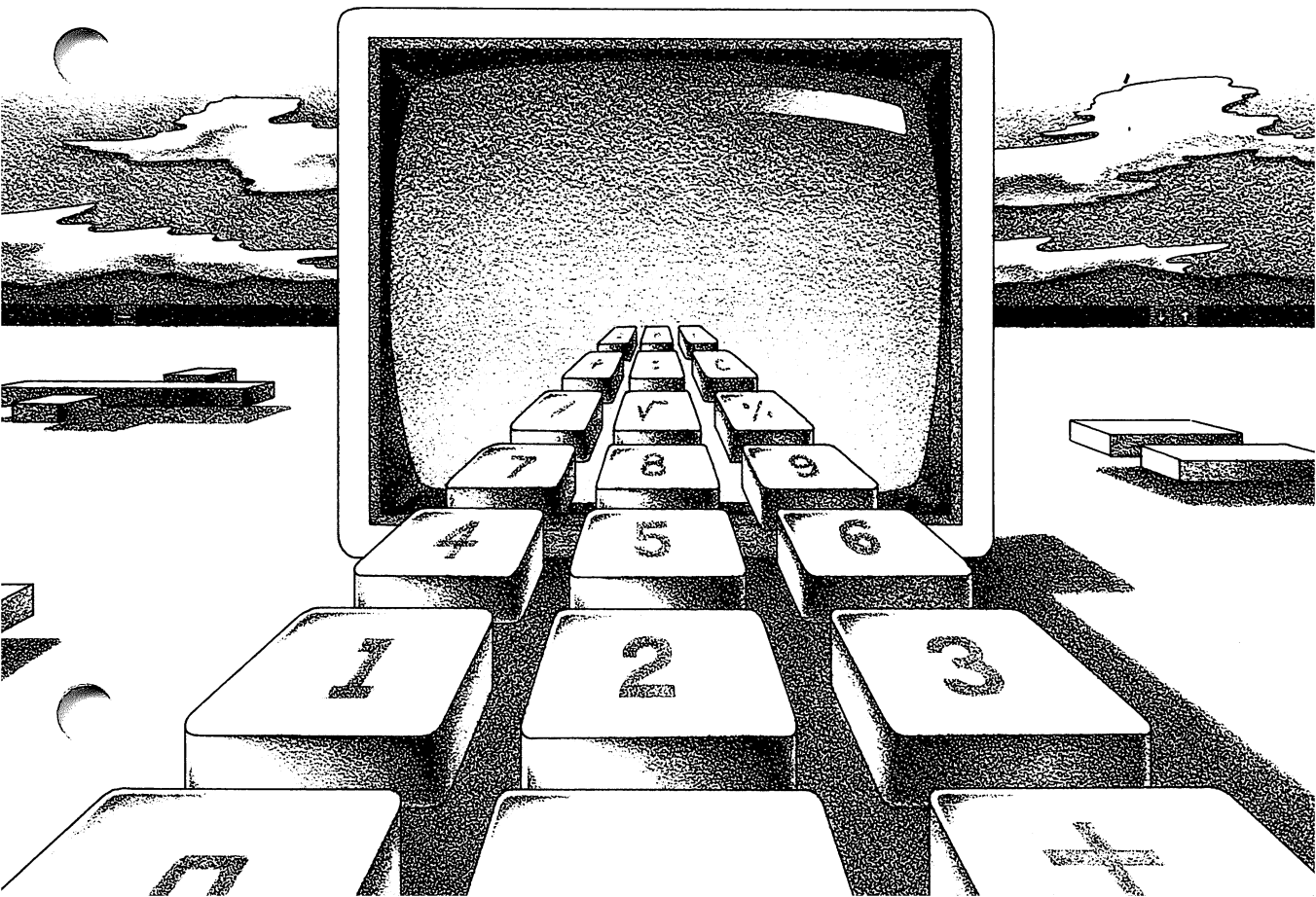
---

## Keyboard shortcuts

## 4 Calculator

Microsoft Windows Calculator works much like a hand-held calculator. It has many basic functions and a memory.

With Calculator, you can perform standard arithmetic operations and calculate percentages and square roots.



---

## Starting Calculator

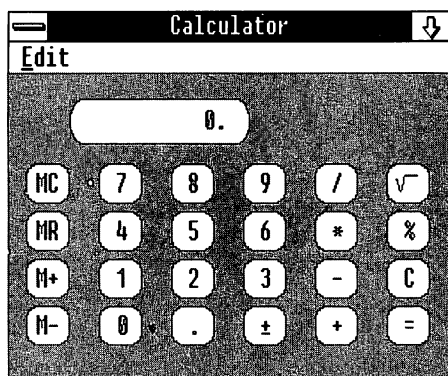
---

### Running Calculator

Here's how you start Calculator:

- Select and run CALC.EXE in the MS-DOS Executive window.

When you start Calculator, it automatically creates a window with a calculator in it.



**Note** The Calculator window cannot be sized. However, it can be reduced to an icon on your screen so that it is readily available when you want to perform calculations.

---

## Using Calculator

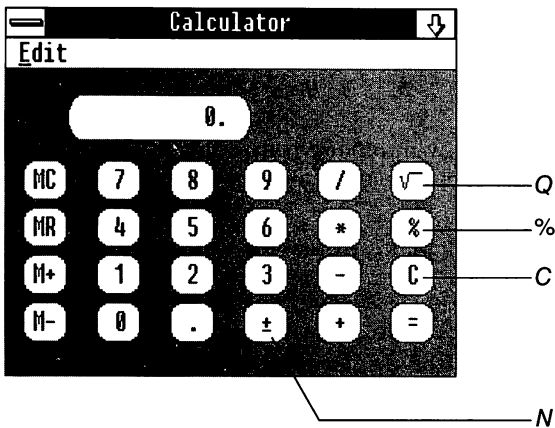
---

### Making calculations

You can use Calculator with either the keyboard or the mouse. Most of Calculator's "keys" can be activated by pressing the same keys on the keyboard. You can type the digits 0 through 9 and press the plus, minus, multiplication, division, and equal sign keys on the keyboard, or on the numeric keypad if the NUMLOCK feature is on. If the NUMLOCK feature is off, press the NUMLOCK key to turn it on.

You can also perform other Calculator actions with the keyboard:

To	Press
Find a square root	Q
Find a percentage	%
Clear Calculator	C
Change a number from positive to negative or negative to positive	N



To use Calculator with the mouse, point to a "key" in the Calculator window and click the mouse button.



## Using the Memory Feature

Calculator has its own memory. The figure in memory starts out as zero. You can add to or subtract from this value. You can also display or clear the memory. To use the memory feature with the keyboard, press and hold down the M key and press the appropriate key, then release both keys.

---

## Using the memory

To use the memory feature with the mouse, just click the “key” you want to activate. The following list describes both methods:

To	With the keyboard	With the mouse
Clear the memory	Press M and C	Click MC
Display the figure in memory	Press M and R	Click MR
Add the displayed figure to the memory	Press M and +	Click M +
Subtract the displayed figure from the memory	Press M and -	Click M -

## Copying a Number

---

### Copying figures

You can use Clipboard to copy numbers from other applications to the Calculator display, and from the Calculator display to other applications.

To copy the figure in the Calculator display to the Clipboard, do the following:

- Select the Edit menu and choose the Copy command.  
 Calculator puts a copy of the displayed amount on the Clipboard.

To paste a number from the Clipboard to the Calculator display, follow this step:

- Select the Edit menu and choose the Paste command.  
 Calculator takes the number from the Clipboard and puts it on the Calculator display. If Clipboard does not contain a number, Calculator does nothing. If Clipboard contains a formula, Calculator pastes the result of the formula.

---

## Ending a Calculator Session

Use the Exit command to end your Calculator session:

- Select the Edit menu and choose the Exit command.  
Windows closes the Calculator window.

---

## Using Shortcut Keys

See Appendix B, “Shortcut Keys,” for a list of the shortcut keys you can use to choose some of Calculator’s commands.

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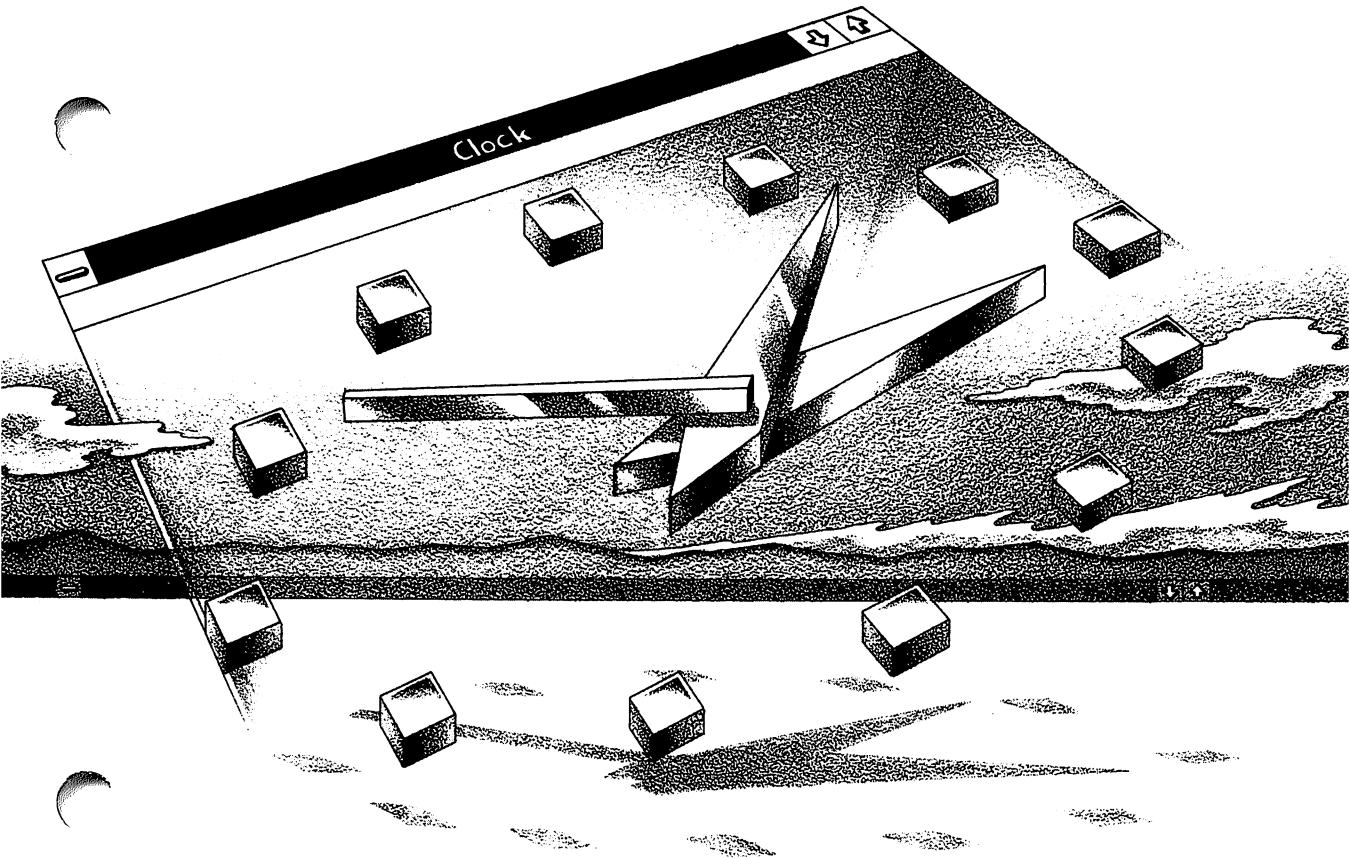
## Quitting Calculator

---

## Keyboard shortcuts

## 5 Clock

Microsoft Windows Clock is a standard clock that shows the time set by your system. You can size the clock and move it wherever you like so that the current time — including seconds — is displayed on the screen but uses little work space.



---

## Starting Clock

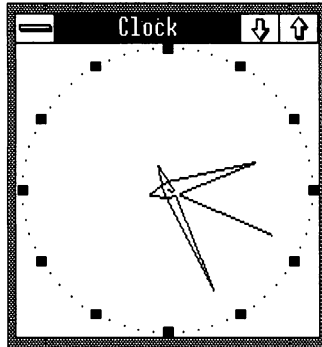
---

### Running Clock

Here's how you start Clock:

- ▣ Select and run CLOCK.EXE in the MS-DOS Executive window.

When you start Clock, it automatically creates a window with a clock in it.



---

### Setting Clock

Clock uses the time from your hardware clock or the time you enter when you start your computer. You can reset Clock from Control Panel. For more information about using Control Panel, see the *Microsoft Windows User's Guide*.

Clock continues to show the correct time even when you size it or shrink it to an icon. You can place the Clock window wherever you want so that it takes up a minimum of work space.

---

## Ending a Clock Session

---

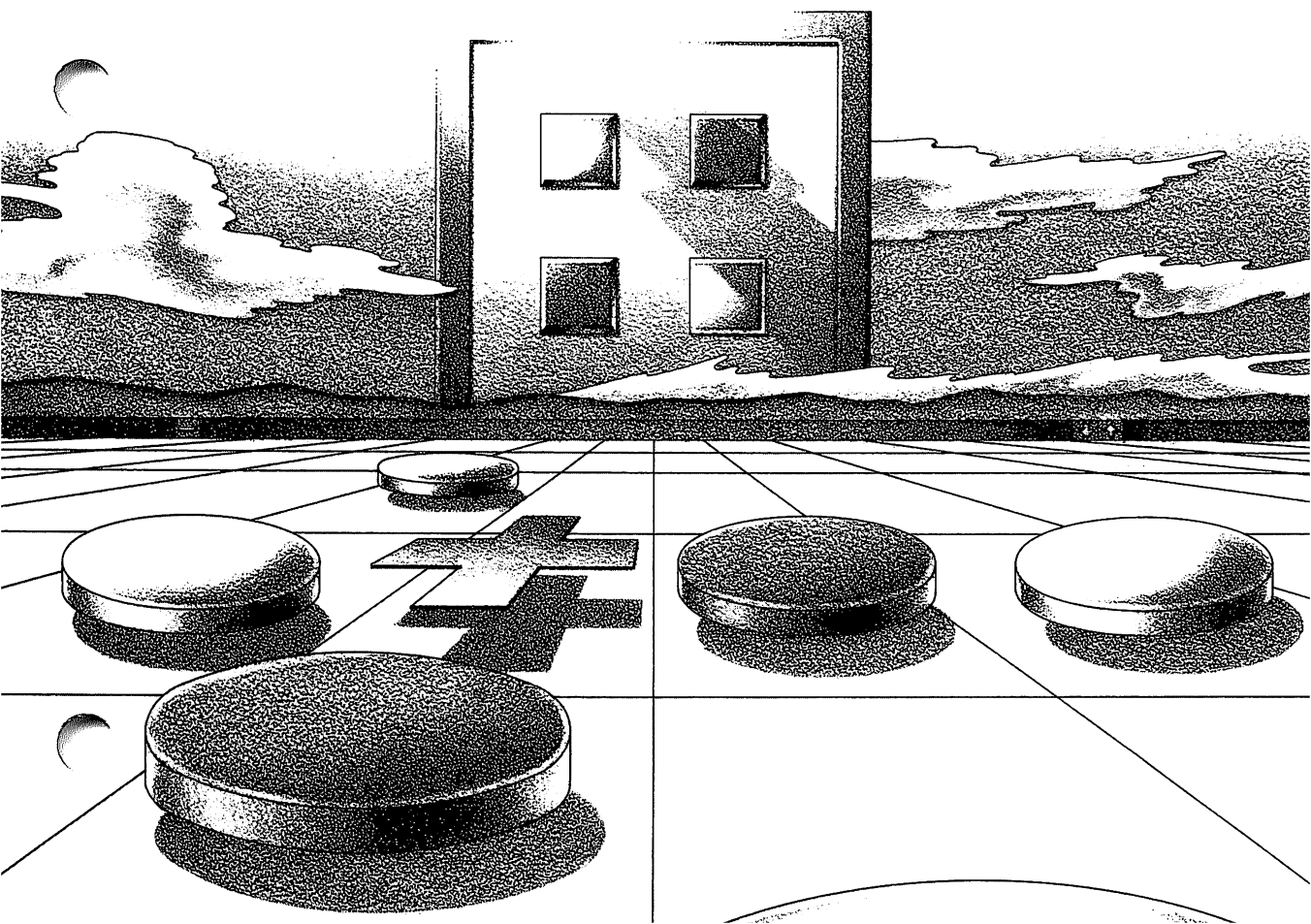
### Quitting Clock

Because Clock does not have application menus, you use the Close command from the Control menu to end your Clock session:

- ▣ Select the Control menu and choose the Close command. Windows closes the Clock window.

## 6 Reversi

Microsoft Windows Reversi is a game you can play with your computer. The object of Reversi is to finish the game with more circles of your color on the board than the computer has of its color.



---

## Starting Reversi

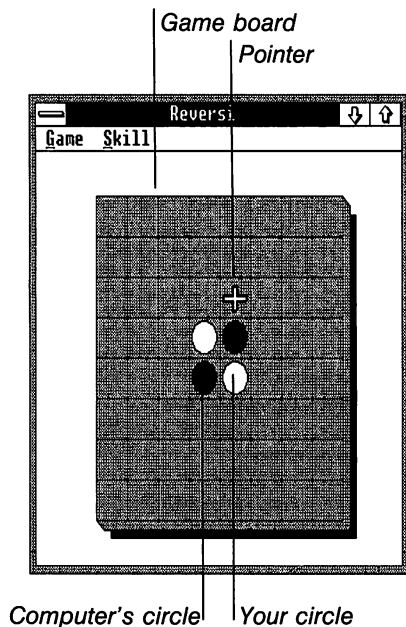
---

### Running Reversi

Here's how you start Reversi:

- Select and run REVERSI.EXE in the MS-DOS Executive window.

When you start Reversi, it creates a window with the game in it.



Your circles are white and your computer's circles are black. In color, your circles are red and your computer's circles are blue.

---

## Rules of the Game

---

### Game rules

The rules of Reversi are as follows:

- To turn black circles white, trap them between white circles. The black circles must be in a straight line: horizontal, vertical, or diagonal.

- If you can turn circles white, you must do so.
- If you cannot make a legal move, select the Game menu and choose the Pass command.

When neither you nor the computer can make a move, the game is over. The one with the most circles wins.

---

## Playing Reversi

Here's how you play Reversi:

- 1 Select the Skill menu and choose one of the four skill levels. Skill levels range from Beginner, the easiest, to Master, the hardest. The higher the skill level, the longer your computer spends calculating its moves.
- 2 Press the DIRECTION keys or point with the mouse to move the pointer to a gray square. The pointer changes to a cross in squares where you can make a legal move.
- 3 Press the SPACEBAR or click the mouse button to make your move. The pointer sometimes changes to an hourglass while the computer is calculating its move.

---

## Getting a Hint

If you are not sure of your best move, you can ask Reversi for hints. When you choose the Hint command from the Game menu, Reversi shows you where it would move if it had your turn. You can accept the hint or move elsewhere.

If you want to play a practice game, choose the Hint command before each turn and move where the computer suggests. This will give you a good idea how to make a move and how the computer responds to your moves.

---

## Playing a game

---

## Playing practice games

---

## Starting a New Game

---

### Beginning new games

You can start a new game at any time, even in the middle of the current game, by following this step:

- Select the Game menu and choose the New command.

---

## Ending a Reversi Session

---

### Quitting Reversi

Use the Exit command to end a Reversi session:

- Select the Game menu and choose the Exit command.  
Windows closes the Reversi window.

---

## Using Shortcut Keys

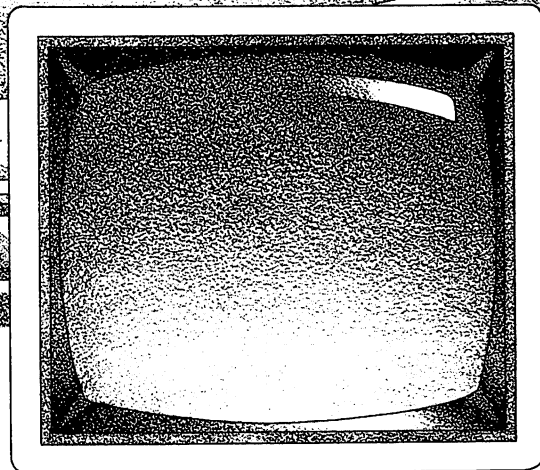
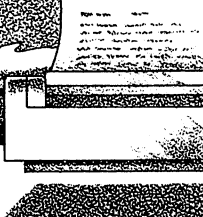
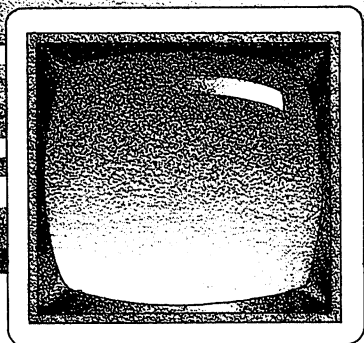
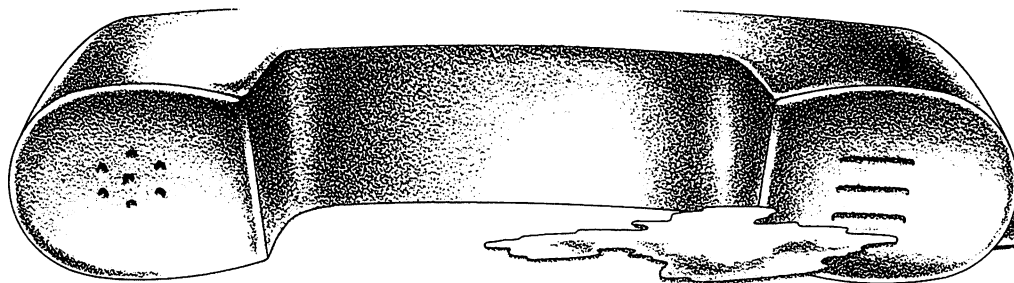
---

### Keyboard shortcuts

See Appendix B, "Shortcut Keys," for a list of the shortcut keys you can use to choose some of Reversi's commands.

## 7 Terminal

Microsoft Windows Terminal is a terminal emulation application that you can use to connect your computer to other computers, or to online information services such as Dow Jones News/Retrieval, CompuServe, and the Source and to online bulletin boards.



---

## Starting Terminal

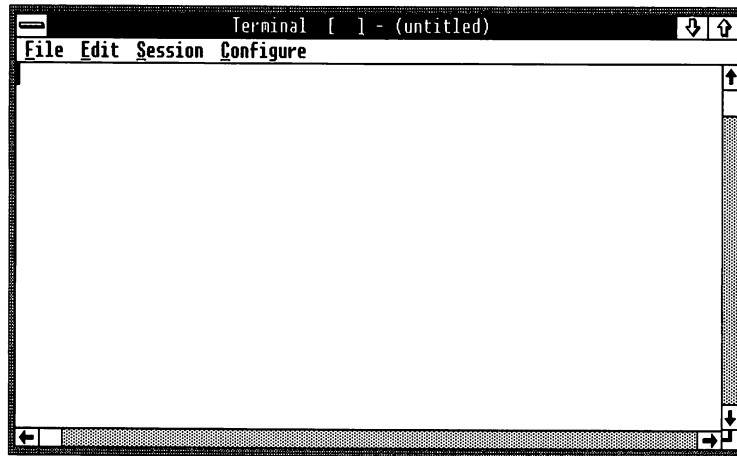
---

### Running Terminal

Here's how you start Terminal:

- Select and run TERMINAL.EXE in the MS-DOS Executive window.

When you start Terminal, it displays a blank window.



---

## Setting Up Terminal

Before you connect your computer to another computer, you must set up Terminal using the commands from the Configure menu. The hardware you are using and the system or computer you are connecting to determine how you set up Terminal. The settings are not explained in detail in this guide; for more information, see the user's manual for the hardware or system to which you are connecting.

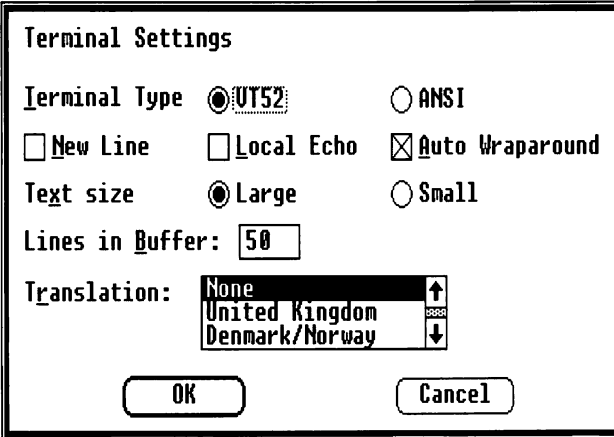
### Terminal Settings

To set the terminal settings, follow these steps:

- 1 Select the Configure menu and choose the Terminal command. Terminal displays the Terminal Settings dialog box.

---

### Selecting terminal options



The image shows a 'Terminal Settings' dialog box with the following options:

- Terminal Type:**  VT52,  ANSI
- New Line:**  (unchecked)
- Local Echo:**  (unchecked)
- Auto Wraparound:**  (checked)
- Text size:**  Large,  Small
- Lines in Buffer:**
- Translation:** A list box containing 'None', 'United Kingdom', and 'Denmark/Norway'. The 'None' option is currently selected. Up and down arrow buttons are visible to the right of the list.

At the bottom of the dialog are two buttons: 'OK' and 'Cancel'.

- 2 Select the appropriate settings for your computer. For an explanation of the settings, see the following list.

The following settings can be selected in the Terminal Settings dialog box:

**Terminal Type** Consult the appropriate user's manual for information on which option to select for this setting. See also Appendix A, "ANSI/VT52 Terminal Emulation."

**New Line** This option moves the insertion point to the beginning of a new line when Terminal receives a linefeed character. If the New Line check box is turned off, the insertion point moves down one line but does not move to the beginning of the line.

**Local Echo** This option enables Terminal to display all the text you type on your screen. If the computer you are connected to is transmitting information half-duplex (either transmitting or receiving, but not doing both simultaneously), it does not echo your keystrokes on your screen. Turn on the Local Echo check box if you want to display the information you type on your screen. You can turn off the Local Echo check box if the computer you are connected to is transmitting full-duplex (simultaneously transmitting and receiving) and echoes your typing.

**Auto Wraparound** This option affects how the incoming information is displayed. If the Auto Wraparound check box is turned on, the insertion point returns to the first column when it reaches the 80th column. If the Auto Wraparound check box is turned off, the insertion point stops at the last column, and incoming characters write over the last character. Turn off this check box if the computer you are connected to provides an automatic wrap feature.

**Text Size** This setting allows you to select the size of the displayed text. Terminal can display two different sizes of text. Large text normally appears in Windows. Select the Small option if you want to fit more information on your screen.

**Lines in Buffer** This setting determines how much incoming information is saved in the buffer before it is replaced by new information. The buffer stores incoming information while Terminal is connected to a service. You can set the buffer to store from 25 to 999 lines of information. If you type a number that is higher than available memory, Terminal will automatically set the buffer to the largest number of lines that available memory permits.

**Translation** This setting allows your terminal to emulate European ISO (International Standards Organization) 7-bit character sets so that you can send and receive information in a European language. By selecting a country name, you specify which character set you want to use. Make sure that the host computer recognizes the character set you select.

## Communications Settings

To set the communications settings, follow these steps:

- 1 Select the Configure menu and choose the Communications command. Terminal displays the Communications Settings dialog box.

Communications Settings

Baud Rate:

Word Length  4  5  6  7  8

Parity  Even  Odd  None

Stop Bits  1  1.5  2

Handshake  XOn/XOff  Hardware  None

Connection  Modem  Computer

Port  COM1:  COM2:

- 2 Select the appropriate options for the service to which you are connecting.

Most of the options for the settings in the Communications Settings dialog box are determined by the modem you are using and the service to which you are connecting. Consult the appropriate user's manual for information on which options to select. The Connection and Port options are described in the following list:

**Connection** This setting enables you to connect to a modem or a computer. Select the Computer option only if your computer is directly connected to the other computer.

**Port** This setting requires that you select the port to which you have connected your modem or line to another computer.

## Phone Settings

If you have a Hayes or Hayes-compatible modem, you can set Terminal to connect automatically to the other computer or information service. If you set the phone settings, Terminal dials the phone number you specify and waits for the connect tone.

To set your phone settings, do the following:

- ▣ Select the Configure menu and choose the Phone command. Terminal displays the Phone Settings dialog box.

Phone Settings

Connect to:

Dial Type  Tone  Pulse

Speed  Slow  Fast

Wait for Tone (2-15):

Wait for Answer (1-256):

The following settings can be selected in the Phone Settings dialog box:

**Connect To** This setting enables you to specify the telephone number of the service you want to connect to. Type the telephone number in the text box. Make sure you type the entire number, including 1 and the area code if necessary. Leave the text box blank if you are using an acoustic coupler rather than a modem.

---

### Selecting phone options

Commas instruct the modem to pause before dialing the number. For example, if you must dial 9 to get an outside line, type a comma after the 9. This allows time for the dial tone to sound before the modem dials the number. You can use hyphens in the number for clarity; the modem ignores them.

**Dial Type** This setting requires that you select the dial type of your phone. If you normally hear a tone for each number you dial, you have a tone telephone. If you hear a clicking sound, you probably have a pulse telephone.

**Speed** This setting controls how fast Terminal dials the phone number when you choose the Connect command. Some phone systems require the number to be dialed more slowly than others do. If you are unable to make a connection, change the Speed setting and try again.

**Wait for Tone** This setting defines how long Terminal waits for a connect tone after the phone that you are trying to reach answers. Type the length of time, in seconds, that you want Terminal to wait for the connect tone before hanging up.

**Wait for Answer** This setting defines how long Terminal waits before hanging up if there is no answer. It is preset at 60 seconds. You can increase the waiting time to up to 256 seconds.

---

## Using Terminal

After you have used the commands from the Configure menu to set up Terminal the way you want it, you can connect your computer to another computer. You use the commands from the Session menu to make the connection and to control sending and receiving information.

### Connecting to Another Computer

When you have defined all the correct settings, you can connect to the other computer by doing the following:

- Select the Session menu and choose the Connect command.  
Terminal attempts to connect to the service using the settings you specified in the dialog boxes.

If the connection fails, check to make sure you have correctly selected all the dialog box options for the commands from the Configure menu.

---

**Connecting directly  
or with a modem**

If you did not type a telephone number in the Phone Settings dialog box, a dialog box appears asking if you want to continue. Use the following information to determine your response:

- Choose the Yes button if you are connecting directly to another computer without using a telephone.
- Choose the No button if you are making the connection with a telephone, then fill in the Phone Settings dialog box and choose the Connect command again.

After you have completed the connection, a checkmark will appear by the Connect command the next time you select the Session menu.

If you have an acoustic coupler rather than a modem, you should dial the number yourself, wait for the connect tone, and then select the Session menu and choose the Connect command. Make sure the Connect To text box in the Phone Settings dialog box is blank.

---

### Connecting with an acoustic coupler

## Pausing

During a Terminal session you can temporarily stop incoming information from scrolling off the screen by using the Pause command. Information that comes in while Pause is active is sent to the buffer. Once the buffer fills up, however, further information may be lost if you don't have XON/XOFF flow control. See the user's manual for the service to which you are connected for more information on this feature.

To temporarily stop incoming information, do the following:

- Select the Session menu and choose the Pause command.
 

After you have chosen the Pause command, a checkmark will appear by the command the next time you select the Session menu.

To resume receiving information, follow this step:

- Select the Session menu and choose the Pause command.

**Hint** Typing a large number in the Lines in Buffer setting in the Terminal Settings dialog box allows you to review more information. However, if you have the window set to display 80 characters by 25 lines (using the Text Size option Small), you may want to set the Lines in Buffer to 25. This reduces the time it takes to resume receiving information after using the Pause command.

---

### Interrupting incoming information

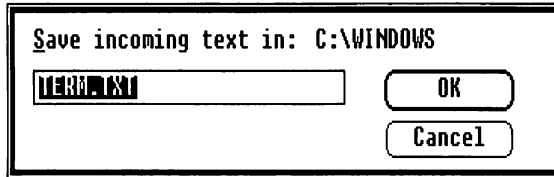
## Capturing Incoming Information

Normally, information is displayed only on your screen as it is received by Terminal. You can set Terminal to capture the incoming information in a file at the same time it is being displayed on your screen.

### Capturing information in a file

To capture incoming information in a file, follow these steps:

- 1 Select the Session menu and choose the Capture command. Terminal displays the Save Text dialog box.



- 2 Type in the text box the name of the file in which you want Terminal to put the captured information. If the file already exists, Terminal adds the captured information to it. If the file does not yet exist, Terminal creates it and adds .TXT to the filename. You don't have to type an extension unless you want a different one.
- 3 Choose the OK button. A "C" appears in the title bar. A checkmark will appear by the Capture command the next time you select the Session menu.

To stop capturing incoming information in a file, do the following:

- 1 Select the Session menu and choose the Capture command. Terminal stops capturing the incoming information. Uncaptured information scrolls off the screen and cannot be retrieved.

When Terminal captures information, it puts it in a text file. Text files can be used in any application that can load them. For example, you can open a file with captured information in the Notepad window.



## Printing Incoming Information

You can send information to your printer at the same time it is appearing on your screen by doing the following:

- Select the Session menu and choose the Print command.  
A “P” appears in the title bar. A checkmark will appear by the Print command the next time you select the Session menu.

To stop printing incoming information, do the following:

- Select the Session menu and choose the Print command.

## Signaling the Host Computer

You can use the Break command to get the attention of the host computer. This is useful if you want to stop the execution of a program.

To signal the host computer, follow this step:

- Select the Session menu and choose the Break command.



## Copying Information


You can copy information from your screen to the Clipboard and then paste the information into other applications. You can also paste information from other applications to Terminal by using Clipboard; for example, you can use this method to send a file.

Follow these steps to copy information from your screen to the Clipboard:

- 1 Select the Session menu and choose the Pause command to freeze the information on the screen.
- 2 Select the information you want to copy.

To select information with the keyboard, use the DIRECTION keys to move the insertion point to the beginning of the information you want to copy. Press and hold down the SHIFT key and move the insertion point to the end of the information you want to copy, then release the SHIFT key.

To select information with the mouse, move the pointer to the beginning of the information you want to copy, then drag the pointer to the end of the information you want to copy.



---

### Printing information

---

### Signaling the host computer

---

### Duplicating information

- 3 Select the Edit menu and choose the Copy command.  
Terminal puts a copy of the selected information on the Clipboard.

You can also include information from the Clipboard in what you are sending. When you paste information from the Clipboard, it appears on the screen just as if you had typed it.

---

### Pasting information

To paste information from the Clipboard to the screen, do the following:

- 1 Move the insertion point to the place where you want the information to appear.
- 2 Select the Edit menu and choose the Paste command.  
Terminal adds the contents of the Clipboard to the screen at the insertion point.

### Disconnecting Terminal

Follow these steps to disconnect Terminal:

- 1 Log off from the system to which you are connected.
- 2 Select the Session menu and choose the Connect command.

---

### Canceling the connection

---

## Working with Terminal Files

You create, open, and save Terminal setup files with commands from the File menu in the Terminal window. Terminal setup files are files that contain Terminal settings and have the .TRM extension. You delete Terminal setup files with commands from the File menu in the MS-DOS Executive window.

### Opening a Setup File

You can open new or existing setup files in the Terminal window. If you open a setup file when there is another file already open, Terminal closes the current file. If you have unsaved changes in the current file, a dialog box appears asking if you want to save your changes before closing the file. Use the following information to determine your response:

To	Choose
Save changes	Yes
Discard changes	No
Continue working in the current file	Cancel

### Creating a New Setup File

To create a new setup file from the Terminal window, do the following:

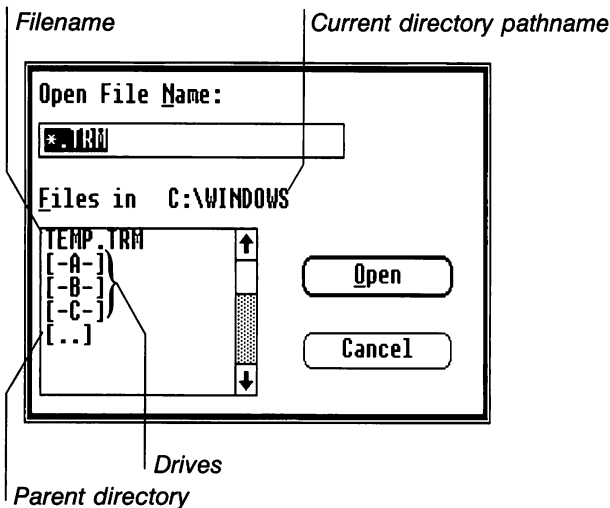
- 1 Select the File menu and choose the New command. Terminal opens a new setup file in the Terminal window.

### Opening an Existing Setup File

If you want to use or change an existing setup file, you can open the file either from the Terminal window or from the MS-DOS Executive window.

To open an existing setup file from the Terminal window, follow these steps:

- 1 Select the File menu and choose the Open command. Terminal displays the Open dialog box. Note that directories and drives are enclosed in brackets.



### Creating setup files

### Opening files from Terminal

- 2 Select the name of the file you want to open from the list box, or type a pathname and filename in the text box at the top of the dialog box.
- 3 Choose the Open button.

Terminal opens the file and displays a dialog box asking if you want to connect. Choose the Yes button if you want to connect to the service or computer; choose the No button if you want to change the settings in the file.

To look at the settings in the current setup file, choose the different Configure menu commands to see their dialog boxes.

---

### Opening files



With the mouse, you can select and open a file listed in the list box in one step:

- Double-click the filename of the file you want to open.

To open an existing setup file from the MS-DOS Executive window, do the following:

- Select the filename and press the ENTER key or, with the mouse, double-click the filename.

---

### Opening files from MS-DOS Executive

## Viewing a File in Another Directory

The Open dialog box initially lists only drives, directories, and files with the .TRM extension. You can view different files or groups of files as well.

To view different files, follow these steps:

- 1 Select the drive, directory, or group of files you want to view from the list box, or type this information in the text box at the top of the Open dialog box.
- 2 Choose the Open button.

Terminal lists the files in the drive, directory, or group of files you specified.

You can view any number of directories or groups of files. The Open dialog box remains on the screen until you open a file or choose the Cancel button.

---

### Viewing files in different directories

## Saving a Setup File

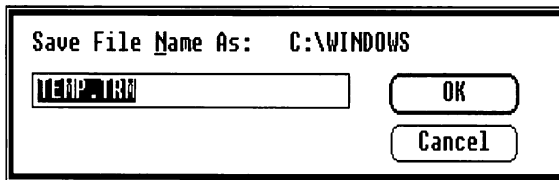
When you create or make changes to a Terminal setup file, you can save it and use it again later. For example, if you intend to connect to a certain service more than once, you can save the settings for that service in a setup file. Then each time you want to connect to that service, you open the setup file instead of redefining all of the settings. There are two commands you can use to save a setup file: Save As and Save.

### Saving a New Setup File

Use the Save As command to name and save a new file. You can also use Save As to save the current file under a new name and keep the original copy of the file on your disk under the old filename.

Follow these steps to save a new setup file:

- 1 Select the File menu and choose the Save As command. Terminal displays the Save As dialog box.



- 2 Type a filename for the setup file in the text box. If you don't type an extension, Terminal automatically adds .TRM to the filename.
- 3 Choose the OK button.  
Terminal saves the setup file on your disk. The setup file remains active so that you can continue working in Terminal.

**Note** If you type the name of a file that already exists, a dialog box asks if you want to replace the existing file with the file you are saving. Choose the Yes button to replace the existing file, or choose the No button and type a different filename.

---

**Saving new setup files**

### **Saving Changes to a File**

The Save command saves the changes to the current setup file on the disk.

---

#### **Saving file changes**

To save changes to the current setup file, do the following:

- Select the File menu and choose the Save command.  
Terminal replaces the file on your disk with the current file.

### **Deleting a Setup File**

You can delete a Terminal setup file to make room for other files on your disk. You delete a setup file using the Delete command from the File menu in the MS-DOS Executive window.

See the *Microsoft Windows User's Guide* for information on MS-DOS Executive and on deleting files.

---

#### **Removing setup files**

---

### **Closing the Terminal Window**

Use the Exit command to quit Terminal:

- Select the File menu and choose the Exit command.

If you have unsaved changes to the file, a dialog box appears asking if you want to save your settings before closing the window. Choosing the Cancel button allows you to continue working in your Terminal file. Choosing the Yes or No button closes your Terminal window.

---

#### **Quitting Terminal**

---

### **Using Shortcut Keys**

See Appendix B, "Shortcut Keys," for a list of the shortcut keys you can use to choose some of Terminal's commands.

---

#### **Keyboard shortcuts**

## Appendix A

# ANSI/VT52 Terminal Emulation

If you are connected to a host computer that uses either the ANSI(VT100) or VT52 terminal, you can use your computer's numeric keypad to produce application codes or numeric codes that are recognized by these terminals.

To use your numeric keypad for ANSI(VT100)/VT52 applications mode, select the VT52 option in the Terminal Settings dialog box and make sure that the NUMLOCK feature is on. If the NUMLOCK feature is off, press the NUMLOCK key to turn it on. You can then produce either numeric codes or application codes, depending on the program being run on the host computer. The following list shows the numeric keypad keys you press in Microsoft Windows to emulate ANSI(VT100)/VT52 keys:

---

**Terminal emulation  
with NUMLOCK on**

<b>ANSI (VT100)/VT52 Key</b>	<b>Keypad Key to Press (with NUMLOCK on)</b>
0	0 INSERT
1	1 END
2	2 ↓
3	3 PAGE DOWN
4	4 ←
5	5
6	6 →
7	7 HOME
8	8 ↑
9	9 PAGE UP
-	-
,	PRINTSCREEN*
.	.DELETE
ENTER	+

---

**Terminal emulation  
with NUMLOCK off**

If the NUMLOCK feature is off, the keypad keys produce the key codes shown in the following list. These codes are the same for either ANSI(VT100)/VT52 or Zenith terminal emulation:

<b>Key Code</b>	<b>Keypad Key to Press (with NUMLOCK off)</b>
Insert character mode	0 INSERT
Insert line	1 END
Cursor down (VT100)	2 ↓
Delete line	3 PAGE DOWN
Cursor left (VT100)	4 ←
Cursor right (VT100)	6 →
Home	7 HOME
Cursor up (VT100)	8 ↑
Delete character	9 PAGE UP

---

**Function key  
emulation**

The ANSI(VT100)/VT52 function keys are supported by the following function keys on your computer. These function keys can also emulate keys on Zenith terminals:

<b>ANSI(VT100)/VT52 Key</b>	<b>Z19/Z29 Key</b>	<b>Key to Press</b>
PF1	Blue/F6	F1
PF2	Red/F7	F2
PF3	White/F8	F3
PF4	F1	F4
	F2	F5
	F3	F6
	F4	F7
	F5	F8
	F9	F9
	HELP	F10

The following VT100 functions are not supported by Terminal:

- 132-column mode
- Printer-mode options
- Smooth scrolling
- Character attributes (except reverse video)
- Split screen
- Double-height/double-width characters
- Graphic character set
- Alternate character sets
- Reverse-video screen

---

## Appendix B Shortcut Keys

When working in a Microsoft Windows Desktop Application, you can use shortcut keys to quickly choose some commands. Shortcut keys allow you to select menus and choose commands in a single step so you don't have to select a menu then choose a command each time you want to perform an action.

This appendix lists the shortcut keys you can use in each application and the commands they choose.

---

### Using a Shortcut Key

Shortcut keys are listed in an application's menus to the right of the command they choose. When you use these keys, you don't need to select a menu. However, while you are learning an application's shortcut keys, you may want to prompt yourself by selecting a menu and viewing the shortcut key list. If you have displayed a menu and decide to use a shortcut key to choose a command, you must first press the ESCAPE key to cancel the menu, then press the proper shortcut key to choose the command.

---

### Using shortcut keys

---

## Notepad

You can use the following shortcut keys to choose Notepad commands:

<b>To choose</b>	<b>Press</b>
Undo from the Edit menu	ALT + BACKSPACE
Cut from the Edit menu	SHIFT + DELETE
Copy from the Edit menu	CONTROL + INSERT
Paste from the Edit menu	SHIFT + INSERT
Clear from the Edit menu	DELETE
Time/Date from the Edit menu	F5
Find Next from the Search menu	F3

---

## Cardfile

You can use the following shortcut keys to choose Cardfile commands:

<b>To choose</b>	<b>Press</b>
Undo from the Edit menu	ALT + BACKSPACE
Cut from the Edit menu	SHIFT + DELETE
Copy from the Edit menu	CONTROL + INSERT
Paste from the Edit menu	SHIFT + INSERT
Index from the Edit menu	F6
Add from the Card menu	F7
Autodial from the Card menu	F5
Go To from the Search menu	F4
Find Next from the Search menu	F3

---

## Calendar

You can use the following shortcut keys to choose Calendar commands:

<b>To choose</b>	<b>Press</b>
Cut from the Edit menu	SHIFT + DELETE
Copy from the Edit menu	CONTROL + INSERT
Paste from the Edit menu	SHIFT + INSERT
Previous from the Show menu	CONTROL + PAGE UP
Next from the Show menu	CONTROL + PAGE DOWN
Date from the Show menu	F4
Set from the Alarm menu	F5
Mark from the Options menu	F6
Special Time from the Options menu	F7

---

## Calculator

You can use the following shortcut keys to choose Calculator commands:

<b>To choose</b>	<b>Press</b>
Copy from the Edit menu	CONTROL + INSERT
Paste from the Edit menu	SHIFT + INSERT

---

## Terminal

You can use the following shortcut keys to choose Terminal commands:

<b>To choose</b>	<b>Press</b>
Copy from the Edit menu	CONTROL + INSERT
Paste from the Edit menu	SHIFT + INSERT
Connect from the Session menu	CONTROL + F3
Print from the Session menu	CONTROL + F4
Capture from the Session menu	CONTROL + F5
Pause from the Session menu	CONTROL + F6
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**Paint**

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# Microsoft® Windows Paint User's Guide

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Version 2.0

Microsoft Corporation



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# Introduction

Microsoft® Windows Paint is a drawing tool designed for use with Microsoft Windows. You can work with Paint to create, enhance, save, and print black and white artwork.

With Paint, you can create drawings that suit your needs. Whether you're making flow charts or doing freehand illustrations, you'll find just the tools you need on Paint's Tools palette. Special commands such as Zoom In, Copy, and Invert make it easy to enhance your work. You can even transfer text and graphics from other programs to Paint for easy editing and enhancement, or create Paint graphics to use in other Windows applications, such as Cardfile.

You don't need to memorize complex commands or instructions. With Paint, you can create art as quickly as you can point with a mouse or press a key. All the artwork in this manual was created using Paint.

---

**Paint is a useful  
drawing tool**

---

**Paint is easy to use**

---

## About This Guide

This guide shows you how to get started with Paint and provides a quick reference to Paint's tools, patterns, and commands. Once you understand these basics, you'll be able to experiment with Paint on your own.

---

### Using this guide

- Chapter 1, "Getting Started," tells you how to start Paint and how to use an optional work disk for a two-drive system, and introduces you to the terminology used in this guide. This chapter also provides you with printing information that you will need to read before you print your Paint drawings.
- Chapter 2, "Learning Paint," explains how to create a drawing using different tools and patterns, and how to add text to your drawing.
- Chapter 3, "Enhancing a Drawing," explains how to make changes to your drawing using commands from Paint's Edit and Options menus.
- Chapter 4, "Tools Summary," describes how to use each of Paint's tools.
- Chapter 5, "Command Summary," describes the purpose and use of each Paint command.
- Appendix A, "Using Paint with the Keyboard," lists the keyboard commands for users who have no mouse. It also describes how to use the CONTROL and SHIFT keys together with the mouse to modify certain Paint operations.
- Appendix B, "Tools Description," describes the function of each of Paint's tools and shows art that was created using these tools.

---

### Preliminaries


Before using Paint, become familiar with your computer, with its operating system, and with Microsoft Windows. If you have questions about these basics, see the appropriate user's guide for more information.

---



### Next

To get the most out of this guide, read Chapter 1 to learn how to start Paint. Then read Chapters 2 and 3 to become acquainted with some of Paint's drawing and editing features. Use Chapters 4 and 5 as a reference while you experiment with Paint.

The exercises in Chapters 2 and 3 are designed to be used with a mouse. If you want to use your keyboard to work through these exercises, see Appendix A, "Using Paint with the Keyboard."

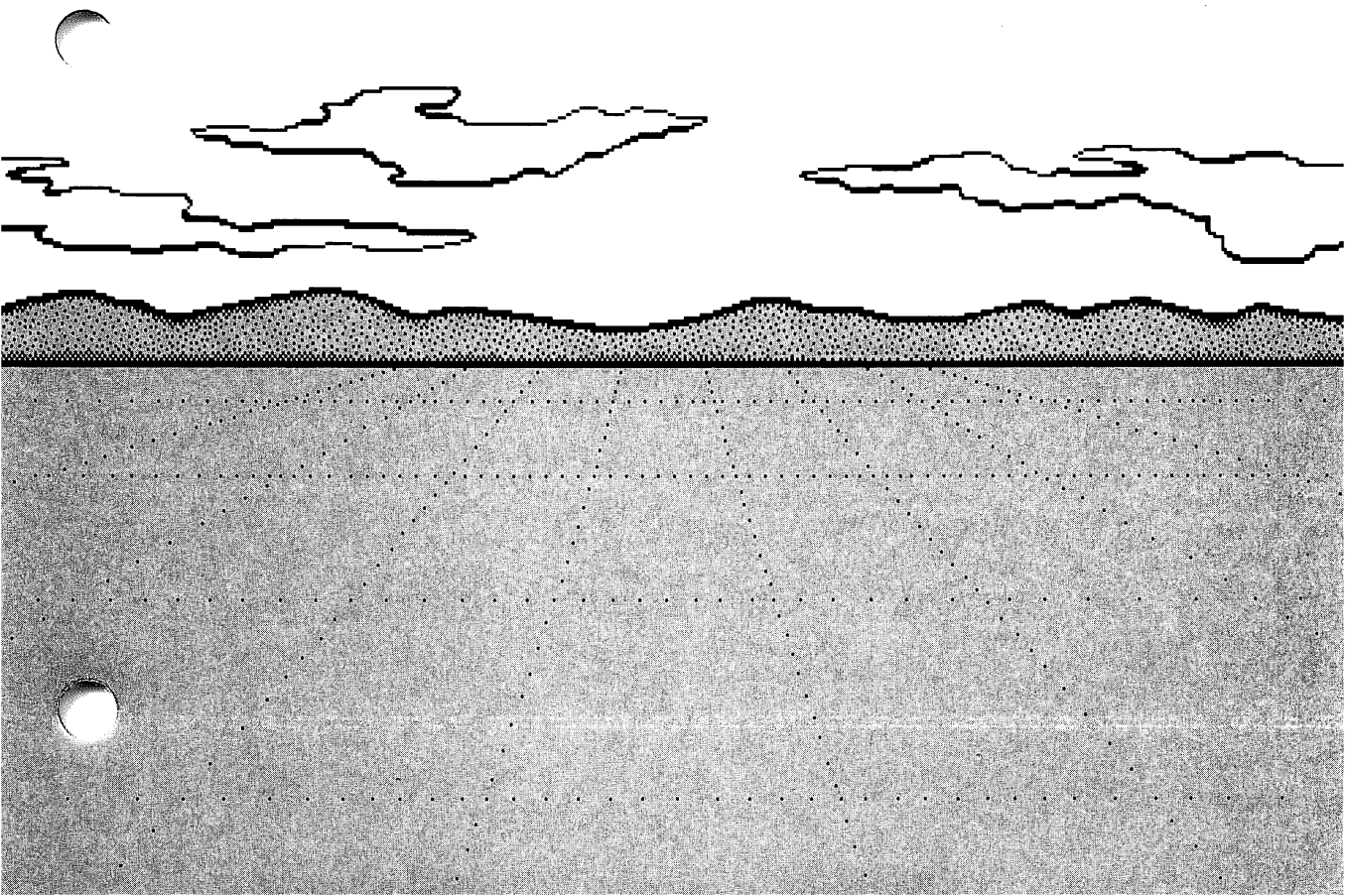


**Note** The illustrations in this guide were done with Paint, using an Extended Graphics Adapter (EGA) high-resolution graphics card and a Toshiba printer driver. If you are using a different graphics card or have specified a different printer when you set up Windows, keep in mind that as you work through the exercises, the drawings you create may look slightly different from those in the illustrations.



# 1 Getting Started

In this chapter, you will learn how to start Paint and prepare for drawing. You will also find instructions on how to create and use an optional work disk. Once you've started Paint, read the section called "Some Definitions" to get acquainted with the Paint screen and the terminology used in this guide.



---

## Starting Paint

Paint is a Windows application and will therefore run only when Windows is installed and running on your system. If you have not yet installed Windows, see the *Microsoft Windows User's Guide* for information on how to install and start it.

---

### Running Paint

Here's what you do to start Paint:

- 1 Start Windows. If the PAINT.EXE file is not in the current directory, change directories to the directory that contains it. If PAINT.EXE is not on the current disk, change disks to the disk that contains it.
- 2 Select PAINT.EXE from the directory listing in the MS-DOS Executive window.
- 3 Press the ENTER key or double-click the mouse button.

The Paint window appears on your screen.

## Creating a Work Disk

---

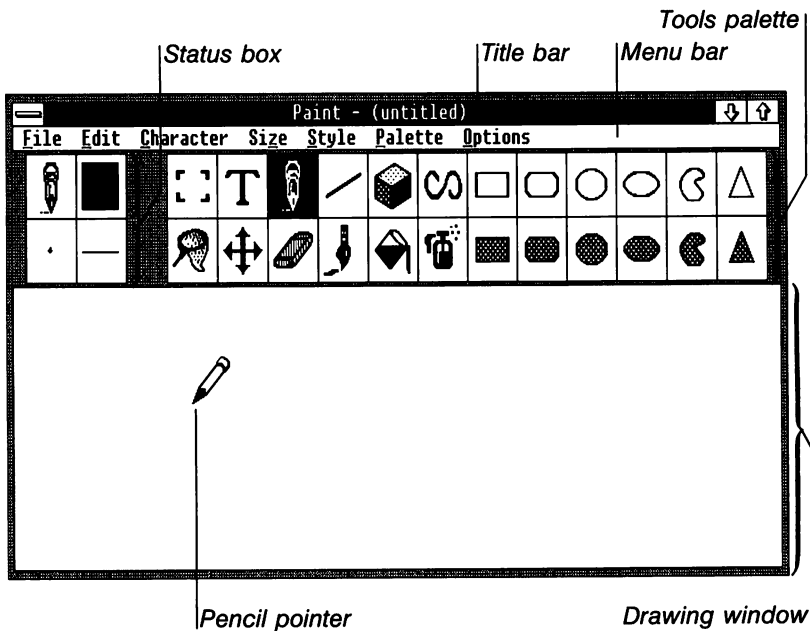
### Using work disks on systems with limited space

On systems with limited disk space, you may need to create a work disk for creating and storing your Paint drawings before you start Paint. A work disk contains a copy of the PAINT.EXE file as well as copies of all the drawings you have created and saved. You'll need a work disk if you don't have enough disk space for at least one drawing and a Paint temporary file. (For many systems, this is about 20K, but your system may require more space.) To make a work disk, you will need to format a blank disk and then copy the PAINT.EXE file to it. See the *Microsoft Windows User's Guide* for information on how to format a disk and copy files.

In step 1 in the preceding procedure, change disks to the work disk, and proceed with steps 2 and 3.

## Some Definitions

After you have started Paint, the Paint window will look like this:



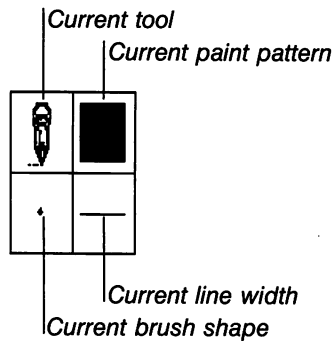
If you've been using color while working in Windows, you will notice that your screen is now in black and white. Paint is a monochrome program designed for creating black and white drawings.

These definitions may be helpful as you begin to use Paint:

- The **drawing window** frames the portion of your drawing that appears on the screen. All your Paint activities take place within the drawing window.  
Keep in mind that your drawings can be larger than the drawing window. The exact size of the drawing area depends on the maximum surface area that your printer can print on.
- The **title bar** contains the title of your drawing.
- The **menu bar** contains the names of Paint's command menus.
- The **Tools palette** contains the implements you use to draw and refine your artwork.

## Definitions

- The **status box** shows the tool, paint pattern, brush shape, and line width that Paint will use when you draw. It reflects the most recent choices you made from the Tools, Patterns, Brush Shapes, and Line Widths palettes.



- The **pointer** is the indicator you use to draw objects and select menus, commands, and palette items. The pointer changes shape in the drawing window whenever you select a tool.
- To **drag** means to press the mouse button and hold it down while you move the mouse on a flat surface.

---

## Preparing to Draw

---

### Choosing the display option

After you have started Paint, you need to prepare Paint for drawing by choosing where you would like your drawings to be ultimately displayed—on your screen or on paper. The following list explains how to make your choice:

<b>For</b>	<b>Do this</b>
Drawings that you will view only on your screen	Select the Options menu and choose the For Screen command
Drawings you can print	Select the Options menu and choose the For Printer command
Drawings you can paste in other applications	Select the Options menu and choose the For Printer command

The For Screen command adjusts the drawing area so that it is the same size as your full screen. The For Printer command adjusts the drawing area so that it matches your printer's paper size.

**Note** Before selecting the For Printer command, use Control Panel to install and set up your printer if you have not already done so or if you have changed printers. Note that the drawings you create are printer-specific. See the *Microsoft Windows User's Guide* for more information about Control Panel and setting up a printer.

Once you choose the For Screen or For Printer command and then start drawing, you cannot change the command unless you restart Paint or begin a new drawing using the New command. If you open an existing drawing file, Paint uses the options that were set when you first created the drawing while you are making your changes.

If you choose the For Printer command, you can then choose the resolution of the drawings you will be creating. The following list explains how to choose the resolution:

For	Do this
Drawings with the finest detail and smoothest curves	Select the Options menu and choose the High Resolution command
Drawings with coarse detail	Select the Options menu and choose the Low Resolution command

The High Resolution command lets you create the sharpest possible drawings on your printer by giving you access to the greatest number of dots per inch when printing. Although drawings created with the Low Resolution command have less detail than high-resolution drawings, they typically print much faster.

Note that some printers do not permit high-resolution drawings. For such printers, the High Resolution command will appear gray in the menu and will have no effect when you choose it.

If you choose the For Printer command, objects may appear a little distorted when you draw them on the screen. For example, circles may look like ovals. There is no need to be concerned about this; Paint is adjusting for differences in aspect ratio between your printer and the display you are using. When you actually print your drawing, the objects you have created will print correctly.

---

### Choosing the resolution

---

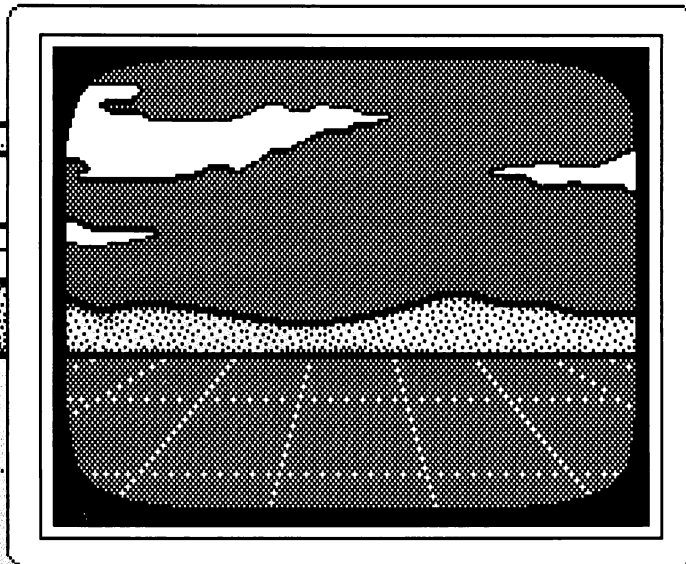
### When circles look like ovals

## 2 Learning Paint

Now you are ready to begin your first Paint session. First, you will use the Pencil and Eraser tools to sketch and erase a few lines. Then you will use the Undo and Erase commands to learn how to correct mistakes and clear the drawing window.

Once you feel comfortable drawing with the mouse and using the Eraser tool and the Undo command, go on to the section called "Creating a Drawing" and work through the exercise there.

Although Paint is designed for use with a mouse, you can also use Paint with the keyboard. See Appendix A, "Using Paint with the Keyboard," for more information on this method.



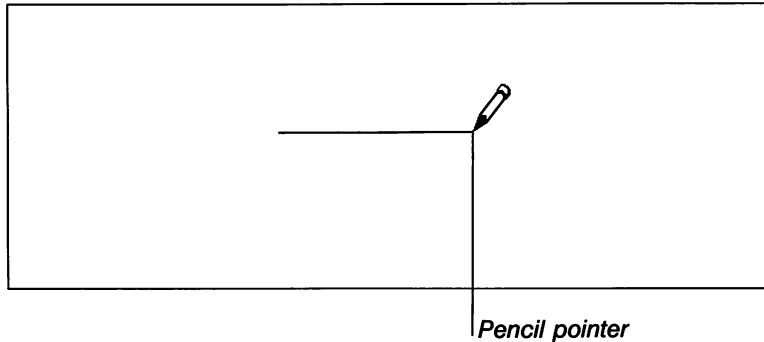
---

## Getting the Feel of Paint

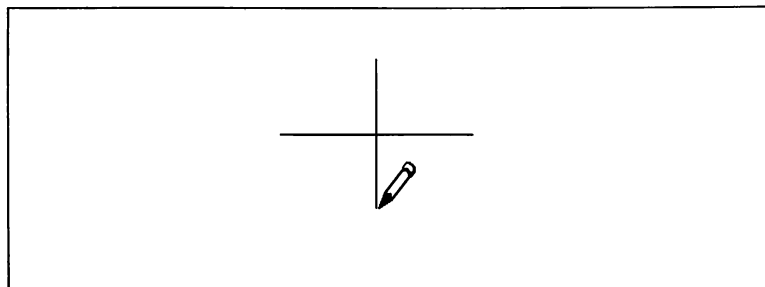
You can make simple sketches using Paint's Pencil. The Pencil is already selected when you first start Paint: notice the Pencil icon in the upper-left corner of the status box.

Here's how you draw with the Pencil:

- 1 Move the mouse pointer into the drawing window. The pointer changes to a pencil as soon as it enters the drawing window.
- 2 Drag the pointer in the drawing window to sketch a horizontal line. Release the mouse button.  
(Don't worry if your line isn't perfectly straight. Later on you will learn how to use a grid for more control.)



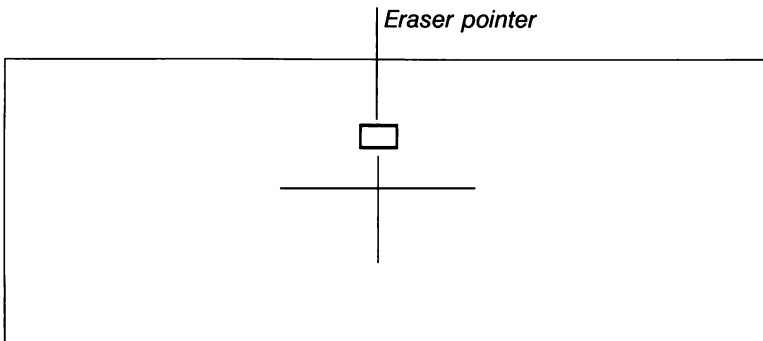
- 3 Move the pointer a short distance above the line.
- 4 Drag the pointer down to sketch a vertical line. Release the mouse button.



## Erasing Part of a Drawing

You can use the Eraser to erase parts of your drawing that you no longer want. To erase part of the line you've just drawn, follow these steps:

- 1 Move the mouse pointer to the Eraser tool in the Tools palette.
- 2 Click the mouse button. The tool shown in the status box changes to an eraser.
- 3 Move the pointer to the top of the vertical line. The pointer changes to an eraser as soon as it enters the drawing window.
- 4 Drag the pointer downward to erase part of the line. Release the mouse button.



### Using the Eraser



## Using the Undo and Erase Commands

You can use the Undo command to restore the last object you erased, or to delete the last object you created:

- Select the Edit menu and choose the Undo command.  
The part of the line you just erased reappears.

For practice using the Undo command, follow these steps:

- 1 Select the Pencil tool in the Tools palette.
- 2 Draw another line somewhere in the drawing window.
- 3 Select the Edit menu and choose the Undo command.  
The line you have just drawn is deleted from the drawing.
- 4 Choose Undo again to restore the line.

### Using the Undo command

---

## Using the Erase command

You can use the Erase command if you no longer want the objects in the drawing window. To erase the sketch you have just made, do this:

- ▣ Select the Edit menu and choose the Erase command.  
Paint clears the drawing window.

---

## Ending a Paint Session

If you want to quit Paint and take a break before the next exercise, use the Exit command from the File menu. If you don't want to quit Paint yet, go on to the next section.

To quit Paint, follow these steps:

- 1 Select the File menu and choose the Exit command.  
If you have created a new drawing, or made changes to an old one, Paint prompts you to save your drawing before quitting.
- 2 Choose the No button. (You will learn how to save a drawing later on.)  
Windows closes the Paint window.

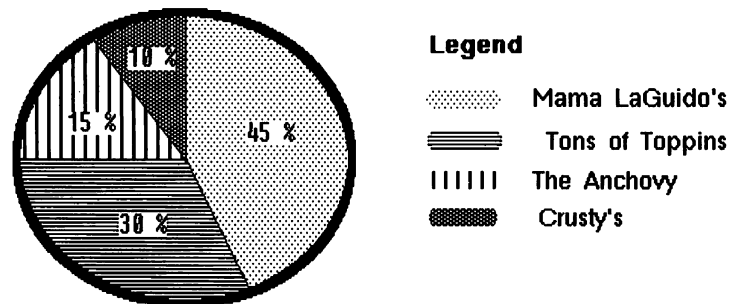
---

## Quitting Paint

---

## Creating a Drawing

Now that you have practiced drawing with the mouse and know what to do if you make a mistake, you are ready to begin your first drawing in Paint. In this exercise, you will use several of Paint's tools, patterns, and commands to create the following pie chart. When you have completed the pie chart, you will learn how to print it.



The Market Share of the Top Four Pizza Parlors  
*(in percentages)*

## Before You Begin

Before you begin, make sure that you have started Paint (if you quit Paint in the last section). See Chapter 1, “Getting Started,” if you need a reminder on how to start Paint. You may want to enlarge the Paint window to fill the entire screen by using the Maximize box or the Maximize command. This will give you more space in the drawing window.

For the following exercise, you’ll need the Helvetica font. Look in the Character menu to see if the abbreviation “Helv” is there. (You could use another font if you wanted; your drawing would just look different from the examples you see in this chapter.) See the *Microsoft Windows User’s Guide* for information on how to add fonts.

If you want to print your drawing, make sure that your printer is connected and set up the way you want before you begin. See the section called “Preparing to Print” in Chapter 1, “Getting Started,” and the *Microsoft Windows User’s Guide* for information on how to add and set up a printer.

If you just want to experiment with Paint, you don’t need to connect or set up a printer. Just work through the following exercise and then skip over the section called “Printing a Drawing.”

## Starting a New Drawing

If you did not quit Paint in the previous section, use the New command to start a new drawing. This command clears any remaining objects outside of the drawing window.

To begin drawing the pie chart, follow these steps:

- 1 Select the File menu and choose the New command.  
A dialog box may ask if you want to save the current drawing (probably your pencil sketches from the previous exercise).
- 2 Choose the No button. (You will learn how to save a drawing later.)

---

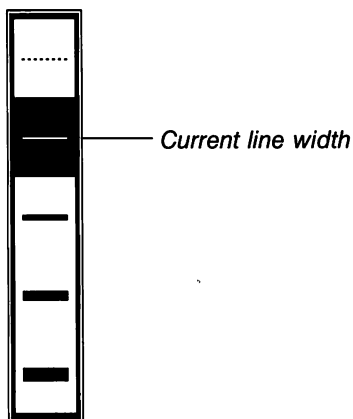
**Beginning a new drawing**

## Using Paint's Tools and Palettes

You draw objects in Paint using the Tools palette, and you specify patterns, line widths, and brush shapes by choosing commands from the Palette menu.

In this exercise, you will begin by changing the line width:

- 1 Select the Palette menu and choose the Line Widths command. The Line Widths palette appears, with the current line width selected.



- 2 Select the third line width. The Line Widths palette vanishes and the new line width appears in the lower-right corner of the status box.

Once you display a palette, you must make a selection before you can return to the drawing window. If you decide not to change the selection, just click the item selected.

Now you will draw the border of the pie chart:

- 1 Select the Circle tool. (Use the empty circle, shown in the margin.) The circle appears in the status box.

---

### Changing the Line Width

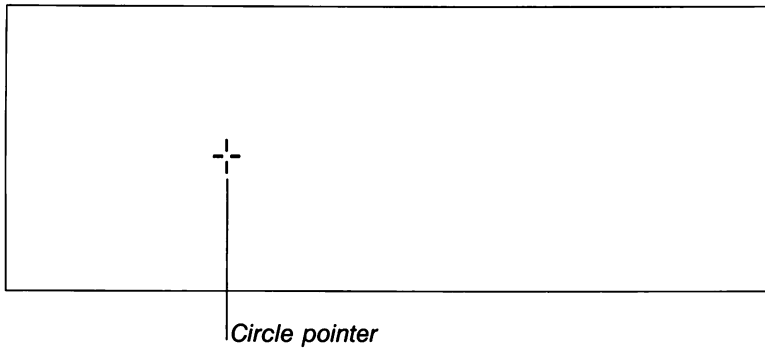


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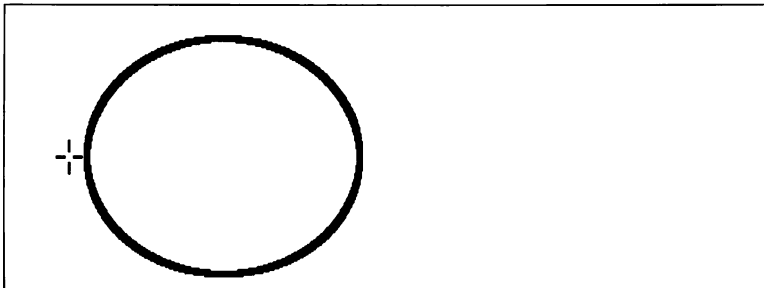
### Drawing a circle



- 2 Position the pointer to the left of the center of the drawing window, as shown in the following example.



- 3 Drag the pointer to the left to draw the circle, then release the mouse button.  
Your drawing will look something like this:



Make sure that you can see the entire circle in the drawing window and that it is on the left side of the screen. This is important because you will need room later on to add objects and text on the right side of the screen.

If the circle is not in the proper place, use the Undo command to erase it, and then try again.



Now you are ready to divide the chart into four pieces. First you need to change the line width again:

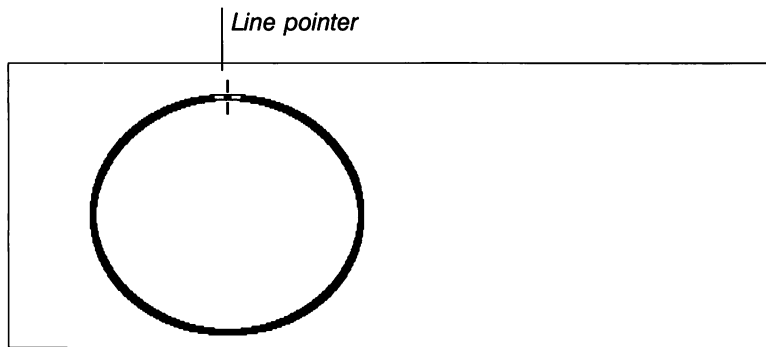
- Select the second line width on the Line Widths palette.

### Drawing a straight line



Now draw the first line to divide the chart:

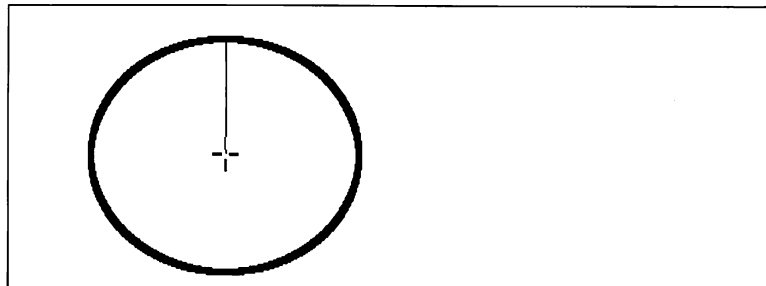
- 1 Select the Line tool.
- 2 Position the pointer on the top edge of the circle so that it is centered.



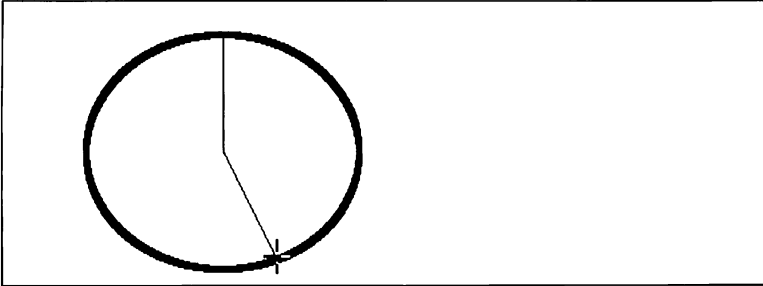
- 3 Drag the pointer to the center of the circle, then release the mouse button.

Now draw the remaining lines:

- 1 Position the pointer at the center of the circle (this should be the end point of the first line).

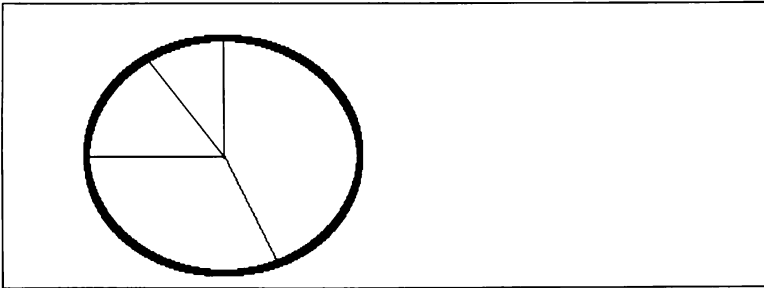


- 2 Drag the pointer to the bottom-right edge of the circle, then release the mouse button.



It is important that the dividing lines meet at the center and touch the edge of the circle. Otherwise, you won't be able to shade the pieces properly later on. If the lines don't meet, use the Undo command to erase the second line. Then redraw it as described in the two preceding steps.

- 3 Draw the rest of the dividing lines in the same way.  
Your drawing will look something like this:



## Saving Your Work

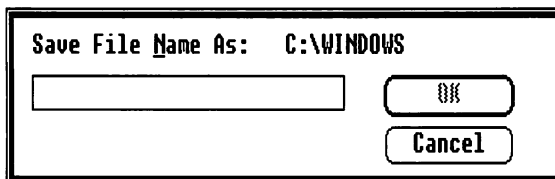
During a Paint session, it is a good idea to save your drawing at regular intervals. That way you can be sure that you won't lose your work if your session is interrupted. There are two commands you can use to save a drawing: Save As and Save.

---

## Using the Save As command

Use the Save As command to name and save a drawing that doesn't already have a title.

- 1 Select the File menu and choose the Save As command.  
A dialog box prompts you to name your drawing. The text box is empty because your drawing is untitled.



- 2 Type a name for your drawing, such as *piechart*. It doesn't matter whether you use capital or lowercase letters. If you don't type an extension, Paint adds .MSP to the filename.
- 3 Choose the OK button, or press the ENTER key.  
The Save As command stores your drawing as a file on your disk under the filename you typed.

---

## Using the Save command

If you want to save your drawing again later on, select the File menu and choose the Save command to save your changes under the current filename. The Save command will write over the old version of the file; choose the Save As command if you want to save your changes under a different filename and keep the original drawing.

**Note** Once you have created Paint files that have a .MSP extension, you have a new way to start Paint: just double-click the .MSP filename in the MS-DOS Executive window. Windows starts Paint and opens the file.

## Adding Patterns to a Drawing

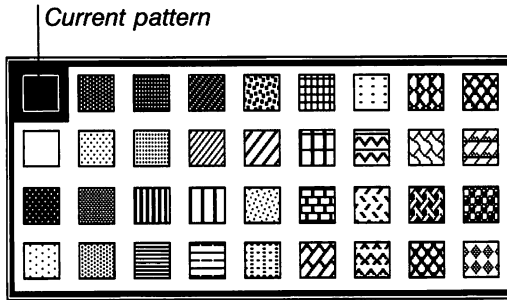
Now that you have divided your pie chart into four pieces, and have saved the work you've done so far, you are ready to fill in the pie pieces. You will do this by using the Fill tool and several different patterns.

---

**Changing patterns**

Follow these steps to select a pattern and fill a pie piece:

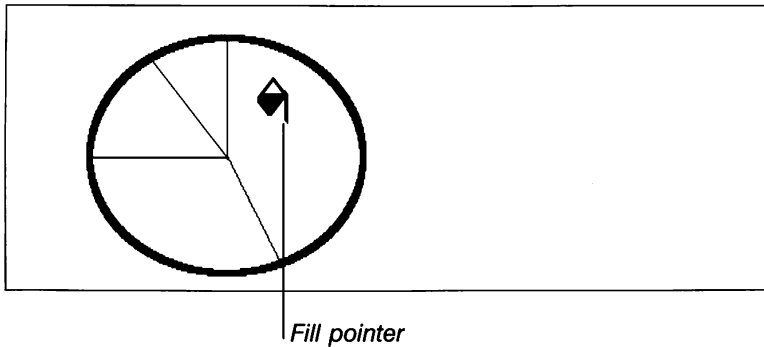
- 1 Select the Palette menu and choose the Patterns command.  
The Patterns palette appears, with the current pattern selected.



Select the light pattern of dots in the second column of the second row.

The Patterns palette vanishes and the new pattern appears in the upper-right corner of the status box.

- 2 Select the Fill tool.
- 3 Position the pointer inside the largest pie piece.



- 4 Click the mouse button.  
The first pie piece is filled with the new pattern.

This is a good point to begin drawing a legend for your pie chart. You will do this using the Brush tool and the Brush Shapes palette.




---

**Filling an area**

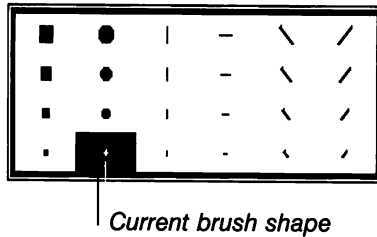

**Hint** If you find that you need a little more control when using the Pencil or Brush, you may want to use a grid to help you draw. See Chapter 5, "Command Summary," for information on how to specify and use a grid.

---

### Changing the brush shape

Follow these steps to add the first pattern to the legend:

- 1 Select the Palette menu and choose the Brush Shapes command.  
The Brush Shapes palette appears, with the current brush shape selected.

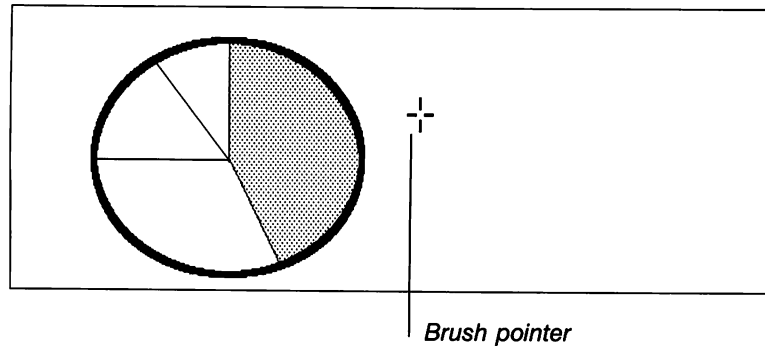


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### Using the Brush



- 2 Select the large round brush shape in the second column of the first row.  
The Brush Shapes palette vanishes and the new brush shape appears in the lower-left corner of the status box.
- 3 Select the Brush tool.
- 4 Position the pointer near the top-right edge of the circle.



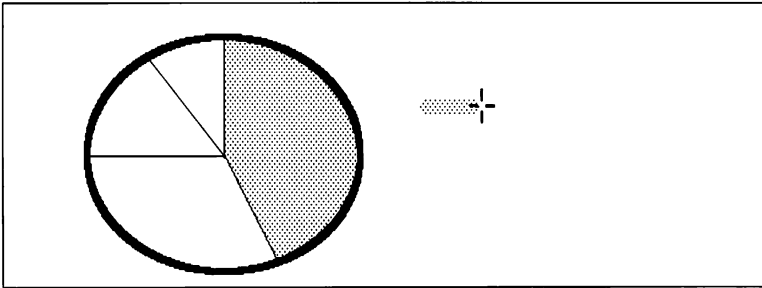
- 5 Drag the pointer a short distance to the right.

It is important that the pattern be close to the circle. Later on, you will need enough room above and next to the pattern to type text.

If the pattern is not as straight as you would like it to be, or if it's not close enough to the circle, use the Undo command to erase it, and then try again.

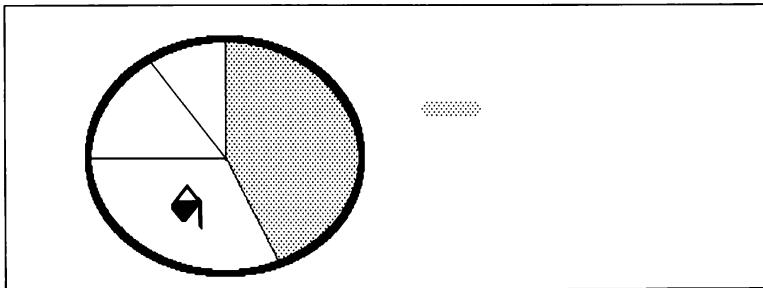
Remember, you can choose a grid if you need more control while drawing the patterns.

Your drawing should now look something like this:



To fill in the second pie piece, follow these steps:

- 1 Select the Palette menu and choose the Patterns command.
- 2 Select the pattern in row 4, column 3.
- 3 Select the Fill tool.
- 4 Position the pointer inside the second pie piece.

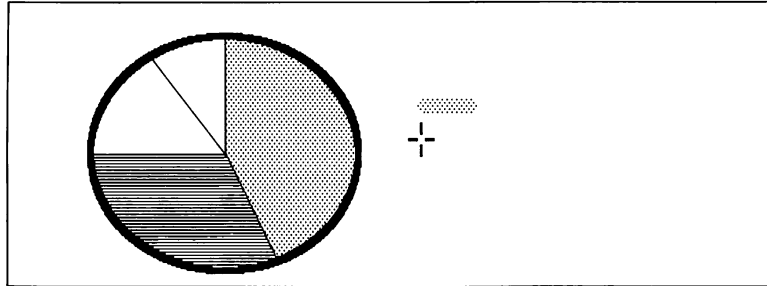


- 5 Click the mouse button.

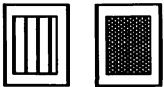
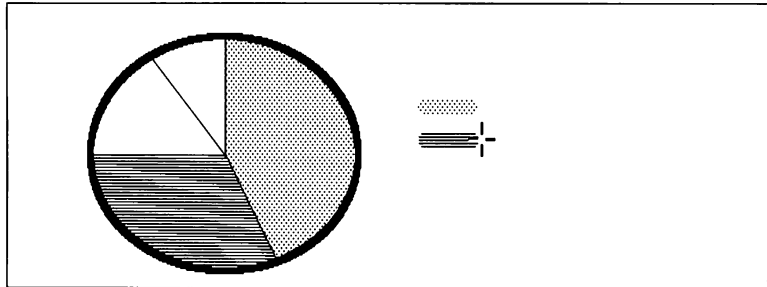
The second pie piece is filled with the new pattern.

Now add the second pattern to the legend:

- 1 Select the Brush tool.
- 2 Position the pointer below the first pattern in the legend.

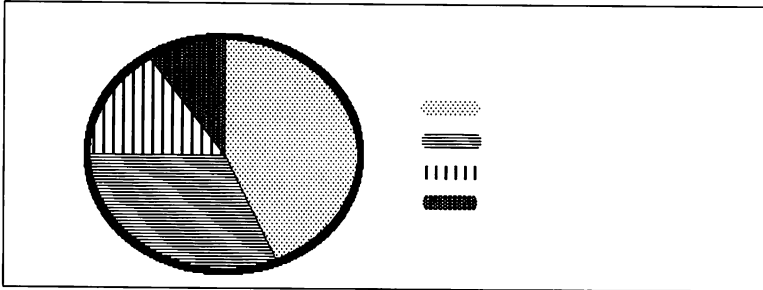


- 3 Drag the pointer a short distance to the right.  
Your drawing should now look something like this:



- 4 Repeat the preceding steps to fill in the rest of the pie pieces and to finish the legend.  
For this exercise, use the pattern in row 3, column 4 of the Patterns palette for the third piece, and the one in row 1, column 2 for the fourth piece.

When you are finished filling in the pieces and creating the legend, your drawing will look something like this:



## Adding Text to a Drawing

You are now ready to add numbers, names, and a title to your drawing. You will add numbers to the pie pieces, names of pizza parlors to the legend, and a title to the pie chart. To do this, you will use several commands from the Character, Size, and Style menus.

**Note** In this exercise, the text for the legend items and the title of the drawing was created using the Helvetica font. You may use another font if you like; your drawing will just look slightly different from the following examples.

Before you continue with this exercise, make sure the font you want to use is listed in the Character menu. If it isn't, first use the Save command to Save your drawing. Then see the *Microsoft Windows User's Guide* for information on adding fonts.

To type numbers in the pie pieces, follow these steps:

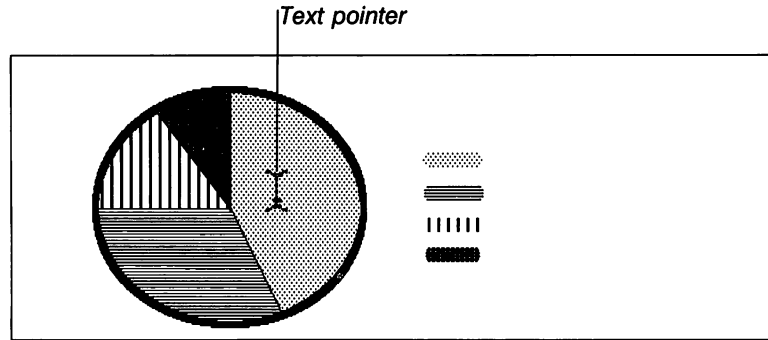
- 1 Select the Text tool.

---

### Adding text

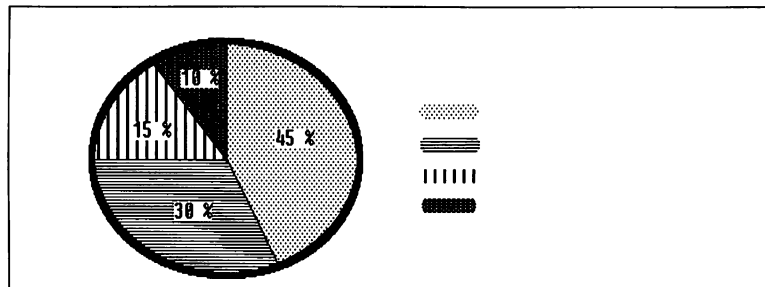


- 2] Position the pointer inside the first pie piece, where you want the number to appear, and click the mouse button to position the insertion point.



- 3] Type 45 %. (Use a space between the number and the percent sign.)  
If you make a mistake, press the BACKSPACE key and retype the number.
- 4] Repeat steps 2 and 3 to add numbers to the rest of the pieces. Type 30 % in the second piece, 15 % in the third piece, and 10 % in the fourth piece.

When you are finished typing the numbers, your drawing will look something like this:



---

**Choosing fonts and font sizes**

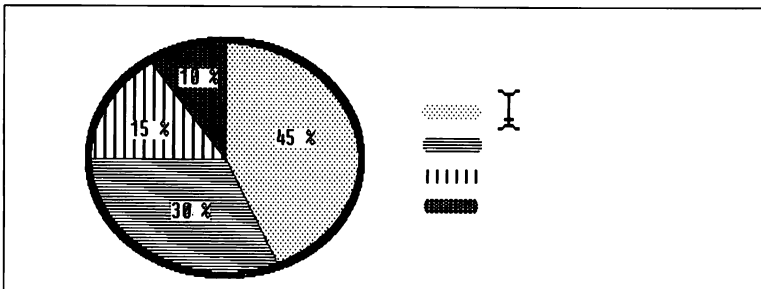
Now type the names of the pizza parlors next to the patterns in the legend:

- 1 Select the Character menu and choose the font you've decided to use. (A checkmark will appear next to this font the next time you choose the Character menu.)
- 2 Select the Size menu and choose 15. (A checkmark will appear next to this number the next time you choose the Size menu.)

**Note** If you are using a graphics card other than an Extended Graphics Adapter (EGA) or a font other than Helvetica (Helv), some of the font sizes used in this exercise may not be supported, or they may appear quite large on your screen. If this is the case, choose a different font size from the Size menu, and then follow the next steps to add text. Keep trying different sizes until the size of your text comes close to the size of the text in the example.

If you are using an EGA card, just go on to the next step.

- 3 Position the pointer to the right of the first pattern in the legend and click the mouse button to position the insertion point.



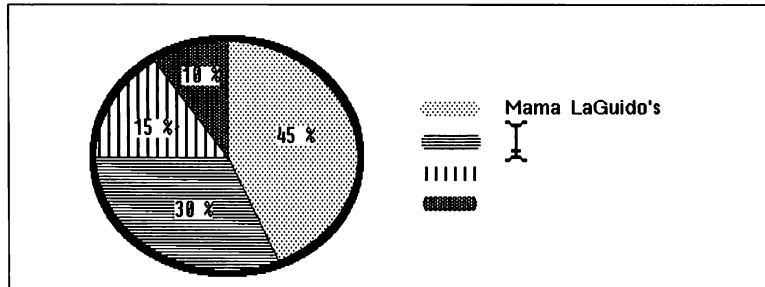
- 4 Type *Mama LaGuido's*.

If you make a mistake, press the BACKSPACE key and retype the name.

Now add the remaining names to the legend:

- 1 Position the pointer to the right of the second pattern in the legend and click the mouse button to position the insertion point.

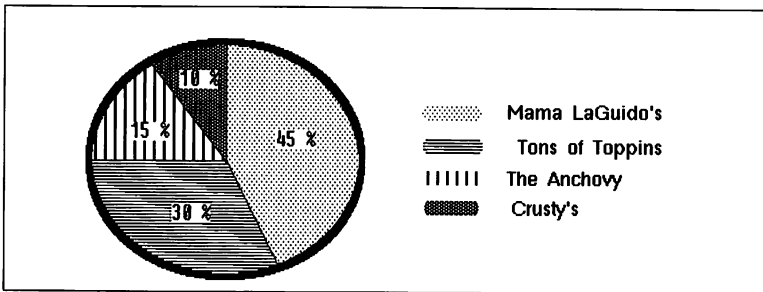
**Hint** You can press the ENTER key after typing the first name. This will move the insertion point to the next line, although it may not match the distance between paint patterns.



- 2 Type *Tons of Toppins*.
- 3 Repeat this procedure to add the rest of the names to the legend.  
Type *The Anchovy* next to the third pattern and *Crusty's* next to the fourth pattern.

Don't worry if the patterns and names aren't perfectly lined up with each other. In the next chapter, you will learn how to move objects around in the drawing window so that you can line up the names and patterns in the legend.

When you have finished adding the names to the legend, your drawing will look something like this:

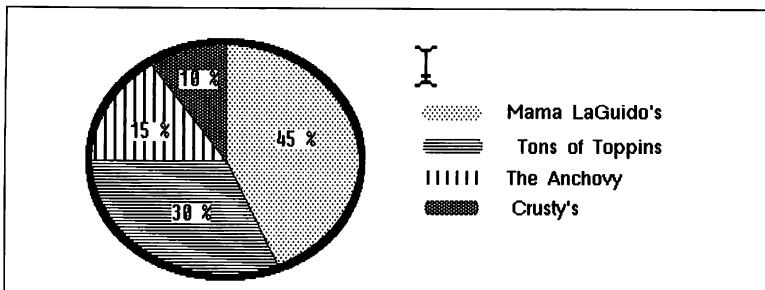


Now you need to add a heading to the legend and a title to the bottom of the pie chart.

First, type a heading for the legend:

### Choosing font styles

- 1 Select the Character menu to make sure the font you are using is still active. If it's not, choose the font again.
- 2 Select the Size menu to make sure the font size is still set at 15 (or whatever size you are using). If it's not, choose the size again.
- 3 Select the Style menu and choose the Bold command. (A checkmark will appear next to this command the next time you choose the Style menu.)
- 4 Position the pointer above the left edge of the first pattern in the legend, and click the mouse button to position the insertion point.



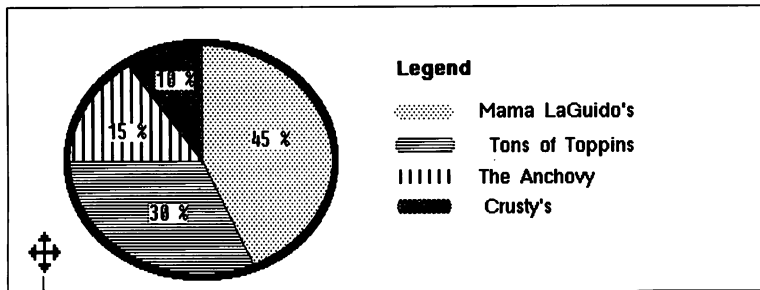
- 5 Type *Legend*.

## Scrolling a drawing



Before you type a title for the pie chart, you need to make room for it at the bottom of the drawing. To do this, use the Scroll tool to move your drawing up:

- 1 Select the Scroll tool.
- 2 Position the pointer at the bottom-left corner of the drawing window.



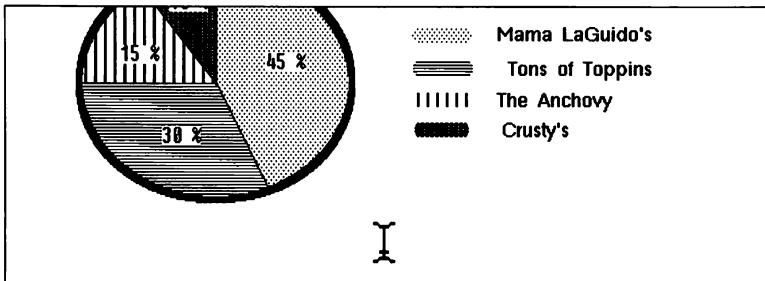
Scroll pointer

- 3 Drag the pointer up until the top fourth of the chart scrolls out of the drawing window, then release the mouse button.

Now type the title below the chart:

- 1 Select the Character menu to make sure that the font you are using is still active. If it's not, choose the font again.
- 2 Select the Size menu and choose 18.
- 3 Select the Style menu to make sure the Bold command is still active. If it's not, choose Bold.
- 4 Select the Style menu and choose the Centered command.
- 5 Select the Text tool.
- 6 Position the pointer below the middle of your drawing and click the mouse button to position the insertion point.

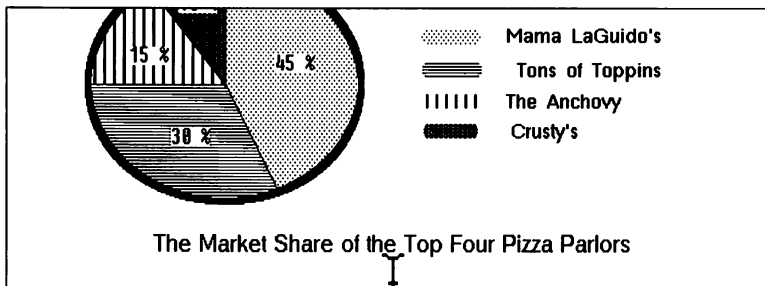
Scrolled drawing



- 7 Type *The Market Share of the Top Four Pizza Parlors*.  
If you make a mistake, press the BACKSPACE key and retype the title.

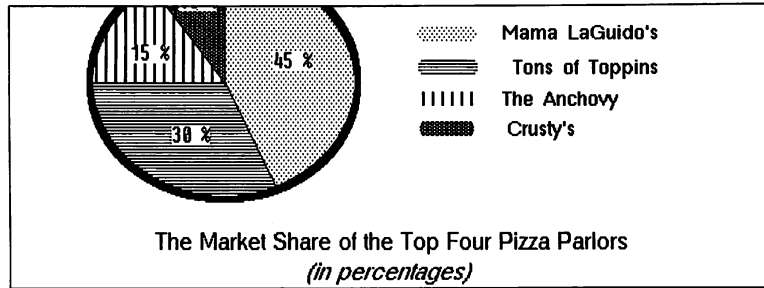
Now type the second line of the title:

- 1 Position the pointer below the center of the first line and click the mouse button to position the insertion point.



- 2 Select the Style menu and choose the Italic command.  
3 Type *(in percentages)*.

Your completed drawing should look something like this:



The drawing you have just created is fairly large, so it doesn't completely fit in the drawing window. If you want to see more of your drawing, use the Scroll tool to move the drawing down. After scrolling your drawing, you should be able to see the top part of the pie chart.

You will be making changes to your drawing in the first part of the next chapter, so be sure to save it:

- Select the File menu and choose the Save command.

The Save command saves the changes you made to your drawing. If you want to keep the original drawing, use the Save As command and type a new filename in the text box. Paint stores your changed drawing in a file under the name you type.

---

## Printing a Drawing

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### Using the Print command

If you decided not to print your drawing, go to the next chapter to learn about more of Paint's features.

If your computer is connected to a printer, and you have set up the printer using Control Panel, you can print your drawing. Here's how:

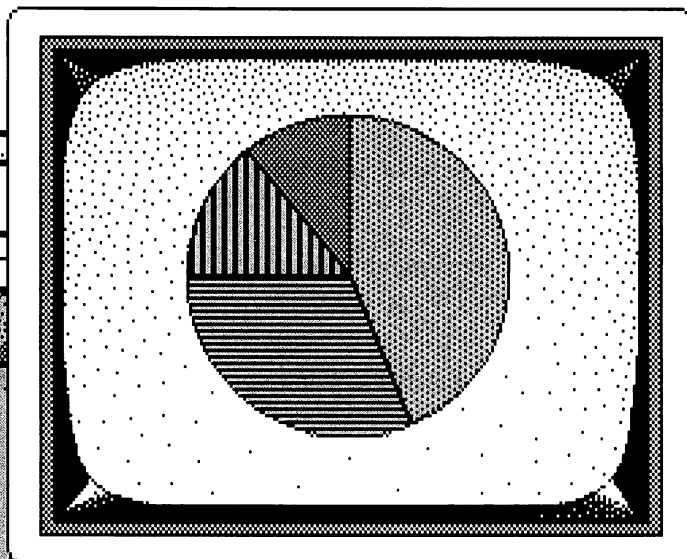
- Select the File menu and choose the Print command.  
Paint prints your drawing.

### 3 Enhancing a Drawing

In the last chapter, you learned how to use Paint's tools and palettes together with some of its commands to create a drawing.

In the first part of this chapter, you will learn how to use the Zoom In command to enhance the pie chart you created in the last chapter. In the rest of this chapter, you will learn how to design your own patterns, and how to use Paint's selection tools and editing commands to edit a section of your drawing.

If you have quit Paint, start Paint again. If you need a reminder on starting Paint, see Chapter 1, "Getting Started." The next page describes how to open a file.

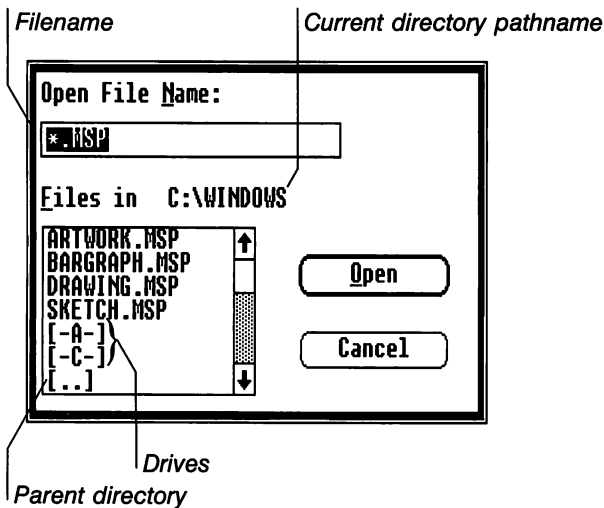


## Opening a Drawing File

### Opening a drawing

Use the Open command to open a file that contains the drawing you want to change:

- 1 Select the File menu and choose the Open command.  
A dialog box prompts you for the name of the drawing file.



- 2 Type the name of the file you want to open, in this case *piechart.msp*, or scroll through the list box and click the filename.
- 3 Choose the Open button.  
Your drawing appears on the screen.

**Hint** You can start Paint and open a file from the MS-DOS Executive window in a single step: just change to the directory that contains your Paint drawing files and double-click the filename you want to open.

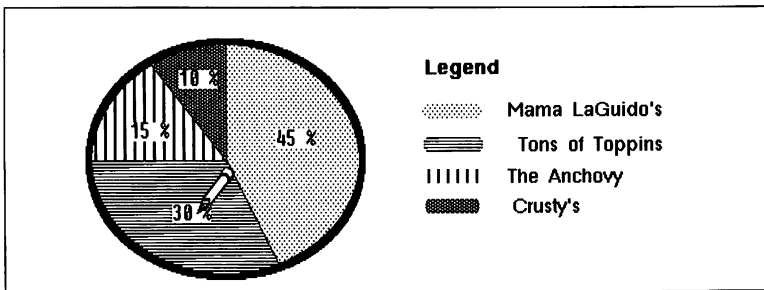
## Editing in Detail

To do detailed editing on a part of your drawing, use the Zoom In command and the Pencil. The Zoom In command enlarges a drawing section so that you can turn screen pixels on or off. A screen pixel is simply a small dot on the screen. When it is on, it appears black. When it is off, it appears white. You point to a pixel with the Pencil and click the mouse button to turn it on or off.

In this exercise, you will draw borders around the numbers in the pie pieces so that they are easier to read.

The first step is to enlarge the area around the number in the second pie piece (the one marked “30 %”):

- 1 Select the Pencil tool.
- 2 Position the Pencil between the zero and the percent sign and click the mouse button.



The Pencil makes a mark at the point where you click: white on black, or black on white.

- 3 Select the Options menu and choose the Zoom In command.
- 4 Paint zooms in to where you last released the mouse button. This view of the screen is called a zoomed-in drawing window.

Notice the small box in the upper-left corner of the drawing window. This box displays a zoomed-out view of the area you are editing. As you turn pixels on or off, you can see how the area will look when you return to the regular drawing window.

## Using the Zoom In command

---

### Scrolling a zoomed-in drawing window

If the number is not entirely displayed in the zoomed-in window, you can scroll your drawing to bring the number into view. Here's how:

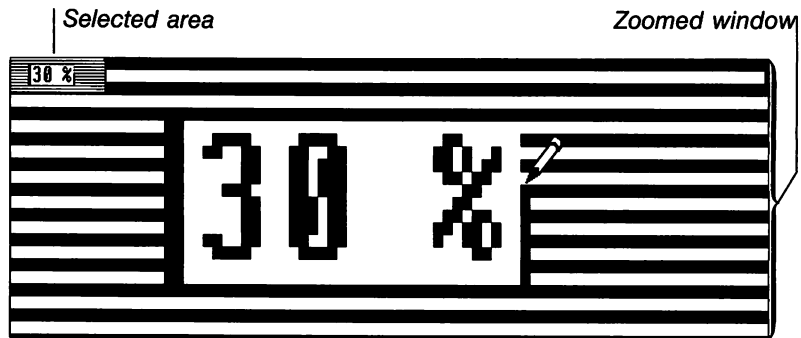
- 1 Press the **SHIFT** key.
- 2 Drag the pointer in the direction you want to scroll. The area in the small box in the upper-left corner of the drawing window moves as you scroll.
- 3 Release the **SHIFT** key and the mouse button.  
The scrolled area appears in the zoomed-in drawing window.

---

### Editing pixel-by-pixel

Now draw a border around the number:

- 1 Click the pixels near the number to draw a border.



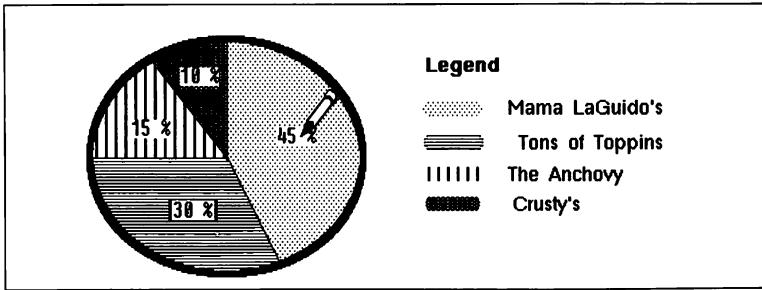
Don't worry if you accidentally turn a white area to black, or a black area to white. Just click the area once more and it will change back to its original color.

Be sure to click the pixel between the zero and the percent sign that you turned black when you were marking the target area.

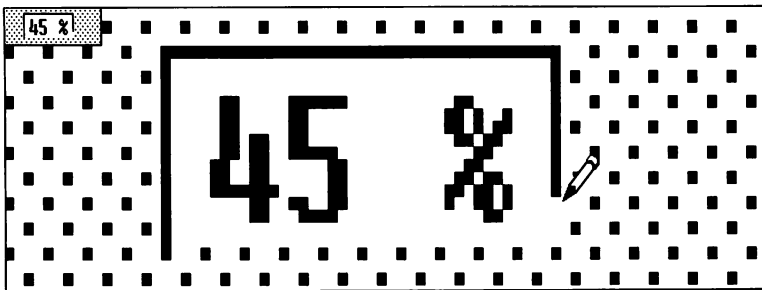
- 2 When you have finished drawing the border around the number, select the **Options** menu and choose the **Zoom Out** command.  
The regular drawing window reappears.

To add a border around the number in the first pie piece (the one marked “45 %”), follow these steps:

- 1 Position the Pencil between the 5 and the percent sign, then click the mouse button.

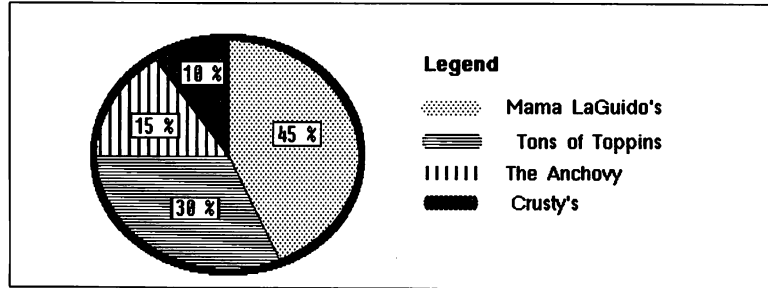


- 2 Select the Options menu and choose the Zoom In command.
- 3 Click the black or white areas to turn pixels on or off. Drag the pointer to turn several pixels on or off quickly. Do this until you've drawn a border around the number.



- 4 When you are done, select the Options menu and choose the Zoom Out command.

Repeat these steps to draw borders around the rest of the numbers. When you have finished, your drawing should look something like this:



---

## Moving a Selection

You can select part of your drawing and move it to another place in the drawing window. In this exercise, you will move the patterns and names in the legend so that their left edges are lined up. You will do this using the Selection Rectangle tool and the pointer to line up the items.

**Note** If you used a grid in the last chapter to create the legend, you'll need to use the same grid for this exercise. Paint refers to this grid when you line up the items in the legend.

---

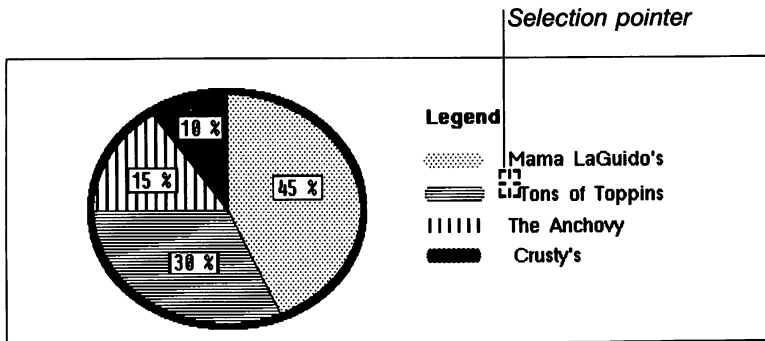
### Selecting an area



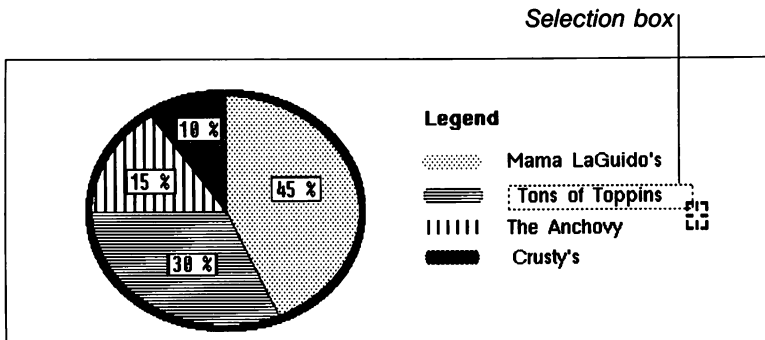
Follow these steps to select and move one of the items in the legend:

- 1 Select the Selection Rectangle tool.

- 2 Position the pointer above and slightly to the left of "Tons of Toppins."

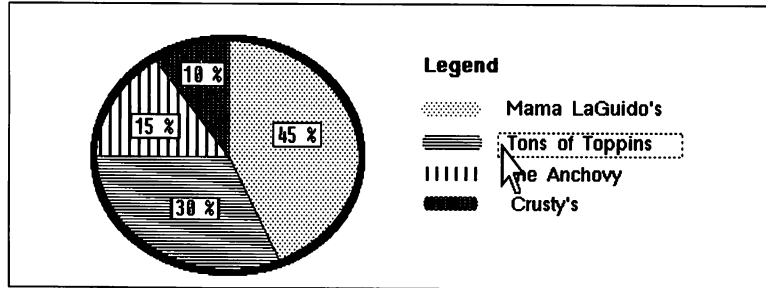


- 3 Drag the pointer down and to the right to enclose the text in a dotted selection box.



- 4 Position the pointer inside the selection box. The pointer changes to an arrow, indicating that you can drag the selection.

- 5 Drag the text until the "T" in "Tons of Toppins" is lined up with the "M" in "Mama LaGuido's," and the space between the items looks right to you.



When you release the mouse button the selection stays where it is. You can drag it again as many times as you want, until you're satisfied with its position. As soon as you click the mouse button outside the selection box, the box disappears and the text is pasted to your drawing in its new place.

- 6 Repeat steps 2 through 5 to line up the rest of the patterns and pizza names in the legend, and to add or remove space between the items.

You have now completed all of the exercises that use the pie chart you created in the last chapter as an example. If you want to keep the pie chart, use the Save command to save the changes you've made before you move on to the next exercise.

---

## Designing Your Own Pattern

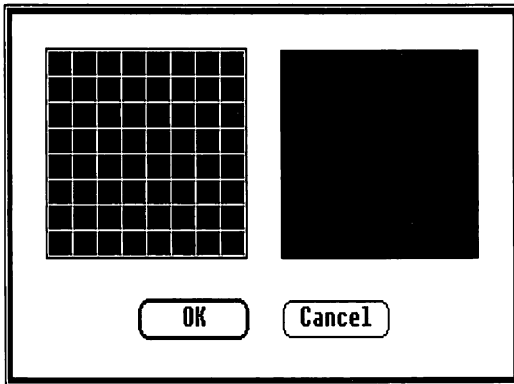
If the Patterns palette doesn't include a pattern you would like to use, you can design your own and use it during the rest of your Paint session. To practice using this feature, clear the drawing window and start a new drawing:

- ❑ Select the File menu and choose the New command.  
Paint clears any remaining objects in the drawing and displays an empty drawing window.

Now start designing your own pattern:

- 1 Select the first pattern from the Patterns Palette.
- 2 Select the Options menu and choose the Edit Pattern command.

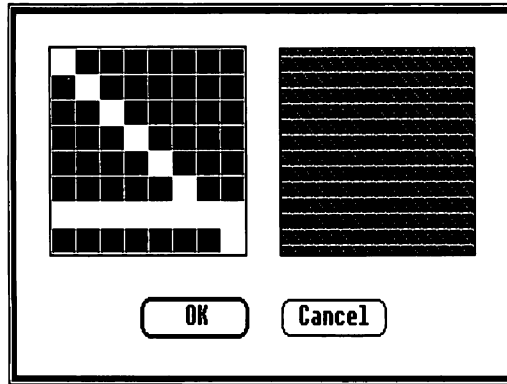
A dialog box displays a pattern of squares on the left and an enlarged view of the current pattern on the right.



---

## Designing a pattern

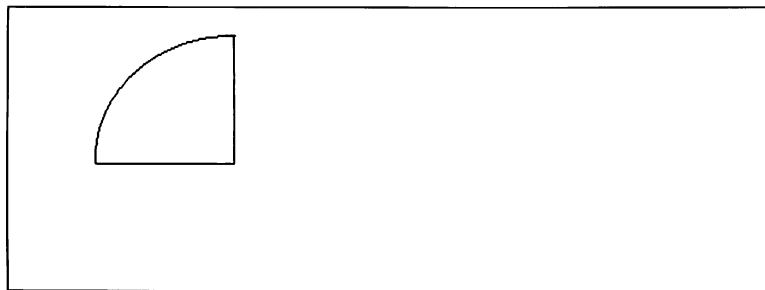
- 3 Click the squares in the pattern on the left to make them black or white. The effects of your editing are displayed to the right.



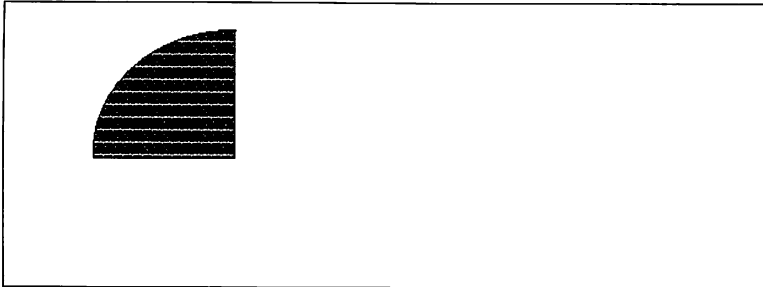
- 4 When you have finished designing a pattern, choose the OK button. The new pattern appears in the status box.

Now try out your new pattern to see how it looks inside a shape:

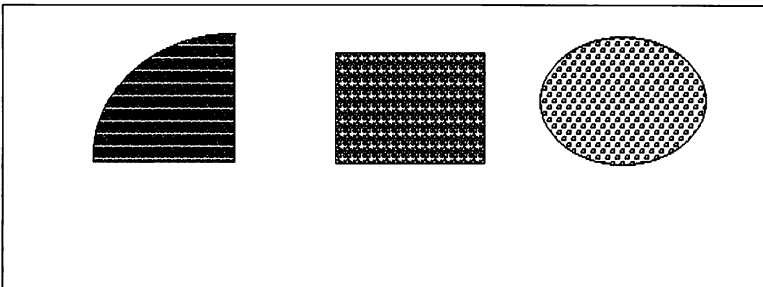
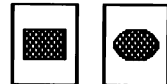
- 1 Use the Circle tool to draw a pie and the Line tool to draw a one-quarter slice in it. Make sure that the lines meet and that they touch the edge of the pie.
- 2 Use the Eraser tool to erase everything except for the pie piece.



- 3 Use the Fill tool to fill the piece with the new pattern.



Go ahead and experiment a little. Try designing new patterns from several of the standard ones. While you are experimenting, try using some new tools, such as the Filled Rectangle or the Filled Oval.



If you like the new patterns you have just designed, you may want to keep a list of the standard patterns you started with, and make rough sketches of the new patterns as they appear in the left-hand square of the Edit Pattern dialog box. Each time you start Paint, you will need to redesign these patterns if you want to use them.

Don't erase the pie piece in the drawing you just made. You will need it for the rest of this chapter. If you want to keep the other objects, use the Save As command to save the drawing under a new filename. Then go ahead and erase the parts you don't need for the next exercise.

---

## Copying a Selection

You can copy all or part of your drawing using the Copy command from the Edit menu. In this exercise, you'll copy the pie piece you made in the last section.

Before you can use most of the Edit menu commands, you need to select the area of the drawing you want to change:

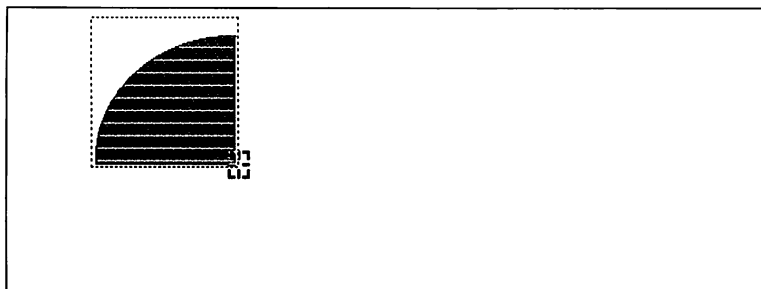
---

### Copying and pasting



- 1 Select the Selection Rectangle tool and enclose the pie piece in the selection box.

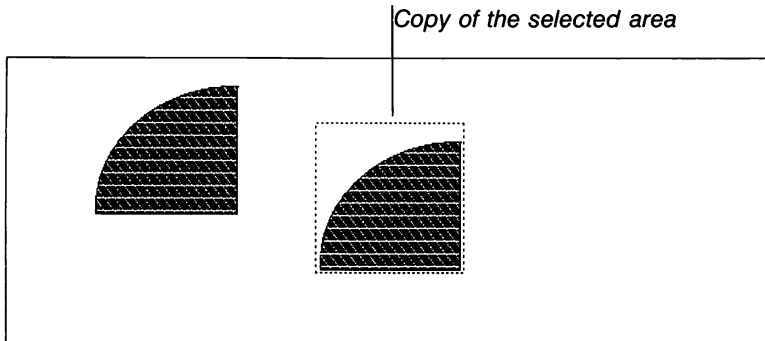
If you include any white space, it will be copied to your drawing as well. If you do not want to copy extra white space, make sure that the right, left, and bottom edges of the piece almost touch the selection box, as shown in the following example:



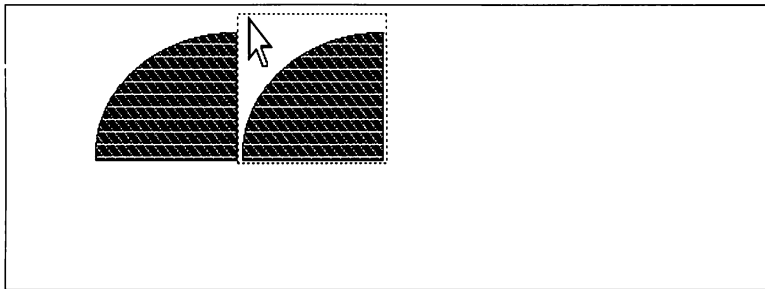
- 2 Select the Edit menu and choose the Copy command.  
This copies the selected area to the Clipboard.

**Note** Whenever you select an area to copy to the Clipboard, make sure that the entire area is visible in the drawing window. If it is not, only the part that you see will be copied to the Clipboard.

- 3 Select the Edit menu and choose the Paste command.  
This pastes the Clipboard contents to your drawing, inside a selection box.



- 4 Position the pointer inside the selection box. The pointer will change to an arrow, indicating that you can drag the selection.
- 5 Drag the selection to the right side of the original pie piece, then release the mouse button.



You now have two pie pieces on your screen: the original one, and the copy inside the selection box, which you will enhance using another editing command.

---

## Editing a Selection

You can use the commands at the bottom of the Edit menu to enhance the selected area of your drawing.

In this exercise, you will use the Flip Horizontal command to put the two pieces together. For descriptions of the other editing commands, see the section called "The Edit Menu" in Chapter 5, "Command Summary."

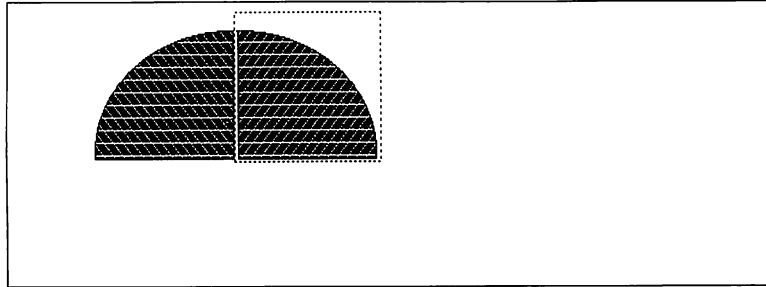
The selection box should still appear around the copy of the pie piece. If it doesn't, use the Selection Rectangle tool to select the piece again.

---

### Editing a selection

Here's how to create a mirror image of the selection:

- 1 Select the Edit menu and choose the Flip Horizontal command.  
The selected pie piece flips from left to right, making half a pie.



- 2 Click the mouse button outside the selection box to paste the copy permanently to your drawing.

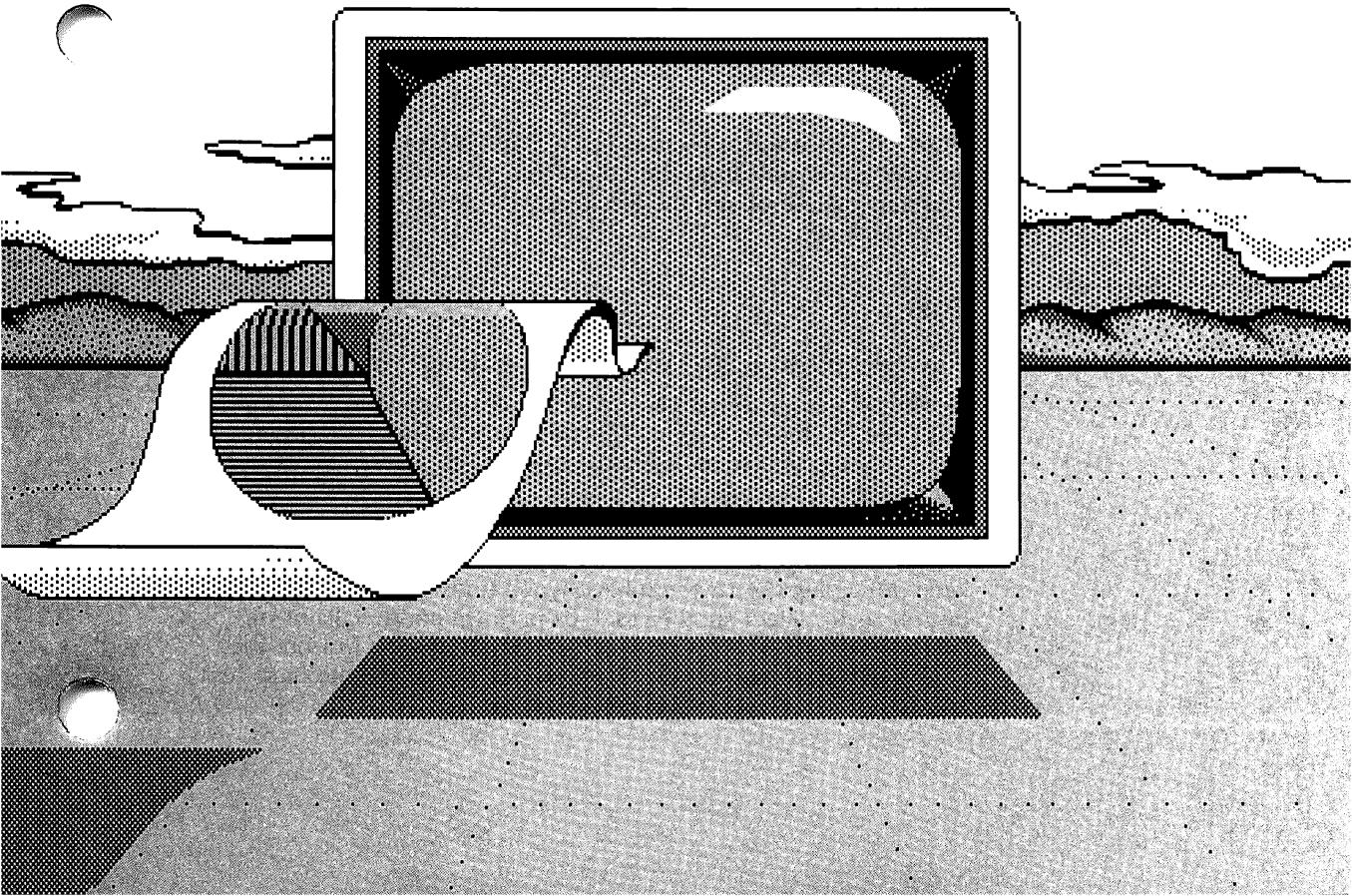
**Note** If you have included any white space inside the selection box, it is also copied to your drawing. This may create a space between the two pie pieces.

You have now completed all the exercises in this guide. If you need a review, go to Chapter 4, "Tools Summary," and Chapter 5, "Command Summary," for a complete description of all Paint's tools and commands and instruction on how to use them. You may want to glance at Appendix B, "Tools Description," for a brief description of each tool and an idea of the kinds of drawings you can create in Paint.

## 4 Tools Summary

This chapter briefly describes the purpose of each of Paint's tools and how to use them.

Try using these tools together with different patterns, shapes, and commands to create new objects or new drawings. Once you feel comfortable using Paint, refer to this chapter whenever you need a reminder on how to use a particular tool.



---

## How to Use Paint's Tools



### Selection Rectangle

You use the Selection Rectangle tool to specify a rectangular drawing area for editing.

Position the pointer near the area you want to select. Drag the pointer up, down, to the left, or to the right to enclose the area in a dotted rectangular selection box. When you release the mouse button, the area is selected.

If you want to cancel the selection, just click the mouse button outside the selection box.



### Selection Net

You use the Selection Net tool to specify a non-rectangular drawing area for editing.

Position the pointer near the area you want to select. Drag the pointer around the area to enclose it. When you release the mouse button, Paint closes the ends of the net with a straight line. The enclosed area turns gray to indicate that it is selected.

To cancel the selection, just click the mouse button outside the selected area.

**Note** If you want to use the Trace Edges, Flip Horizontal, or Flip Vertical commands from the Edit menu, you must use the Selection Rectangle tool, not the Selection Net, to select the area you want to change.






### Text

You use the Text tool to add text to a drawing.

Move the pointer to the place where you want the text to appear, and click the mouse button. This positions the insertion point. Type the text you want, using the SPACEBAR to insert spaces and the BACKSPACE key to correct mistakes.

You can use the commands from the Character, Size, and Style menus to change the font, size, or type style of the text. You can keep modifying the text you have typed until you click the mouse button again, select another tool, or perform another Paint or Windows action. Once you have clicked the mouse button, the commands you choose from these menus will affect the next text you type.



Once you have positioned the insertion point, you can move the pointer out of the way and the insertion point will stay where you positioned it.

## Scroll

You use the Scroll tool to move a drawing in the drawing window. This tool is useful if you want to create a drawing larger than the drawing window.

To move the drawing up, position the pointer at the bottom of the drawing window. Drag the pointer up. The top of your drawing slides out of the drawing window. To move the drawing down, position the pointer at the top of the drawing window. Drag the pointer down. The bottom of the drawing slides out of the drawing window.



## Pencil

You use the Pencil tool the same way you use a regular pencil to sketch or to create a free-hand drawing.

Move the pointer to the place where you want to draw. Drag the pointer to sketch an object.

**Hint** If you want more control when using the Pencil to draw straight lines, you can choose a grid, or you can draw using the keyboard keys instead of the mouse. See Chapter 5, “Command Summary,” for information about the Grid commands.



## Eraser

You use the Eraser tool to erase a part of your drawing that you no longer want.

Move the pointer to the area you want to erase. Drag the pointer over the area to erase it.



## Line

You use the Line tool to draw a straight line using the current line width.

Move the pointer to the place where you want the line to start. Drag the pointer to where you want the line to end, then release the mouse button.





## Brush

You use the Brush tool to paint an area of your drawing using the current pattern and brush shape.

Move the pointer to the area you want to paint. Drag the pointer to paint the area.

**Hint** If you want more control when using the brush, you can choose a grid, or you can paint using the keyboard keys instead of the mouse. See Chapter 5, "Command Summary," for information about the Grid commands.



## 3-D

You use the 3-D tool to create objects that have a three-dimensional appearance. When you hold down the mouse button, three axis lines appear in the drawing window.

Drag the pointer along the axes. The axes move as you drag. Release the mouse button to draw a line. The point where the axes meet when you release the mouse button determines the end point of the line.

**Hint** As with all of Paint's tools, you can use the 3-D tool with the mouse. However, you may find that you have more control if you use the keyboard to draw with this tool.



## Fill

You use the Fill tool to fill an enclosed area with the current pattern.

Move the pointer into the area you want to fill. Click the mouse button to fill the area.

**Note** Make sure that the area you want to fill is completely enclosed. Otherwise the pattern will "spill" out.

## Curve

You use the Curve tool to draw a curve.

Move the pointer to the place where you want the curve to start. Drag the pointer to draw a straight line. Position the pointer next to the line, and press the mouse button. The pointer marks the peak of the curve. Drag the pointer up, down, to the right, or to the left to stretch the line into the type of curve you want.



## Spray Paint

You use the Spray Paint tool to spray paint using the current pattern.

Move the pointer to the place where you want to spray paint. Click the mouse button to spray dabs of paint. Drag the pointer to leave several dabs of paint in the pointer path.



## Rectangle

You use the Rectangle tool to draw a rectangle using the current line width.

Move the pointer to the place where you want the rectangle to appear. Drag the pointer up, down, to the left, or to the right to draw the rectangle, then release the mouse button.



## Filled Rectangle

You use the Filled Rectangle tool to draw a rectangle that is filled with the current pattern.

Move the pointer to the place where you want the filled rectangle to appear. Drag the pointer to draw the rectangle, then release the mouse button. When you release the mouse button, Paint fills the rectangle with the current pattern.



## Rounded Rectangle

You use the Rounded Rectangle tool to draw a round-cornered rectangle using the current line width.

Move the pointer to the place where you want the rounded rectangle to appear. Drag the pointer up, down, to the right, or to the left to draw the rectangle, then release the mouse button.





## Filled Rounded Rectangle

You use the Filled Rounded Rectangle tool to create a round-cornered rectangle that is filled with the current pattern.

Move the pointer to the place where you want the filled rounded rectangle to appear. Drag the pointer to draw the rectangle, then release the mouse button. When you release the mouse button, Paint fills the rectangle with the current pattern.



## Circle

You use the Circle tool to draw a circle using the current line width.

Move the pointer to the place where you want the circle to appear. Drag the pointer up, down, to the right, or to the left to draw the circle, then release the mouse button.



## Filled Circle

You use the Filled Circle tool to draw a circle that is filled with the current pattern.

Move the pointer to the place where you want the filled circle to appear. Drag the pointer to draw the circle, then release the mouse button. When you release the mouse button, Paint fills the circle with the current pattern.



## Oval

You use the Oval tool to draw an oval using the current line width.

Move the pointer to the place where you want the oval to appear. Drag the pointer up, down, to the right, or to the left to draw the oval, then release the mouse button.



## Filled Oval

You use the Filled Oval tool to draw an oval that is filled with the current pattern.

Move the pointer to the place where you want the filled oval to appear. Drag the pointer to draw the oval, then release the mouse button. When you release the mouse button, Paint fills the oval with the current pattern.

## Freehand Shape

You use the Freehand Shape tool to draw a freehand shape using the current line width.

Move the pointer to the place where you want the shape to appear. Drag the pointer to draw lines and curves, then release the mouse button. When you release the mouse button, Paint closes the shape by connecting the end points with a straight line.



## Filled Freehand Shape

You use the Filled Freehand Shape tool to draw a freehand shape that is filled using the current pattern.

Move the pointer to the place where you want the filled shape to appear. Drag the pointer to draw lines and curves, then release the mouse button. When you release the mouse button, Paint closes the shape by connecting the end points with a straight line, and then fills the shape with the current pattern.



## Polygon

You use the Polygon tool to draw a polygon using the current line width.

Move the pointer to the place where you want the polygon to appear, and click the mouse button to mark the first corner point. Move the pointer and click the mouse button to mark the rest of the corner points. Paint connects the corners with straight lines as you mark them. When you double-click the last corner point, Paint connects it to the first corner point to close the polygon.



## Filled Polygon

You use this tool to draw a polygon that is filled with the current pattern.

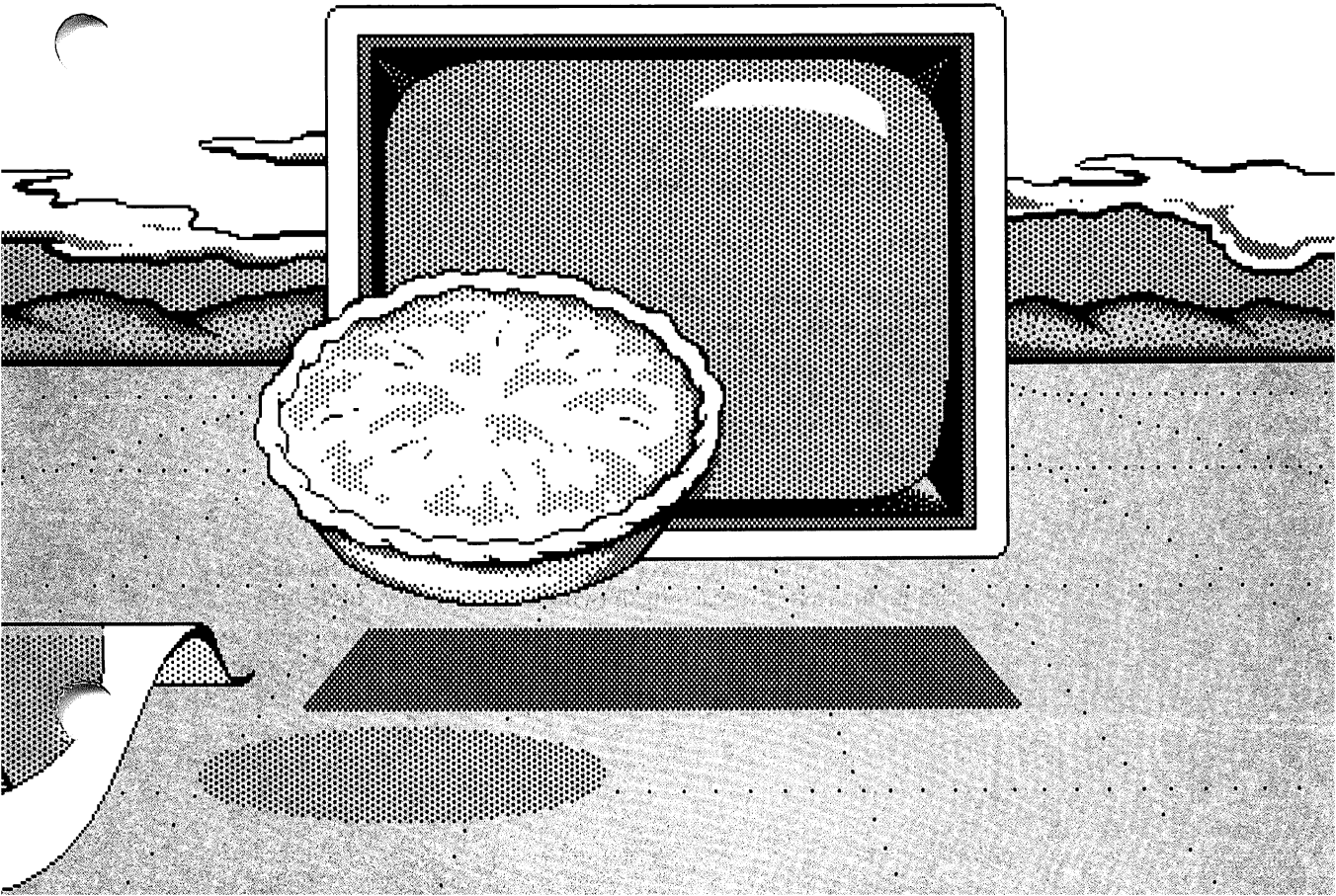
Move the pointer to the place where you want the filled polygon to appear, and click the mouse button to mark the first corner point. Move the pointer and click the mouse button to mark the rest of the corner points. Paint connects the corners with straight lines as you mark them. When you double-click the last corner point, Paint connects it to the first corner point, and then fills the polygon with the current pattern.

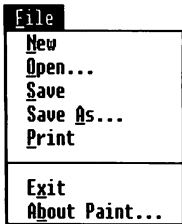


## 5 Command Summary

This chapter describes the Paint commands that you use to create, enhance, and edit your drawings. Paint commands are grouped into the menus you see in the menu bar.

This chapter describes the menus and their commands, in the order in which they appear in the menu bar.





## The File Menu

You use the File menu commands to create, save, and print your drawings.

**Note** The Open, New, and Exit commands prompt you to save any changes you made to the current drawing before you proceed.

### New

The New command starts a new drawing.

After you choose this command, Paint clears the current drawing from your screen and displays an empty drawing window. The status of the selected tool, pattern, brush shape, and line width is unchanged.

### Open

The Open command opens a file that contains a drawing you created earlier.

After you choose this command, a dialog box prompts you to either choose a title from the list box or type the title of the drawing you want. Paint then displays the drawing on your screen. The status of the selected tool, pattern, brush shape, and line width is unchanged.

### Save

The Save command saves the changes you've made to the current drawing, under the existing filename.

After you choose this command, a dialog box prompts you for a name, if the file is untitled. If you have already named the file, Paint stores the drawing in a file under the name you previously specified.

### Save As

The Save As command saves a new drawing, or saves the changes you've made to the current drawings, under a new filename.

After you choose this command, a dialog box prompts you to type a name for the current drawing. Paint then stores the drawing in a file under the name you specified.

## Print

The Print command prints the current drawing.

After you choose this command, a dialog box tells you that Paint is sending your drawing to Spooler. If you want to stop printing your drawing, choose the Cancel button.

This command is inactive if you have not set up a printer using the Setup program or Control Panel. See the section called “Preparing to Draw” in Chapter 1, “Getting Started,” and the *Microsoft Windows User’s Guide* for information about adding and setting up printers.

## Exit

The Exit command ends your Paint session.

After you choose this command, a dialog box prompts you to save any unsaved changes that you’ve made to your drawing. If you choose the Cancel button, you can continue working on your drawing in the Paint window. If you choose the Yes button or the No button, Windows ends your Paint session.

## About Paint

The About Paint command displays information about the Paint program.

After you choose this command, a dialog box displays the version number and copyright dates of the Paint program you are using. After you have read this information, choose the OK button.

---

## The Edit Menu

You use the Edit menu commands to edit or modify the current drawing.

Except for Erase, Undo, and Paste (if there is anything on the Clipboard), all of the Edit menu commands are inactive until you first select the drawing area you want to edit. Use either the Selection Rectangle tool or the Selection Net tool to select an area.

Edit	
Undo	Alt+BkSp
Erase	
Cut	Shift+Del
Copy	Ctrl+Ins
Paste	Shift+Ins
Clear	Del
Invert	
Trace Edges	
Flip Horizontal	
Flip Vertical	

## Undo

The Undo command cancels the most recent drawing or editing action you made. Choosing Undo a second time restores the action.

## Erase

The Erase command erases the contents of the drawing window. You can also erase the contents of the drawing window by double-clicking the Eraser tool.

## Cut

The Cut command removes the selected area from the drawing and places it on the Clipboard. (See the *Microsoft Windows User's Guide* for information about Clipboard.)

**Note** When selecting an area to cut or to copy to the Clipboard, make sure that its entire contents are visible in the drawing window. If they are not, you need to scroll the drawing so that the area you wish to cut or copy is in full view. Otherwise the Cut or Copy command will not include all the material you want.

## Copy

The Copy command copies the selected area to the Clipboard.

## Paste

The Paste command copies the Clipboard contents into a selection box in the drawing window. The objects you paste stay selected (and movable) until you click outside the selection box, select another area, or select a different tool.

You can paste the contents of the Clipboard in as many places in the current drawing as you want.

**Note** You can also use the Cut and Paste commands to copy your drawing or parts of your drawing to other Windows applications. Your drawing may appear differently on the screen or after it is printed, depending upon the characteristics of the other application.

## Clear

The Clear command erases the selected area from the drawing window.

## Invert

The Invert command changes the appearance of the selected area: it turns black objects to white, and white objects to black.

**Note** The following editing commands require that you use the Selection Rectangle instead of the Selection Net to select the area you want to change.

## Trace Edges

The Trace Edges command outlines the edges of the selected patterns and objects. The patterns and objects themselves turn white.

## Flip Horizontal

The Flip Horizontal command flips the selected area from left to right, creating a mirror image of it.

## Flip Vertical

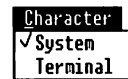
The Flip Vertical command flips the selected area from top to bottom, creating a mirror image of it.

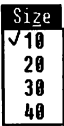
---

## The Character Menu

You use the Character menu commands to choose the text typeface. The list of commands in the Character menu varies according to the fonts installed on your system disk. The System and Terminal fonts are automatically installed for you, so they will always appear in the menu. System is the default font.

You can change the typeface of the text you have just typed until you click the mouse button again, select another tool, or perform any other Paint or Windows action.



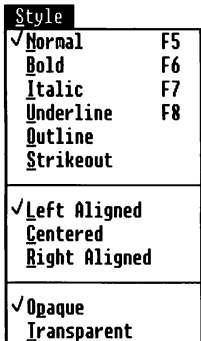


## The Size Menu

You use the Size menu commands to set the font size of a piece of text. The list of commands in the Size menu varies according to the sizes supported by the font you are using. The sizes supported by the System font are the default sizes, with 10 being the default setting.

You can change the size of the text you have just typed until you click the mouse button again, select another tool, or perform any other Paint or Windows action.

**Note** Font sizes vary depending on the display adapter you are using. Some of the sizes shown in the Size menu are grayed if they are not available for your display adapter in the font you are using. In this case, the text you type will be displayed in the next larger or smaller available font size.



## The Style Menu

You use the Style menu commands to modify the appearance of your text.

You can change the style of the text you have just typed until you click the mouse button again, select another tool, or perform any other Paint or Windows action.

Normal is the default style.

The following example illustrates the text styles that Paint supports:

Normal	<u>Underline</u>
<b>Bold</b>	Outline
<i>Italic</i>	<del>Strikeout</del>

More than one text style may be active at the same time. The following example shows text that was created using the Bold, Italic, and Underline text styles:

***Bold Italic Underline***

## Left Aligned

Left Aligned is the default setting. The Left Aligned command aligns lines of text using an invisible column as the left margin.

Click the text pointer to mark the location of the invisible column. Your text moves to the right as you type.

## Centered

The Centered command centers lines of text evenly on both sides of the invisible column.

Click the text pointer to mark the location of the invisible column. The insertion point moves to the right and your text moves to the left as you type.

## Right Aligned

The Right Aligned command aligns lines of text using an invisible column as the right margin.

Click the text pointer to mark the location of the invisible column. Your text moves to the left as you type.

The following example illustrates how each of these commands works:

Left Aligned

Centered

Right Aligned

## Opaque

Opaque is the default setting. The Opaque command provides a solid white background for text.

## Transparent

The Transparent command lets the current background pattern show through text.

Palette	
P <u>at</u> terns...	F3
L <u>in</u> e Widths...	F4
B <u>r</u> ush Shapes...	
T <u>o</u> ols...	

## The Palette Menu

You use the Palette menu commands to choose patterns, brush shapes, and line widths for lines and shapes. Use the Tools command to display the Tools palette when it is not entirely within the window.

To select an item from a palette, click the item.

To return to the drawing window without changing anything, click the item that is already selected.

**Note** To create a filled shape without a line around it, use the top line on the Line Widths palette together with a Filled Shape tool. This line appears as a dotted line on the palette, but is invisible in the drawing.

Options	
Z <u>o</u> om In	
Z <u>o</u> om Out	
<input checked="" type="checkbox"/> <u>N</u> o Grid	
<input type="checkbox"/> <u>F</u> ine Grid	
<input type="checkbox"/> <u>M</u> edium Grid	
<input type="checkbox"/> <u>C</u> oarse Grid	
E <u>d</u> it Pattern...	
<input checked="" type="checkbox"/> <u>F</u> or Printer	
<input type="checkbox"/> <u>F</u> or S <u>cr</u> een	
<input checked="" type="checkbox"/> <u>L</u> ow Resolution	
<input type="checkbox"/> <u>H</u> igh Resolution	

## The Options Menu

You use the Options menu commands to enlarge part of a drawing, to display the entire drawing in the drawing window, to control the alignment and placement of the objects in a drawing, and to design your own patterns for use in the current Paint session.

### Zoom In

The Zoom In command zooms in on your drawing at the point where you last released the mouse button. Zoom In also restores a zoomed-out drawing window to its normal scale.

When you zoom in on your drawing, a small rectangular box appears in the upper-left corner of the drawing window. This box shows a view of the area you are editing at normal scale. In the box, you can see the effects of turning pixels on and off.

You can also zoom in by double-clicking the Pencil tool in the Tools palette. Double-clicking the Pencil tool will also restore the drawing window to its normal scale.

## Zoom Out

The Zoom Out command displays the entire drawing, with the current drawing window outlined. Zoom Out also returns a zoomed-in drawing window to its normal scale.

You can also zoom out the drawing window by double-clicking the Scroll tool in the Tools palette. Double-clicking the Scroll tool will also restore the drawing window to its normal scale.

**Note** You cannot create new objects or edit an area in a zoomed-out drawing window.

## No Grid

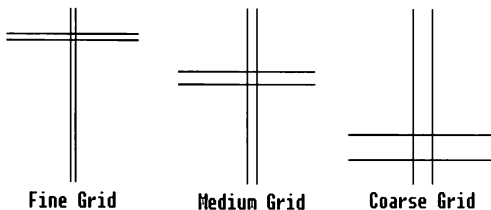
No Grid is the default setting. The No Grid command turns off an active grid.

## Fine Grid, Medium Grid, Coarse Grid

The Grid commands give you more control when you align objects, draw with the Pencil, or paint with the Brush.

These commands lay an invisible grid on the drawing window. Paint automatically places the objects you create or move along the grid lines closest to the pointer. The type of grid you choose determines the distance between the grid lines. If you choose the Fine Grid command, the lines are close together. If you choose the Medium Grid or Coarse Grid commands, the lines are farther apart.

The following example illustrates the differences in the distance between the grid lines in a fine grid, a medium grid, and a coarse grid.



## Edit Pattern

The Edit Pattern command allows you to design your own pattern.

After you choose this command, a dialog box appears, displaying a pattern of squares on the left and an enlarged view of the current pattern on the right. Click the squares on the left to design a new pattern.

You can use a pattern you design anytime during a single Paint session, but each time you start Paint, you will need to re-create the pattern if you want to use it again.

**Hint** You may want to make a sketch of the pattern as it appears in the left side of the dialog box. This will help you remember how you designed the pattern originally.

## For Printer, For Screen

These commands adjust the size of the drawing area to accommodate either the printer or the screen.

The For Screen command adjusts the drawing area so that it is the same size as your full screen. The For Printer command adjusts the drawing area so that it matches your printer's paper size.

If you plan to print your drawing, choose the For Printer command. If you don't want to print your drawing, choose the For Screen command. Once you set this option and begin drawing, you cannot change the setting unless you restart Paint or begin a new drawing using the New command. See the section called "Preparing to Draw" in Chapter 1, "Getting Started," for more information about setting these options.

## Low Resolution, High Resolution

These commands adjust the resolution of the drawing area to match the resolution setting of your printer. This allows you to create drawings with a large amount of detail.

If you want to create a detailed drawing, choose the High Resolution command. If you want to create a simple drawing or speed up the printing process, choose the Low Resolution command. Once you set this option and begin drawing, you cannot change the setting unless you restart Paint or begin a new drawing using the New command.

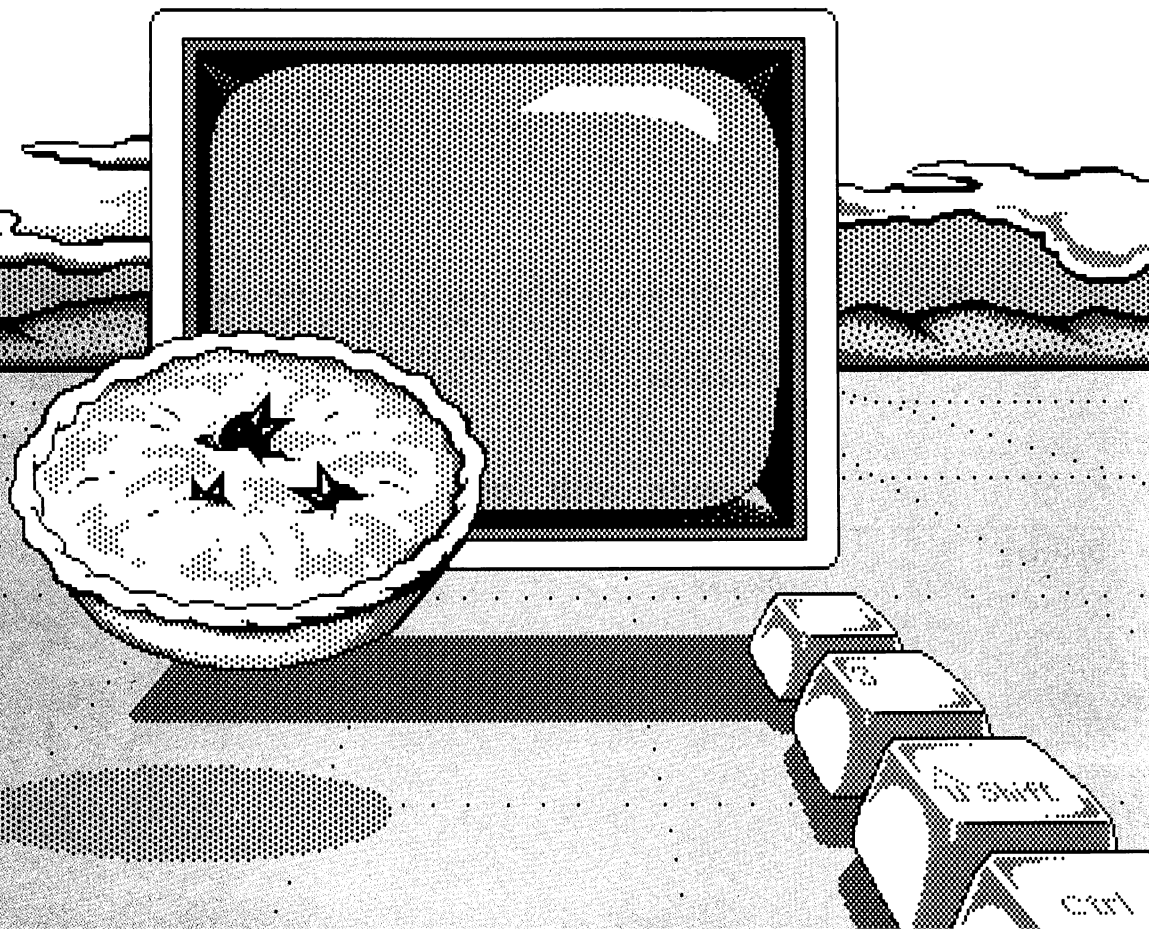
These commands only have an effect if you have set up a printer and chosen the For Printer command. They have no effect if the For Screen command is active.

## Appendix A Using Paint with the Keyboard

This appendix describes how you can use the keyboard to select tools, draw objects, scroll a drawing, edit a drawing area, and take shortcuts. It also explains how you can use the keyboard together with the mouse to enhance some of Paint's features.

You should already have learned how to use the keyboard to choose commands from menus. For more information on this topic, see the *Microsoft Windows User's Guide*.

If you don't have a mouse, use this Appendix as a keyboard reference while working with Paint.



---

## Performing Mouse Actions with the Keyboard

---

### Mouse equivalents

Three main mouse actions have direct counterparts on the keyboard. The following list describes what they are:

To	Press
Click	SPACEBAR
Double-click	ENTER
Move the pointer	A DIRECTION key

---

## Selecting Tools and Palette Items

---

### Selecting tools

Press the TAB key to move forward through the Tools palette and select a tool. The highlight moves from tool to tool in the palette — first from top to bottom, then from left to right. Press and hold down the SHIFT key, and press the TAB key to move backwards through the Tools palette.

**Note** You can press and hold down the SHIFT and CONTROL keys, and press the DIRECTION keys to select a tool. If you press the RIGHT or LEFT keys, the next tool to the right or left is selected. If you press the UP or DOWN keys, the tool directly above or below is selected.

---

### Selecting palette items

To select an item from a palette, choose the command for the palette you want from the Palette menu. Press the DIRECTION keys to move through the palette. Press the ENTER key or the SPACEBAR to select an item.

---

## Drawing with Tools

---

### Drawing

Once you select a tool, you can use the keyboard to draw with the tool.

## Drawing Lines and Shapes

Press and hold down the SPACEBAR, and press the DIRECTION keys to draw with the following tools:

Pencil

Line

Brush

Spray Paint

3-D

The shape tools

When you release the SPACEBAR, Paint draws the object.

## Erasing

Press and hold down the SPACEBAR, and press the DIRECTION keys to erase part of your drawing with the Eraser tool.

## Drawing Curves

Select the Curve tool. Press and hold down the SPACEBAR, and press a DIRECTION key to draw a line. Release the SPACEBAR. Move the pointer to one side of the line, and press the SPACEBAR to mark the peak of the curve. As long as you hold down the SPACEBAR, you can use the DIRECTION keys to change the shape of the curve. When you release the SPACEBAR, Paint draws the curve.

## Drawing Polygons

Select the Polygon tool. Use the DIRECTION keys to move the pointer to the place where you want the polygon to appear, and press and release the SPACEBAR to mark the first corner point. Use the DIRECTION keys and the SPACEBAR again to move to and mark each corner point. Paint connects the corners with straight lines. Press the ENTER key at the final corner to close the polygon.

## Using the Fill Tool

Select the Fill tool. Use the DIRECTION keys to move the pointer over the object you want to fill. Press the SPACEBAR to fill the object with the current pattern.

---

## Editing a Drawing

---

### Editing

#### Selecting an Area

Select the Selection Rectangle or Selection Net tool. Press and hold down the SPACEBAR, and use the DIRECTION keys to select the area you want to change.

#### Moving a Selected Area

Use the DIRECTION keys to move the pointer into the selection box or netted area. Press and hold down the SPACEBAR, and use the DIRECTION keys to move the selected area.

#### Copying and Moving a Selected Area

Use the DIRECTION keys to move the pointer into the selection box or netted area. Press and hold down the CONTROL key and the SPACEBAR, and use the DIRECTION keys to move a copy of the selected area.

#### Making Multiple Copies of a Selected Area

Use the DIRECTION keys to move the pointer into the selection box or netted area. Press and hold down the SHIFT key and the SPACEBAR, and use the DIRECTION keys to drag the selected area. Paint leaves multiple copies along the pointer path.

---

## Scrolling a Drawing

---

### Scrolling

Select the Scroll tool. Press and hold down the SPACEBAR, and use a DIRECTION key to scroll the screen.

You can scroll a zoomed-out drawing by pressing and holding down the SPACEBAR and pressing a DIRECTION key to move the outline of the drawing window. When you return to the regular drawing window, the outlined area of the drawing appears on the screen.

You can scroll the drawing area in a zoomed-in drawing window by pressing and holding down the SHIFT key and the SPACEBAR and pressing the DIRECTION keys. The Scroll pointer replaces the Pencil pointer while you are scrolling. Move the pointer to scroll the drawing. You can see the drawing area scroll in the small box in the upper-left corner of the drawing window. When you release the SPACEBAR, the scrolled part of the drawing appears in the drawing window.

## Taking Shortcuts

Whether you are using Paint with a mouse or with the keyboard, you can use the keyboard to take shortcuts.

### Using Shortcut Keys to Choose Commands

You can use shortcut keys to select a menu and choose a command in a single step. The shortcut keys described in the following list are listed next to the corresponding command in the Paint menus:

To choose	From the	Press
Undo	Edit menu	ALT + BACKSPACE
Cut	Edit menu	SHIFT + DELETE
Copy	Edit menu	CONTROL + INSERT
Paste	Edit menu	SHIFT + INSERT
Clear	Edit menu	DELETE
Patterns	Palette menu	F3
Line Widths	Palette menu	F4
Normal	Style menu	F5
Bold	Style menu	F6
Italic	Style menu	F7
Underline	Style menu	F8

---

### Choosing commands with shortcut keys

### Using the ENTER Key to Choose Commands

You can choose the Zoom In, Zoom Out, and Erase commands by selecting the appropriate tool and pressing the ENTER key.

---

### Choosing commands with the ENTER key

#### Zoom In

Select the Pencil tool and use the DIRECTION keys to move the pointer to the area where you want to zoom in. Press the SPACEBAR to mark the area. Press the ENTER key to zoom in for editing; press the ENTER key again to return to the regular drawing window.

#### Zoom Out

Select the Scroll tool and press the ENTER key to zoom out for a full view of the drawing; press the ENTER key again to return to the regular drawing window.

## **Erase**

Select the Eraser tool and press the **ENTER** key to erase the entire drawing window. The objects outside the drawing window will not be erased; if you want to erase them, you must first scroll your drawing so that they appear in the drawing window.

---

## **Using the Keyboard with the Mouse**

---

### **Combining keyboard and mouse actions**

You can use the **CONTROL** and **SHIFT** keys with the mouse to enhance some of Paint's functions.

### **Copying and Moving a Selected Area**

Press and hold down the **CONTROL** key and drag the selected area; Paint creates a copy of the selection, and the original remains in place.

### **Making Multiple Copies of a Selected Area**

Press and hold down the **SHIFT** key and drag the selected area; Paint leaves copies of the selection along the pointer path.

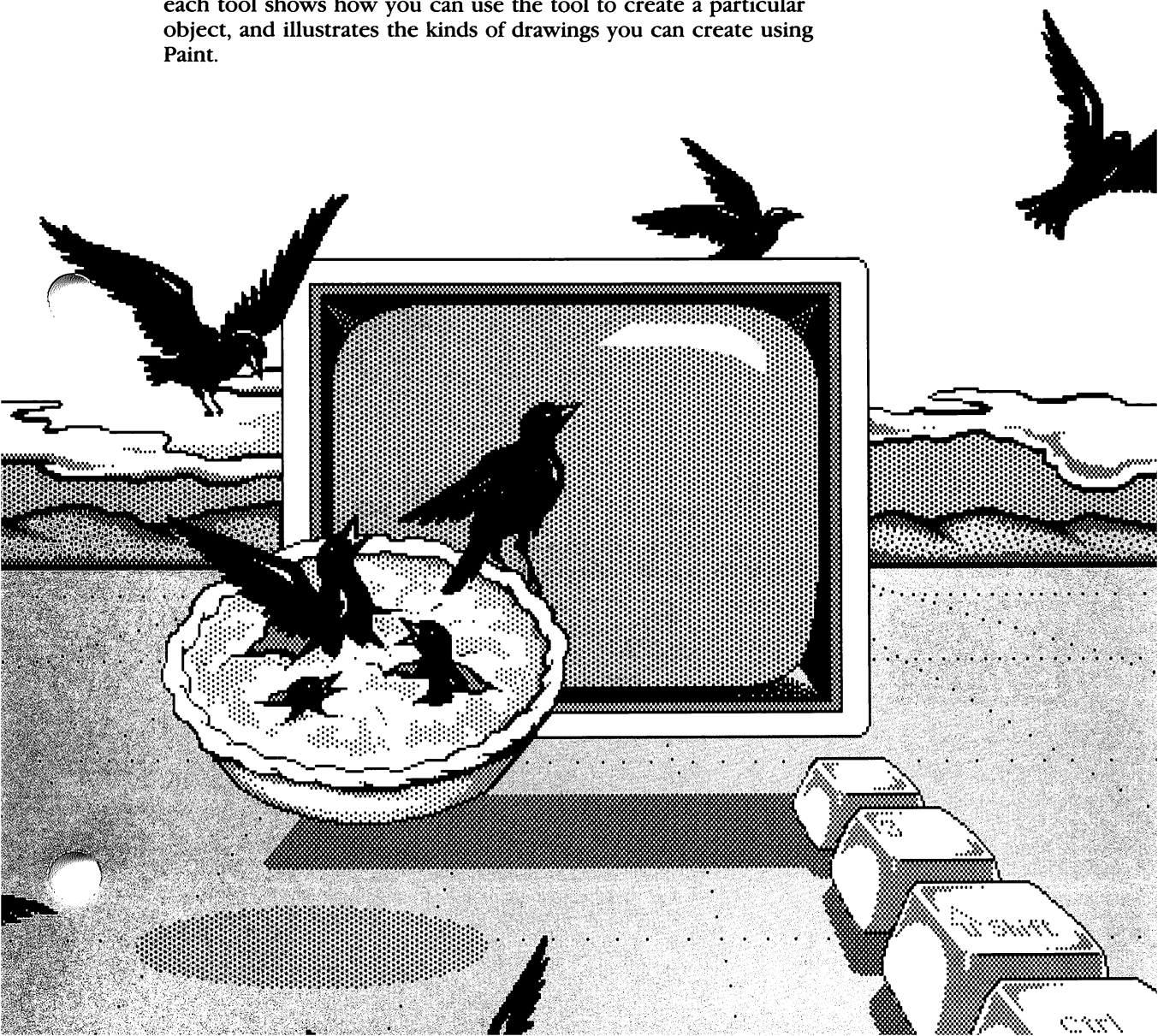
### **Scrolling a Zoomed-In Drawing Area**

Press and hold down the **SHIFT** key in the zoomed-in drawing window and drag the pointer. The small box in the upper-left corner of the drawing window displays the effects of your scrolling. When you release the mouse button, the scrolled drawing area appears in the zoomed-in drawing window.

## Appendix B

# Tools Description

This appendix describes what each tool does. The example by each tool shows how you can use the tool to create a particular object, and illustrates the kinds of drawings you can create using Paint.



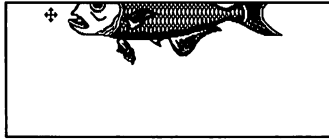
 **Selection Rectangle**

Defines a rectangular area for editing.



 **Scroll**

Moves the drawing around in the drawing window.



 **Line**

Draws a straight line.



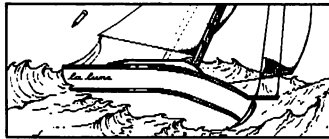
 **Selection Net**

Defines a nonrectangular area for limited editing.



 **Pencil**

Draws a thin line.



 **Brush**

Paints with the current pattern.



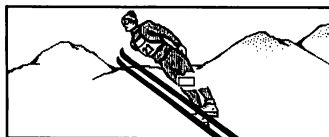
 **Text**

Enters text in the chosen font, size, and style.



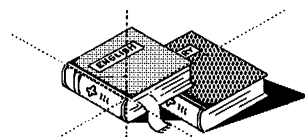
 **Eraser**

Erases the part of a drawing that the pointer passes over.



 **3-D**

Displays axes to follow when creating 3-D drawings.





**Fill**

Fills an enclosed area with the current pattern.



**Rectangle**

Draws a box with square corners.



**Oval**

Draws an oval.



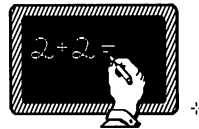
**Curve**

Creates a curved line.



**Rounded Rectangle**

Draws a box with rounded corners.



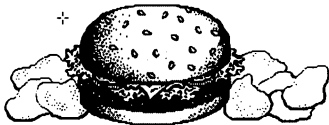
**Freehand Shape**

Draws an irregular shape and closes it with a straight line.



**Spray Paint**

Sprays paint with the current pattern.



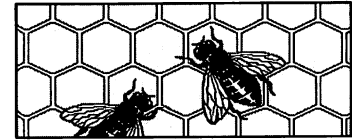
**Circle**

Draws a circle.



**Polygon**

Draws a polygon.



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**Write**

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# Microsoft® Windows Write User's Guide

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**Version 2.0**


Microsoft Corporation

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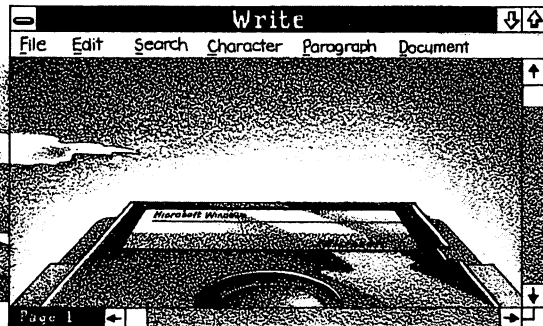
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# Introduction

Microsoft® Windows Write is a writing program for Microsoft Windows. With Write, you can write, edit, and print all kinds of documents for business and personal use. Because it runs in the Windows environment, Write gives you some unique advantages, such as pasting information or graphics from other applications into your Write documents to make your documents more informative and eye-catching.

Write uses the familiar conventions of the Windows environment: command menus, dialog boxes, icons, and the Windows Control menu. You will find that using Write is a natural extension of using Windows. Write makes it easy to accomplish all your day-to-day writing tasks.



---

## About This Guide

This manual describes how to use Write to create, format, save, and print documents. It gives you a step-by-step procedure for every task you can perform with Write.

Throughout the manual, you will see sections called "Now Try This." If you want, you can do the exercises in these sections to practice your skills before applying them to your own documents.

The manual is divided into six chapters:

- Chapter 1, "The Basics," introduces you to the Write window and tells you how to open and save documents and how to end a Write session.
- Chapter 2, "Editing a Document," describes how to enter text, scroll through a document, and select text. It also tells you how to insert, delete, move, copy, and find text.
- Chapter 3, "Formatting Your Work," describes how to use Write's formatting abilities to give your documents the appearance you want.
- Chapter 4, "Pasting from Other Applications," describes how to copy text or graphics from other Windows applications into Write documents.
- Chapter 5, "Printing a Document," explains how to print and paginate your documents and how to change printers.
- Chapter 6, "Command Summary," gives a brief description of the Write commands in the order in which they appear on the menus.

An appendix, "Fonts and the Active Printer," describes how Write uses fonts with different types of printers.

<b>If you want to</b>	<b>See</b>
Create or open a document	“Working With Documents” in Chapter 1
Start typing text	“Typing Text” in Chapter 2
Edit a document	Chapter 2, “Editing a Document”
Change the appearance of your document	Chapter 3, “Formatting Your Work”
Paste information from another application into a Write document	Chapter 4, “Pasting from Other Applications”
Edit a Microsoft Word document in Write	“Using Windows Write with Microsoft Word” in Chapter 4
Save a document	“Saving a Document” in Chapter 1
Print a document	Chapter 5, “Printing a Document”
Close the Write window	“Ending a Write Session” in Chapter 1
Learn more about Write commands	Chapter 6, “Command Summary”

You can use Write with or without a mouse. Where appropriate, this manual describes a procedure with the keyboard and with the mouse, so you can learn either or both techniques.

This manual assumes that you already know how to use your Microsoft Windows system, and that you have read the *Microsoft Windows User's Guide*.

---

## Getting Started

Windows Write includes the following components:

- Windows Write disk
- *Microsoft Windows Write User's Guide*

To run Windows Write, you need Microsoft Windows installed and running on your computer.

For more information on what you need to run Microsoft Windows, see the *Microsoft Windows User's Guide*.

## Running Write

---

### Running Write

To run Write, follow these steps:

- 1 Start Microsoft Windows.
- 2 If you're running a floppy disk system, insert the Write disk.
- 3 Run the WRITE.EXE program from MS-DOS® Executive.

Store the documents you create with Write on the Write disk. When you have about 50K bytes remaining on your Write disk, you should start a new disk. To do this, copy WRITE.EXE to a new disk, and use that disk for running Write and storing documents.

To copy WRITE.EXE to a new disk, follow these steps:

- 1 Select WRITE.EXE on MS-DOS Executive.
- 2 Select the File menu and choose the Copy command.
- 3 Place a blank, formatted disk in the drive.
- 4 Choose the OK button.

Windows copies WRITE.EXE to the new disk.

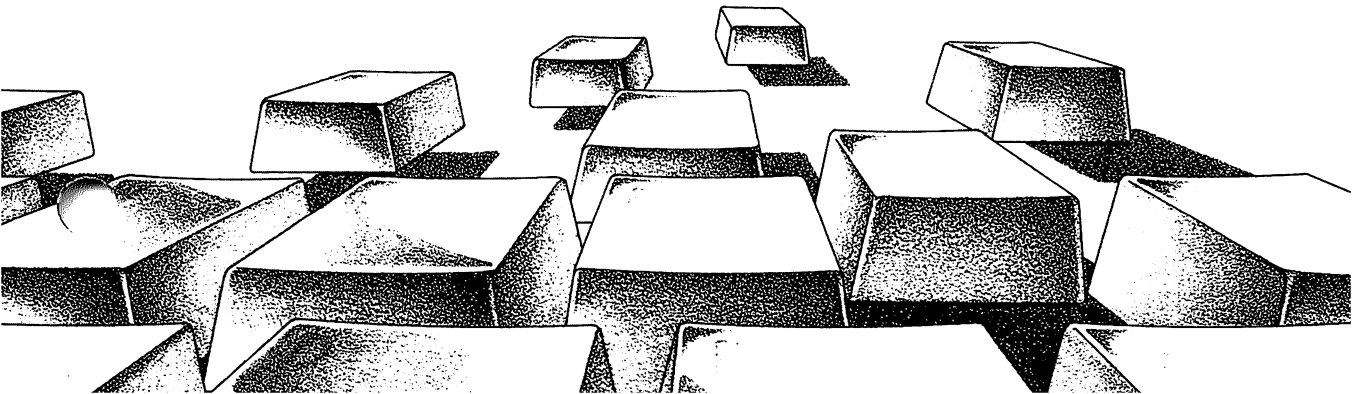
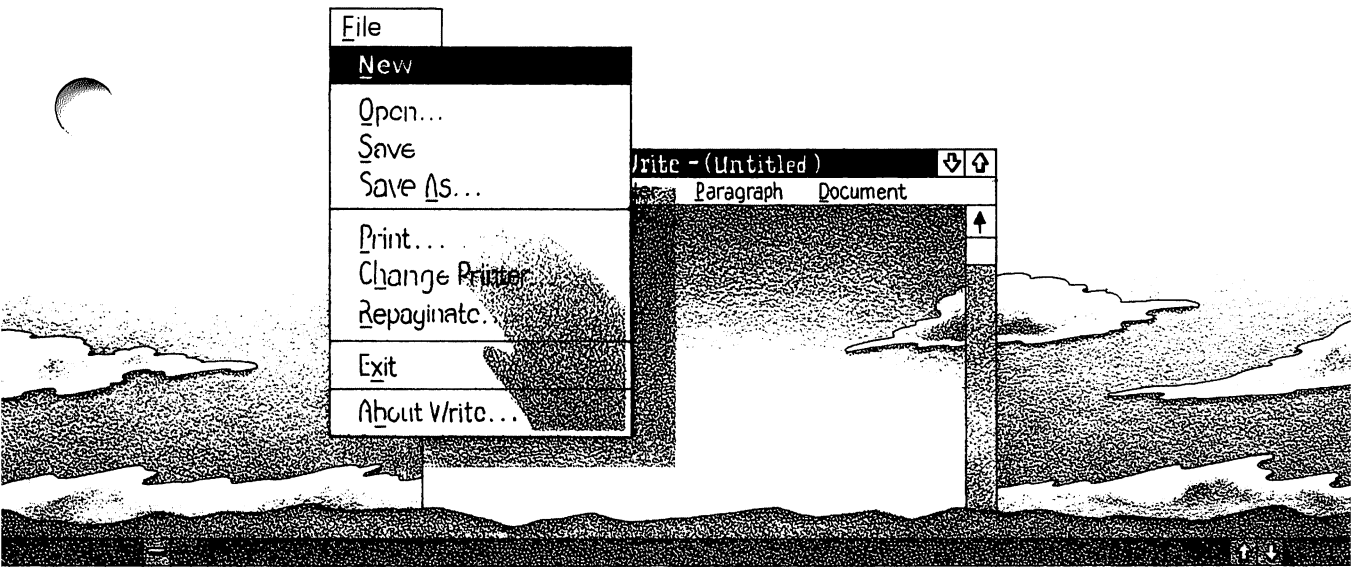
**Warning** Never remove the Write disk while you are in the process of editing a document with Write. There are only two times when you can remove the Write disk without risk of losing your work:

- When the Save As dialog box is on the screen
- When the Open dialog box is on the screen

At these times you can change disks if you want to save your document on a different disk or open a document that is on a different disk. Otherwise, do not remove the Write disk during an editing session.

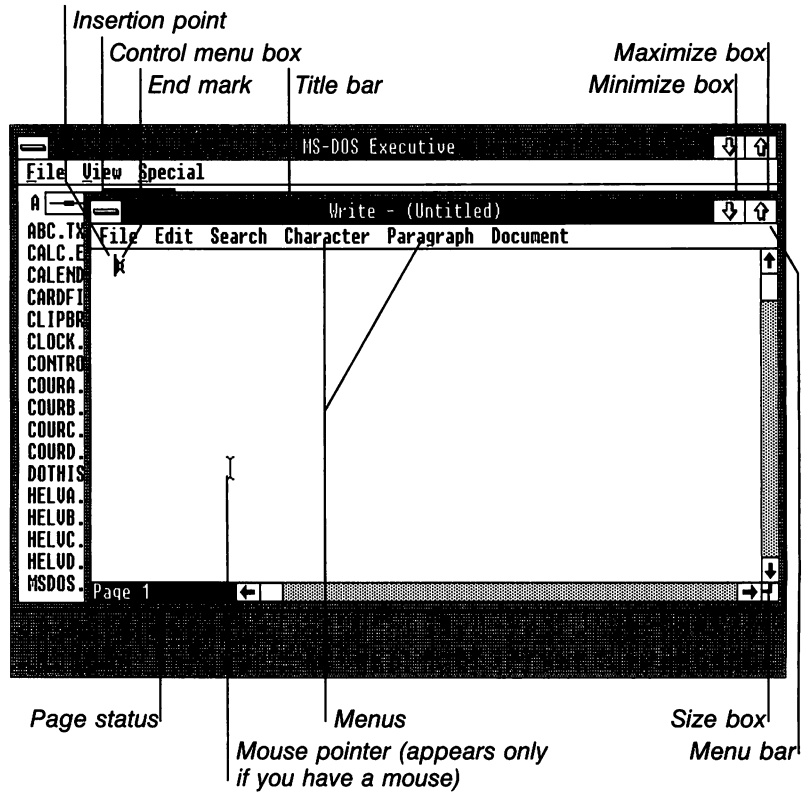
# 1 The Basics

This chapter introduces you to the Microsoft Windows Write window. It also describes how to open a new or existing document, how to save a document on the disk, and how to close the Write window.



## The Write Window

When you start Write, the screen looks like this:



Note that the Write window automatically starts on top of MS-DOS Executive. You will probably want to adjust the placement of these windows in order to take full advantage of the screen area, and create an organization that suits your needs. You can adjust this screen image in three ways:

- By turning MS-DOS Executive into an icon
- By enlarging the Write window
- By moving or sizing the Write Window

To learn how to perform these procedures, see the *Microsoft Windows User's Guide*.

The rest of the Write windows that appear in this guide have been enlarged with the Maximize command.

---

## Working with Documents

You can begin working with a document by selecting the File menu and choosing the New command or Open command. The New command creates a new untitled document. The Open command opens a document that is already stored on your disk.

You can also open a new or existing document from MS-DOS Executive.

### Creating a New Document

When you run WRITE.EXE from MS-DOS Executive, Write begins with a new untitled document. While you are using Write, you can create a new document with the New command.

To create a new document from Write, use this procedure:

- Select the File menu and choose the New command.

---

**Creating a new document**

## Opening an Existing Document

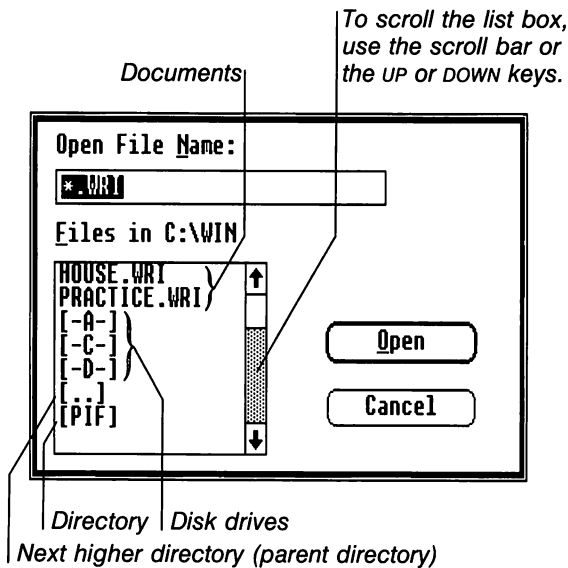
With the Open command, you can open a document you have saved. You can also open different disk drives and directories to gain access to documents stored in them.

### Opening an existing document

To open an existing document from Write, follow these steps:

- 1 Select the File menu and choose the Open command.

You will see this dialog box:



- 2 Select the name of the document you want to open.
- 3 Choose the Open button to complete the command.  
Or, with the mouse, double-click the name of the document you want to open.

If you open a document name, Write opens the document.

If you open a disk drive or directory, Write makes it the default disk drive or directory and displays the contents in the list box. Select again and choose the Open button. This way, you gain access to documents that are not on the active disk drive or in the active directory.

## Opening a Document from MS-DOS Executive

You can also run Write and open a document at the same time from MS-DOS Executive. The document must be stored in the same directory as WRITE.EXE, unless WRITE.EXE is listed in the PATH setting in your DOS AUTOEXEC.BAT file. For more information on placing entries in your AUTOEXEC.BAT file, refer to your DOS manual.

To open an existing document from the MS-DOS Executive, use this procedure:

- Select a Write document name and press the ENTER key. Or, double-click the document name with the mouse.

## Opening Documents That Are Not in Write Format

When you try to open a document that was not created in Microsoft Write format, you will see a dialog box that asks if you want to convert the document to Write format (the Windows ANSI character set). Windows uses an 8-bit ANSI character set. This allows you to represent up to 256 characters (0–255). If the document contains characters in the 128–255 range, those characters will probably not be displayed correctly on Windows unless you convert the document to Write format.

Typical documents not in Write format would include the following:

- Microsoft Word documents
- Other non-Windows documents
- Write documents saved as text only, or other Windows documents

There are a couple of things to keep in mind when you convert documents:

- Make sure you back up your work before doing a conversion.
- Do not convert any binary files. In these files, characters above 127 may be related to the program that created the file and therefore cannot be converted.

The following sections describe how to open each type of document.

---

### Opening a document from MS-DOS Executive

---

### Opening non-Write documents

---

### Opening Microsoft Word documents

#### Opening a Microsoft Word Document

When you try to open a document that was formatted using Microsoft Word, you will notice that the No Conversion option in the dialog box is grayed. Since Word documents do not use the ANSI character set, they must be converted.

If you have any special graphic characters in your Word-formatted document, they will not be converted. These special graphic characters do not have an equivalent in the ANSI character set. To avoid losing any data, make a backup of your Word-formatted document before converting it.

For Word documents that were saved as text only, select the Convert option. Your document will be converted to the Windows ANSI character set.

---

### Opening other non-Windows documents

#### Opening Any Other Non-Windows Document

For all other documents that were not created using Windows, select the Convert option. Your document will be converted to the Windows ANSI character set.

---

### Opening documents in ANSI format

#### Opening a Write Document Saved as Text Only or Other Windows Documents

Documents created by a Windows application are in ANSI format. If you convert, your document will not be displayed correctly. If your document was created using Write and saved as text only, select No Conversion from the dialog box. Follow this same procedure for documents created by any other Windows application.

**Note** If you make a mistake in selecting the Convert/No Conversion option, simply quit Write without saving the file. Your file will be restored to its original status.

#### Opening More Than One Write Window

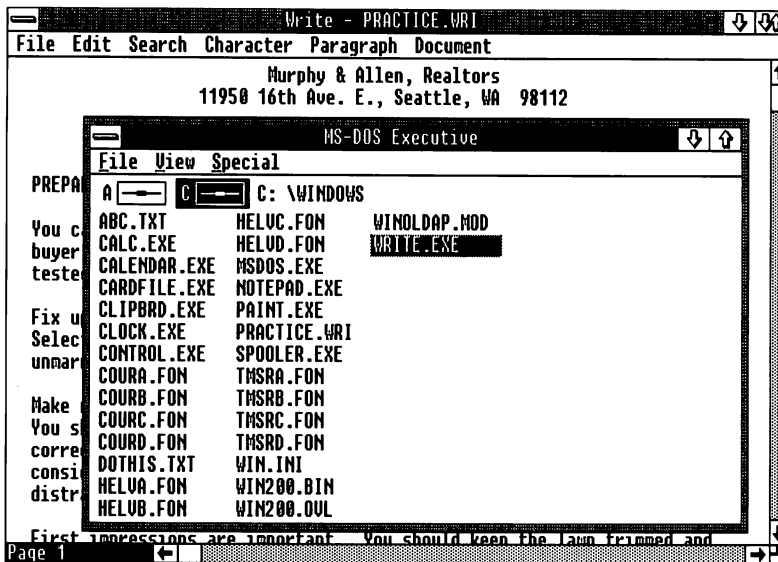
You can have more than one Write window open at a time.

To open an additional Write window, follow these steps:

- 1 Begin with a Write window open on your screen.
- 2 Expand MS-DOS Executive to share the screen with the Write window.
- 3 Select and run WRITE.EXE.

---

### Opening multiple Write windows



- 4 Open a document in the new Write window.

**Note** If you have the same document open in two different windows, you will see your changes only in the window you are working in. The document will not be updated in the other window unless you close and reopen it.

---

## Saving a Document

When you save a document, Write stores the latest version of the document on the disk.

You will usually want to save your Write document before you close the Write window or open another document. It is also a good idea to save often while you are working with Write. Saving frequently helps Write perform faster, and it minimizes lost work if there is a power interruption.

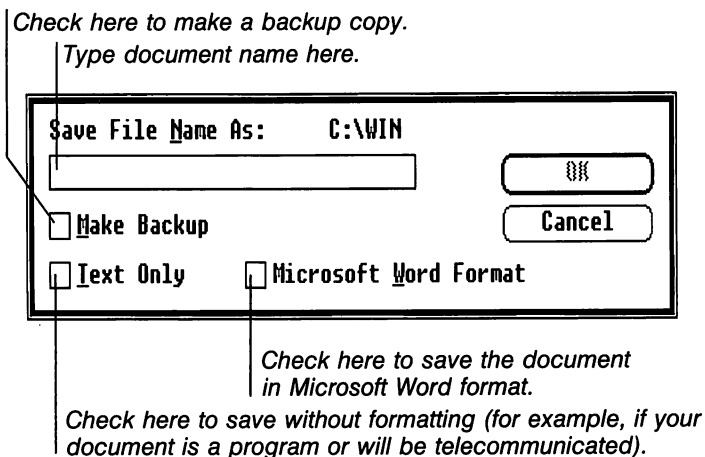
There are two Write commands that you can use to save a document: Save As and Save. You use the Save As command if you want to save the changes and modify the status of the document in some way (for example, if you wanted to name or rename the document). You use the Save command to simply save the changes you have made to the document on screen.

## The Save As Command

### Using the Save As command

To save a document for the first time, or modify its status, use the Save As command, as follows:

- 1 Select the File menu and choose the Save As command.  
The Save As dialog box appears.



- 2 Type the name you want the document to have.  
If the document already has a name, Write proposes that name. See "Document Names," later in this section, for more information.
- 3 Choose the OK button to carry out the command, or press the ENTER key.

While saving, Write briefly displays the number of characters contained in the document. The number appears in the lower-left corner of the window, where the page status usually appears. After saving, Write returns to the document so you can resume working.

**Note** If a file of the same name already exists in the directory, Write asks if you want to replace the existing file. Choose the Yes button only if you want to delete that file and replace it with the document you are saving. Otherwise, choose the No button and type a different document name.



## The Save Command

To save a document as it appears on screen, use this procedure:

- Select the File menu and choose the Save command.

Windows saves the file to disk automatically, without displaying a dialog box. If the document does not have a name, you will see the Save As dialog box. Follow the steps described in the Save As command.

## Document Names

Keep in mind the following guidelines when you create a name for a Write document:

- The characters in a document name can be letters or numbers. You can enter the letters in upper or lower case, but Write always displays them in upper case.
- A name can have up to eight characters, plus an extension. An extension always begins with a period and can have up to three characters.
- Write automatically adds the extension .WRI for you. This extension is a good way to identify all your Write documents. If you add your own extension when you save the document, or if you just end the name with a period, Write does not add .WRI.
- If you select the Microsoft Word Format option and don't type an extension, Write automatically adds the extension .DOC. If you add your own extension when you save the document, or if you end the filename with a period, Write does not add .DOC.



## Saving More Than One Version

If you change a document, but want to keep the old version on the disk as well as the new version, you can use the Save As command to give the new version a slightly different name. For example, the new version of RESUME.WRI could be named RESUME2.WRI.

To save more than one version of a document, follow these steps:

- Select the File menu and choose the Save As command.

---

### Using the Save command

---

### Creating document names

---

### Saving additional versions



- 2 Type the name for the new version of the document in the text box.
- 3 Choose the OK button to carry out the command.

---

## Saving backup copies

### Saving a Backup Copy

When you save a file in Write, the Make Backup check box is selected by default. This ensures that you make a backup copy each time you work with an existing document. If you converted the document to Write format when you opened it, the backup will be the original (unconverted) document.

**Note** When you save a Write document as a Word document, any pictures will disappear.

---

## Making a backup of a Write document

### Backing Up a Write Document

When making a backup of an existing Write document (extension *.WRI*), you can choose to do any of the following:

- Save the document as a Windows Write document. The backup file has the extension *.BKP*.
- Save the document as a Microsoft Word-formatted document. The backup file has the extension *.BKP*.
- Save the document as a Microsoft Word-formatted document, but delete the extension proposed by the Save dialog box (*.WRI*). The document will be saved with the extension *.DOC*. The backup file will have the extension *.WRI*. The backup is the original Write-formatted document.

---

## Making a backup of a Microsoft Word document

### Backing Up a Microsoft Word Document

When making a backup of an existing Microsoft Word document (extension *.DOC*), you can do one of the following. (Since it is a Microsoft Word document, you can assume you converted it to the Write ANSI format when you opened it.)

- Save the document as a Microsoft Word-formatted document. The backup file will have the extension *.BAK*.
- Save the document as a Windows Write document. The backup file will have the extension *.BAK*.
- Save the document as a Windows Write-formatted document, but delete the extension proposed by the Save dialog box (*.DOC*). The document will be saved with the extension *.WRI*. The backup file will have the extension *.DOC*. The backup is the original Microsoft Word-formatted document.

## Saving in Different Formats

You have four formatting choices when saving a Write document:

- Save the document as a Write-formatted document.  
Choose the Save button or press the ENTER key.
- Save the document as a Microsoft Word-formatted document.  
Select the Microsoft Word Format check box, then choose the Save button or press the ENTER key. The document will be saved as Microsoft Word-formatted text.

**Note** When you save a Write document as a Word document, any pictures will disappear.

- Save the document without formatting (as a Windows ANSI text file).  
Select the Text Only check box, then choose the Save button or press the ENTER key.
- Save the document as a Microsoft Word text file (non-formatted).  
Select both the Text Only and Microsoft Word Format check boxes, then choose the Save button or press the ENTER key.  
Your document will not be saved in the Windows ANSI format.

## Saving to a Different Disk Drive

Normally, Write saves documents to the active disk drive, which is the drive containing WRITE.EXE. If you have a hard disk, you can save to a different disk drive by preceding the document name with the drive letter and a colon.

**Note** If you have a two-drive floppy disk system, do not save to a different disk. You must always save your documents on the Write disk. If you have a hard disk system you may save to a disk in drive A or B.

---

## Saving a Write document in different formats

---

### Saving to a different disk drive

To save to a different disk, follow these steps:

- 1 Select the File menu and choose the Save As command.
- 2 Type the name of the document preceded by a letter and colon for the drive you want to save to.  
For example, type *b:resume.wri* to save RESUME.WRI on the disk in drive B.
- 3 Choose the OK button to carry out the command.

### Saving to a Subdirectory

Normally, Write saves documents to the active directory. You can save a document to a subdirectory by preceding the document name with a subdirectory name and a backslash.

To save to a subdirectory, follow these steps:

- 1 Select the File menu and choose the Save As command.
- 2 Type the subdirectory name, a backslash, and the document name.  
For example, type *jobs\resume.wri* to save the document RESUME.WRI in the subdirectory JOBS. JOBS must be a subdirectory in the active directory.
- 3 Choose the OK button to carry out the command.

The subdirectory you specify must already have been created with MS-DOS. Write will not create the subdirectory for you.

---

## Ending a Write Session

When you are finished using Write, close the Write window.

To close the Write window, use this procedure:

- 1 Choose Exit from the File menu.  
Or, double-click the Window menu box with the mouse.

If you have unsaved changes in the document, Write asks if you want to save them before closing.

If you end the Windows session without closing the Write window, Windows closes it for you. If you have unsaved changes in a Write document, Windows asks if you want to save them before ending the session.

---

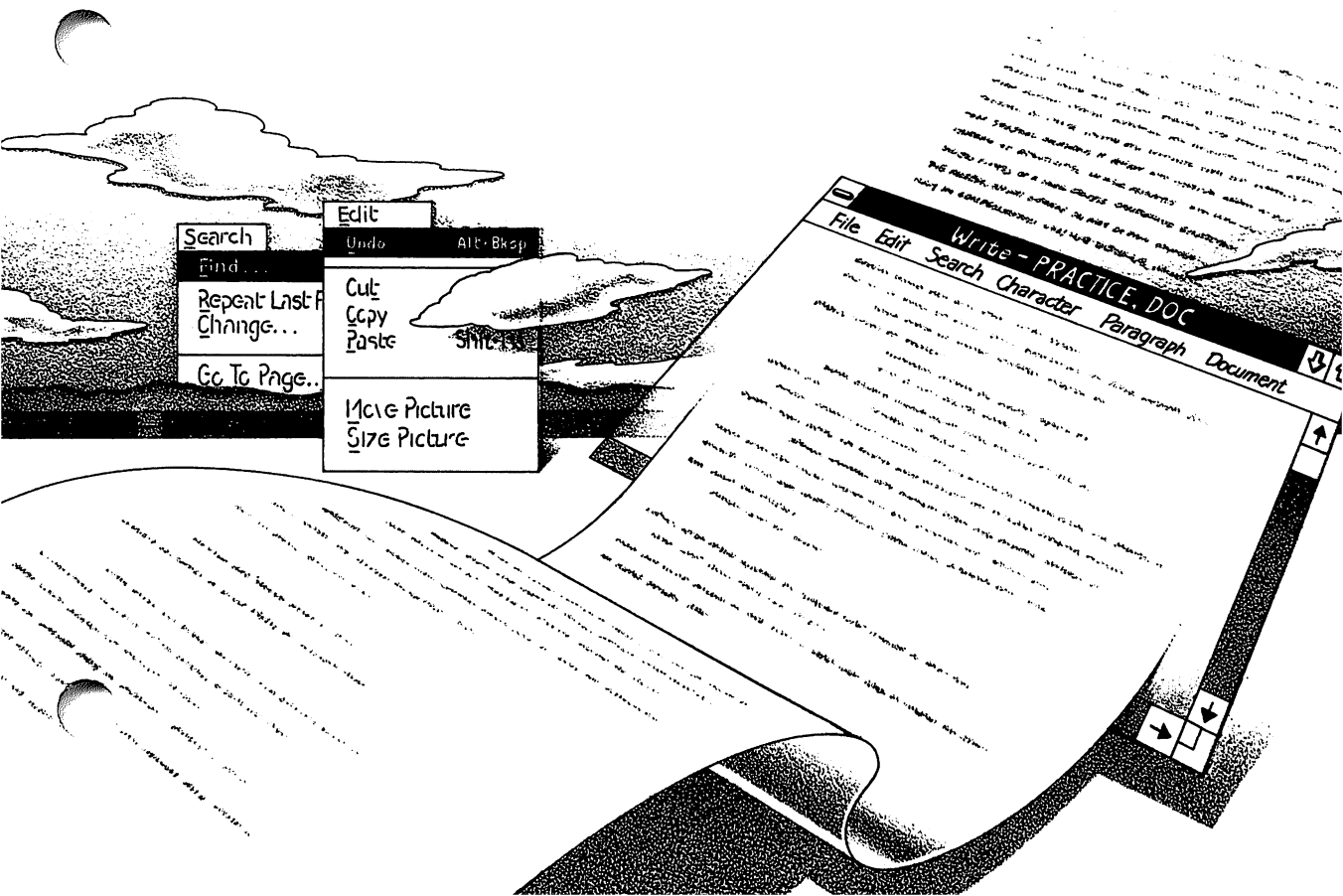
### Saving to a subdirectory

---

### Closing the Write window

## 2 Editing a Document

This chapter tells you how to type and edit text with Microsoft Windows Write. Editing techniques include deleting, inserting, moving, and finding text. You can practice each technique by working through the sections called "Now Try This."



## Typing text into a document

## Typing Text

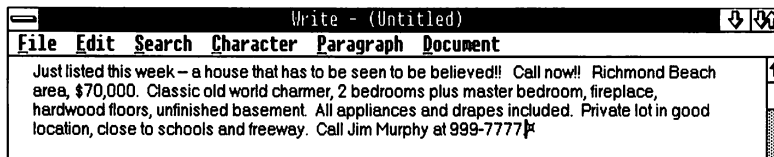
To type text with Write, start the program, then start typing. There are several things to keep in mind:

- As you type, text appears to the left of the blinking insertion point.
- If you make a typing mistake, press the BACKSPACE key. It erases characters as it backs over them.
- Press the ENTER key only when you want to begin a new paragraph, leave some blank lines, or begin a new line before you reach the right margin.

You do not need to press the ENTER key when you reach the end of each line because Write automatically starts the next line for you. This is called wordwrap. Each time you reach the right margin, the insertion point and the word you are typing automatically move to the next line.

### Now Try This

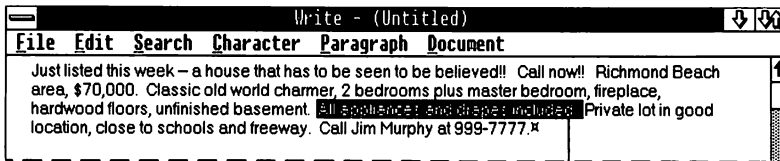
- 1 Start Write as described in the Introduction.
- 2 Type the following paragraph. Do not press the ENTER key as you type. To erase typing mistakes, press the BACKSPACE key.



The text on your screen may not look exactly like the text shown here. This is because Write displays text in different fonts, depending on the active printer. For more information, see the Appendix, "Fonts and the Active Printer."

## Scrolling and Selecting Text

Scrolling is the process of moving the document text through the window. Selecting is the process of highlighting text on the screen. You want to be able to scroll efficiently so you can go where you want in the document. You want to be able to select text easily because many commands and actions with Write require you to first select text.



*Selected text*

The following sections describe how to move the insertion point, scroll a document, and select text with the keyboard.

### Moving the Insertion Point

To move	Press
Left, right, up, or down	DIRECTION key: LEFT, RIGHT, UP, or DOWN
To the next or previous word	CONTROL+RIGHT or CONTROL+LEFT
To the beginning or the end of the line	HOME or END
To the next or previous sentence	GOTO+RIGHT or GOTO+LEFT (The GOTO key is the 5 on the keypad.)
To the next or previous paragraph	GOTO+DOWN or GOTO+UP (The GOTO key is the 5 on the keypad.)
To the top or bottom of the window	CONTROL+PAGE UP or CONTROL+PAGE DOWN

### Moving the insertion point

To move continuously, press and hold down the key or key combination. The document scrolls as necessary.

## Scrolling

To scroll	Press
Down or up one window	PAGE DOWN or PAGE UP
To the beginning or end of the document	CONTROL+HOME or CONTROL+END
To the next or previous page	GOTO+PAGE DOWN or GOTO+PAGE UP (The GOTO key is the 5 on the keypad.)

To scroll continuously, press and hold down the key or key combination.

For more information on printed pages, see Chapter 5, "Printing a Document."

## Selecting Text

To select text, hold down the SHIFT key while holding down any key combination that scrolls or moves the insertion point. The SHIFT key indicates that you want to highlight the text as you move over it.

To select	Press
Characters	SHIFT+LEFT or SHIFT+RIGHT
Words	SHIFT+CONTROL+LEFT or SHIFT+CONTROL+RIGHT
Lines	SHIFT+UP or SHIFT+DOWN

## Selecting text

## Now Try This

Practice moving the insertion point, scrolling, and selecting text in the real estate listing you typed.

- Press and hold down a DIRECTION key to move the insertion point continuously.
- Press the HOME or END key to move the insertion point to the beginning or end of a line.
- Press GOTO+LEFT to move to the previous sentence, and press GOTO+RIGHT to move to the next sentence.
- Press CONTROL+HOME or CONTROL+END to move the insertion point to the beginning or end of the document.

- Press PAGE DOWN to scroll down to the next window, and press PAGE UP to scroll back up.
- Press and hold down the SHIFT + DIRECTION keys to select some text.

The following sections describe how to move the insertion point, scroll a document, and select text with the mouse.

## Scrolling and selecting text



### Moving the Insertion Point

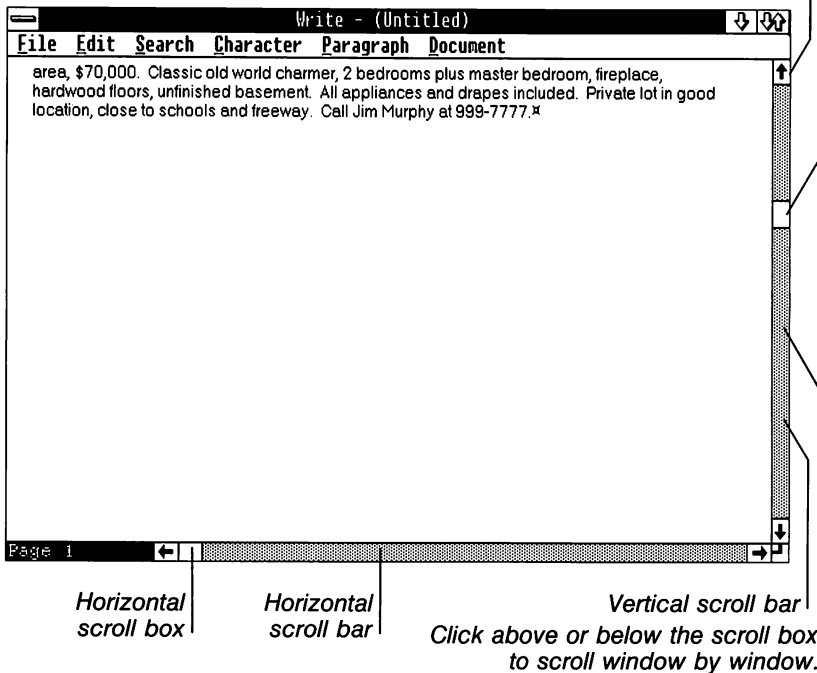
To move the insertion point to a new position on the screen, use the following procedure:

- ▣ Position the mouse pointer and click the mouse button.

### Scrolling

To scroll with the mouse, use the scroll bars on the bottom and right side of the Write window.

*Vertical scroll box. Drag the scroll box to go to an approximate place in the document. Click an arrow to scroll line by line. To scroll continuously, point to an arrow and hold down the mouse button.*

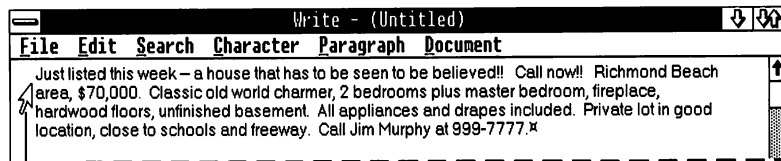


## Selecting Text

To select	Do this
Any text	Point to where you want to begin selecting text and press the mouse button. Drag over the text you want to select. Release the mouse button.
Words	Point to a word and double-click to select it. Hold the mouse button down after the second click and drag to extend the selection a word at a time.
Between points	Point to the starting place for the selection and click. Move the insertion point to a stopping place, hold down the SHIFT key, and click.

## Selecting with the Selection Bar

The far left edge of the window is called the selection bar. In the selection bar, the mouse pointer changes to an arrow that slants to the right. The selection bar provides some additional options for selecting text.



*Mouse pointer in selection bar*

To select	Do this
By the line	Move to the selection bar and point to a line. Click to select the line. Drag to select more than one line.
By the paragraph	Move to the selection bar and point to a paragraph. Double-click to select the paragraph. Hold the mouse button down after the second click and drag to extend the selection a paragraph at a time.

## Using the selection bar

To select	Do this
Between points	Use the selection bar to select a line or paragraph. Move to another line or paragraph on the selection bar, press the SHIFT key, and click. Write selects all lines or paragraphs between the two points.
The entire document	Move to the selection bar, press the CONTROL key, and click.

### Now Try This

Practice moving the insertion point, scrolling, and selecting text with the mouse in the real estate listing you typed.

- Position the mouse pointer anywhere in the document and click the mouse button to move the insertion point there.
- Click below the scroll box on the vertical scroll bar to scroll down to the next window, and click above the scroll box to scroll back up.
- Position the mouse pointer anywhere in the document and drag over some text to select it.
- Position the mouse pointer in the selection bar and drag to select some lines.

### Going to a Specific Page

You can also scroll to a specific page number with the Go To Page command. The Go To Page command only works when you have divided the document into pages. You divide a document into pages by printing it or by choosing the Repaginate command from the File menu. For more information on paginating, see Chapter 5, "Printing a Document."

To go to a specific page, follow these steps:

- 1 Select the Search menu and choose the Go To Page command, or press the F4 key.

You will see this dialog box:

Page Number:

OK Cancel

---

**Going to a specific page**

- 2 Type the page number that you want to go to.
- 3 Choose the OK button to carry out the command.

---

## Deleting Text

There are four ways to delete text with Windows Write:

- With the BACKSPACE key
- With the DELETE key
- With the Cut command
- By typing over text you have selected

---

### Deleting text

To delete	Do ONE of these
One character	Place the insertion point to the right of the character and press the BACKSPACE key. Place the insertion point to the left of the character and press DELETE.
More than one character	Select the text, then choose Cut or press SHIFT+DELETE. Select the text, then start typing. The selected text is deleted and the text you type is inserted in its place.

When you delete a selection with the Cut command or with SHIFT+DELETE, you remove the text from the document and put it on Clipboard.

## Using Clipboard

---

### Using Clipboard

Clipboard holds information that you delete or copy from applications running with Windows. While text is on Clipboard, you can paste it elsewhere on your Write document. You can also paste the contents of Clipboard onto another Write document or onto another Windows application.

When you put information on Clipboard, it stays there until you choose Cut or Copy again. Pasting the information from Clipboard onto a document or other application does not remove the contents of Clipboard. You can also use Clipboard to move or copy

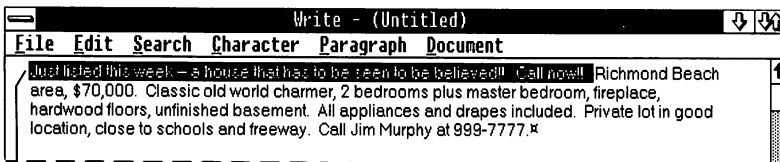
graphics and text into your Write document from other Windows applications. For more information, see Chapter 4, "Pasting from Other Applications." For more information on pasting text from Clipboard, see "Inserting Text" and "Moving and Copying Text" later in this chapter.

If you wish, you can expand Clipboard to see its contents. To do so, run CLIPBRD.EXE from MS-DOS Executive. For more information about Clipboard, see the *Microsoft Windows User's Guide*.

### Now Try This

Delete sentences from the real estate listing by following these steps:

- 1 Select the first two sentences in the paragraph, as shown.
- 2 Select the Edit menu and choose the Cut command, or press the DELETE key.



Choose Cut to delete the selected text, or press the DELETE key.

---

## Inserting Text

There are two ways that you can insert text in your document:

- By typing the text
- By inserting text from Clipboard

To insert text by typing, follow these steps:

- 1 Move the insertion point to where you want to insert the text.
- 2 Type the text.

The text to the right of the insertion point moves over as you type the new text.

---

### Inserting text by typing

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## Inserting text from Clipboard

To insert text from Clipboard, follow these steps:

- 1 Move the insertion point to where you want to insert the text.
- 2 Select the Edit menu and choose the Paste command, or press the INSERT key.

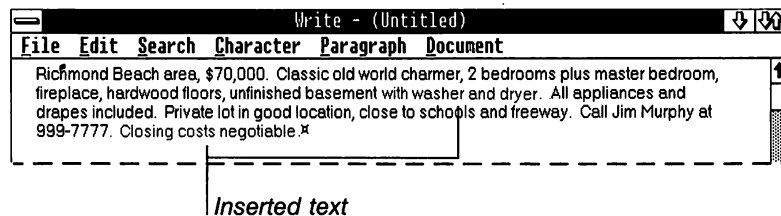
For more information about Clipboard, see the sections "Deleting Text" and "Moving and Copying Text" in this chapter.

For information on inserting graphics into your document, see Chapter 4, "Pasting from Other Applications."

### Now Try This

Insert text in the real estate listing by following these steps:

- 1 Position the insertion point before the period (.) following "basement".
- 2 Press the SPACEBAR, then type *with washer and dryer*
- 3 To insert text at the end of the document, position the insertion point before the end mark. Press the SPACEBAR and type *Closing costs negotiable.*



---

## Moving and Copying Text

Moving text means that you delete it from its original location in a document and insert it at a new location. Copying text means that you take a copy of some text without deleting the original text, and insert it at another location. Both actions use Clipboard to hold the text while you move or copy it.

You can move or copy text

- Within a document
- Between Write documents
- Between Write and other Windows applications

## Moving Text

To move text, follow these steps:

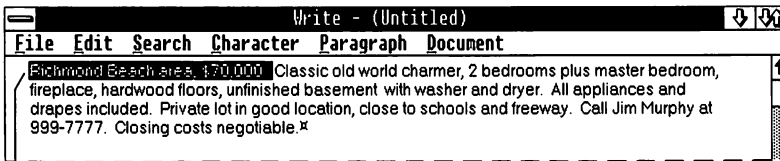
- 1 Select the text.
- 2 Select the Edit menu and choose the Cut command, or press SHIFT + DELETE.
- 3 Position the insertion point where you want to move the text.
- 4 Select the Edit menu and choose the Paste command, or press SHIFT + INSERT.

### Moving text

### Now Try This

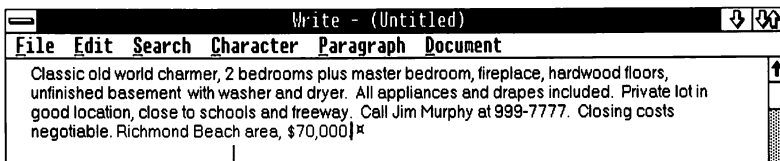
Move a sentence from one part of the real estate listing to another by using the following procedure:

- 1 Select the text as shown.



*Choose Cut to delete the selected text to Clipboard.*

- 2 Select the Edit menu and choose the Cut command.
- 3 Move the insertion point to just before the end mark.
- 4 Select the Edit menu and choose the Paste command.



*With the Paste command, you inserted this text from Clipboard.*

## Copying Text

---

### Copying text

To copy text, follow these steps:

- 1 Select the text.
- 2 Select the Edit menu and choose the Copy command, or press CONTROL + INSERT.
- 3 Position the insertion point where you want to insert the text.
- 4 Select the Edit menu and choose the Paste command, or press SHIFT + INSERT.

Repeat steps 3 and 4 to make additional copies of the text.

**Note** A copy of the text remains on Clipboard until the next time you choose the Cut or Copy command. Clipboard holds only the text from the most recent Cut or Copy command. If you cut or copy again before you insert, your original text will be lost from Clipboard.

If you have a mouse, you can use the following shortcut methods for moving and copying text.

---

### Moving text



To move text with the mouse, follow these steps:

- 1 Select the text you want to move.
- 2 Point to where you want to insert the text.
- 3 Hold down the SHIFT and ALT keys.
- 4 Click the mouse button.

Write cuts the selected text and inserts it at the new location.

---

### Copying text



To copy text with the mouse, follow these steps:

- 1 Select the text you want to copy.
- 2 Point to where you want to copy the text.
- 3 Hold down the ALT key.
- 4 Click the mouse button.

Write copies the selected text and inserts it at the new location.

## Moving and Copying Between Write Documents

You can move and copy text from one document to another. The procedures are similar to moving and copying within a document.

To move text between documents, follow these steps:

- 1 Select the text you want to move.
- 2 Select the Edit menu and choose the Cut command, or press SHIFT+DELETE.
- 3 Open the document you want to move the text to.
- 4 Place the insertion point where you want to insert the text in the new document.
- 5 Select the Edit menu and choose the Paste command, or press SHIFT+INSERT.

To copy text between documents, follow these steps:

- 1 Select the text you want to copy.
- 2 Select the Edit menu and choose the Copy command, or press CONTROL+INSERT.
- 3 Open the document you want to copy the text to.
- 4 Place the insertion point where you want to insert the text in the new document.
- 5 Select the Edit menu and choose the Paste command, or press SHIFT+INSERT.

**Note** If you cut or copy text from a Write window to Clipboard and then close the window, the formatting for the text on Clipboard will be lost.

You can also paste text and graphics from other applications into your Write documents. For more information, see Chapter 4, “Pasting from Other Applications.”

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### Moving text between documents

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### Copying text between documents

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## Finding and Changing Text

You can easily locate text and change it with the commands in the Search menu. You can

- Search for text up to 255 characters in length.
- Change all occurrences of the text in a document.
- Change only those occurrences you want to.

### Finding Text

Use the Find command to look for a character, word, or group of characters or words. The Find command starts at the insertion point or at the end of the selection and goes to the end of the document. Then Find goes back to the beginning of the document and continues searching to the insertion point or to the end of the selection.

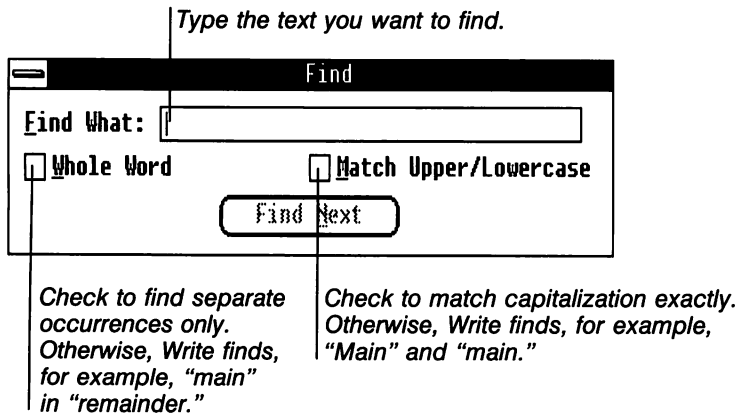
---

#### Finding text

To find text, follow these steps:

- 1 Select the Search menu and choose the Find command.

You will see this dialog box:



- 2 Choose the Find Next button to start the search, or press the ENTER key.

Write searches for the text and selects the first occurrence, if there is one. If there are no occurrences of the text in the document, you see a dialog box that says "Search text not found."

To continue the search after an occurrence is selected, use this procedure:

- Choose the Find Next button again.

When all occurrences of the search text have been found, you see a dialog box that says “Search complete.”

You can search for text using a question mark (?) to match any single character. For example, if the search text is `hea?`, you might find “head,” “heal,” “heap,” “hear,” or “heat.”

To search for text that includes spaces, tabs, paragraph marks, and page breaks, type these special characters in the search text:

Type	To stand for
<code>^w</code>	White space. Searches for any combination of spaces, tab characters, paragraph marks, and page breaks.
<code>^t</code>	Tab character.
<code>^p</code>	Paragraph mark.
<code>^d</code>	Page break.

**Note** You can also use the preceding characters (except for `^w`) when you find and change text with the Change command. For more information, see “Changing Text” later in this chapter.

When you are finished finding text, close the Find dialog box.

To close the Find dialog box, use the following procedure:

- Press the ESCAPE key, or select the Control menu on the Find dialog box, and choose the Close command.

## Editing Between Finds

Often you want to edit the document after you find each occurrence of the search text. You can either press `ALT+F6` to switch between the Find (or Change) dialog box and the Write window, or close the Find dialog box after finding the first occurrence, and then use the Repeat Last Find command.

With the Repeat Last Find command, you can continue searching for text with or without the Find dialog box on the screen. The Repeat Last Find command finds the next occurrence of the search text used in the last Find command. The shortcut key for the Repeat Last Find command is the `F3` key. You can search quickly through a document by pressing the `F3` key repeatedly.

## Editing between finds

To edit between finds, follow these steps:

- 1 Use the Find command to find the first occurrence of the search text.
- 2 Close the Find dialog box.
- 3 Edit the document.
- 4 Select the Search menu and choose the Repeat Last Find command, or press the F3 key.

Repeat steps 3 and 4 to continue finding and editing.

**Note** You can also use the Repeat Last Find command after first choosing the Change command. For more information about the Change command, see "Changing Text."

## Changing Text

Use the Change command to find text and replace it with something else, or to change all occurrences of the text automatically.

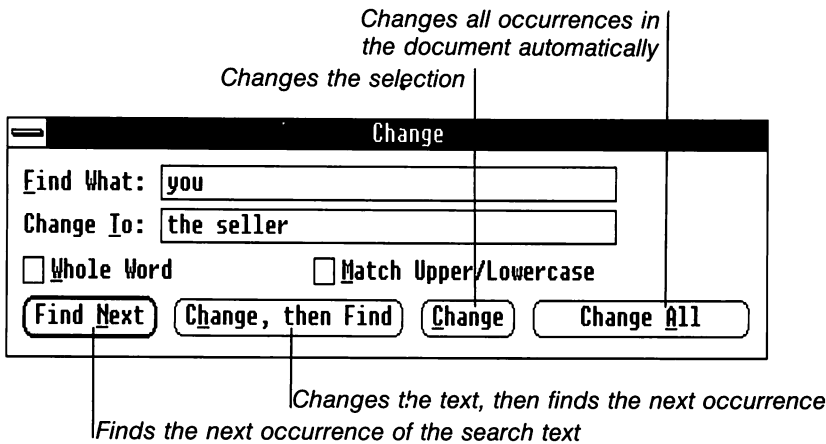
The Change command searches forward from the insertion point, then goes to the beginning of the document and comes back to the insertion point. However, if you select one or more characters before choosing the Change command, the command operates only within that selection.

To find and change text, follow these steps:

- 1 Select the Search menu and choose the Change command.  
You will see this dialog box:

## Finding and changing text automatically

- 2 Choose one of the buttons to start: Find Next; Change, then Find; Change; or Change All.



If there are no occurrences of the text in the document, you see a dialog box that says “Search text not found.”

When the entire document has been searched, you see the message “Search complete.”

When you are finished changing text, close the Change dialog box.

To close the Change dialog box, use the following procedure:

- Press the ESCAPE key, or select the Control menu on the Change dialog box and choose the Close command.

Often you want to make changes in part of a document rather than the entire document. To do this, select part of the document before you choose the Change command. The Change command then operates only within the selection, and the Change All button becomes the Change Selection button.

To change text within a selection, follow these steps:

- 1 Select the part of the document in which you want to find and change text.
- 2 Select the Search menu and choose the Change command.
- 3 Fill in the Find What and Change To text boxes.
- 4 Choose a button to start.

The Change Selection button changes all occurrences of the search text found within the selection.

---

### Changing selected text

### Now Try This

Open the document called PRACTICE.WRI that comes on your Write disk. Be sure to save any open documents before you open PRACTICE.WRI. If the active document is the real estate listing, save it with the name HOUSE.

- 1 Choose the Open command and open the document PRACTICE.WRI.
- 2 Select the Search menu, and choose the Change command.
- 3 Type *you* in the Find What box.
- 4 Type *the seller* in the Change To box.
- 5 Choose each of the buttons in turn to see what happens.  
Find Next: finds the first occurrence of "you".  
Change, then Find: changes the first occurrence of "you" to "the seller", then finds the next occurrence of "you".  
Change: changes that occurrence of "you" to "the seller".  
Change All: changes the remaining occurrences of "you" to "the seller".
- 6 Press the ESCAPE key to close the Change dialog box.

---

## Undoing Your Last Action

You can use the Undo command from the Edit menu to reverse your most recent action.

When you open the Edit menu, the Undo command names the most recent action: Undo Typing, Undo Editing, or Undo Formatting.

To undo, use the following procedure:

- 1 Select the Edit menu and choose the Undo command, or press ALT + BACKSPACE.

If your most recent action was undo, the Undo command reverses the undo, so you have plenty of opportunity to change your mind. Using the Undo command, you can switch back and forth between two versions of text to see which you prefer.

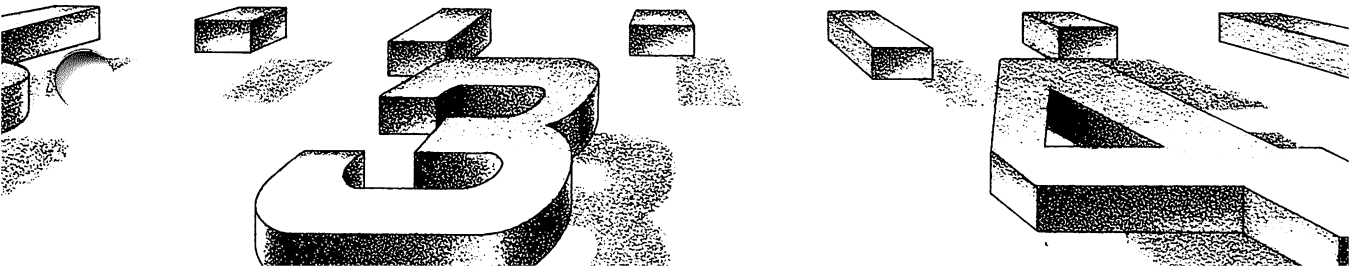
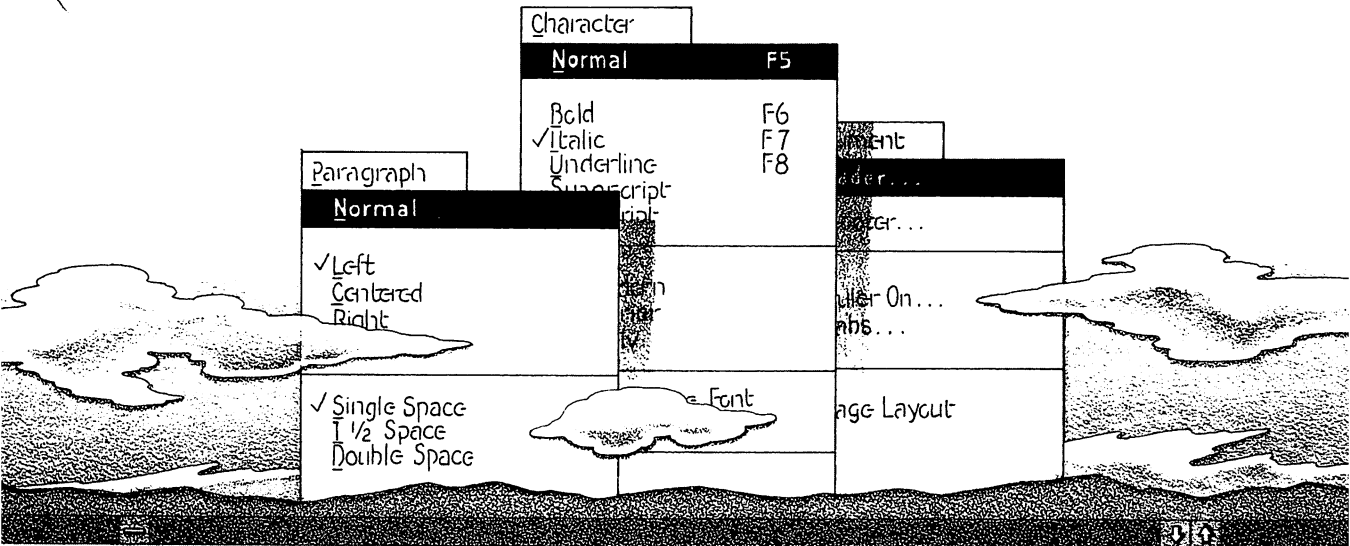
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### Undoing your last action

## 3 Formatting Your Work

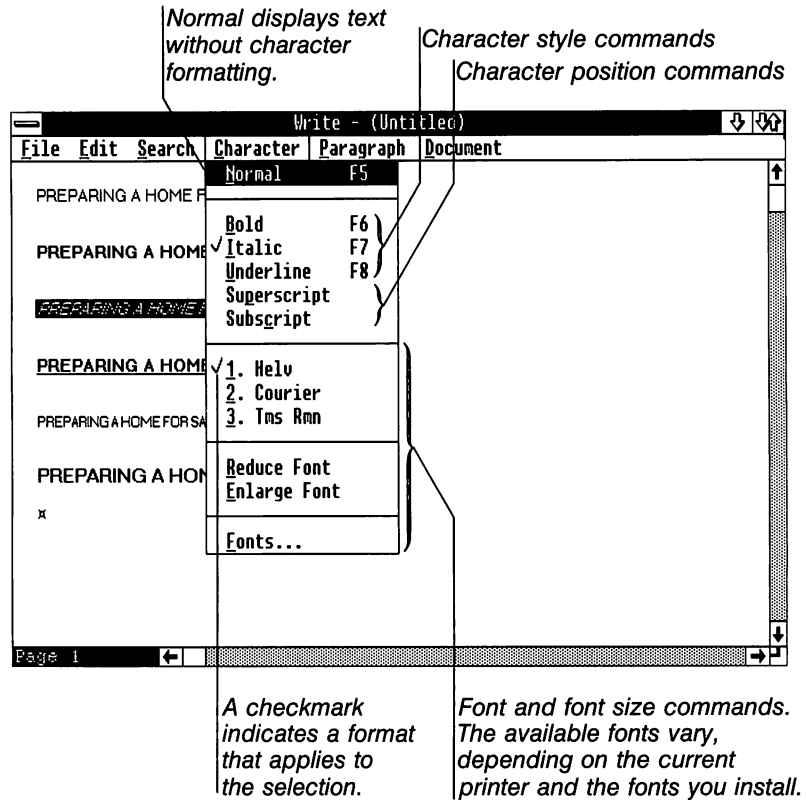
Formatting is the process of giving your document the appearance you want. You can change the appearance of the characters, the spacing and alignment of lines in each paragraph, and the page layout for the entire document. Most of the formats you choose appear on your screen as they will appear in the printed document.

This chapter describes how to format characters, paragraphs, and documents.



## Formatting Characters

The commands in the Character menu control the style, position, font, and point size of characters in your document.



On the screen, Microsoft Windows Write displays character formats that resemble the formats you will see when you print the document. If your printer cannot print a format, such as italic, Write does not display it. However, the selection still has the format, as indicated by a checkmark on the menu. If you change to a printer that prints the format, Write changes the display. For information on how to change the printer, see Chapter 5, "Printing a Document."

Write saves character formats when you save your document. Write also keeps character formats when you move or copy your formatted text to other parts of the document or to another Write document.

When you type text, it will have the same formats as the text just before the insertion point unless you change the format just before you start typing.

## Changing Character Styles

Character styles add emphasis to text by making it bold, italic, or underlined. You can apply more than one character style to the same characters. For example, if you choose Bold, then Italic, then Underline for the same selection, all three styles apply.

To change or add character styles, follow these steps:

- 1 Select the text you want to change.
- 2 Select the Character menu and choose the style you want. Or, you can press the following shortcut keys:

To choose	Press
Normal	F5
Bold	F6
Italic	F7
Underline	F8

If you choose a style that is already checked, Write removes that style from the selection. For example, if Bold is already checked, choosing Bold again cancels it. (In other words, these items toggle.)

## Creating Superscripts and Subscripts

Superscripts and subscripts are characters that appear slightly above or below the rest of the text. They are also scaled to a smaller size. Use them for notations such as H<sub>2</sub>O or 64<sup>2</sup>.

To create a superscript or subscript, follow these steps:

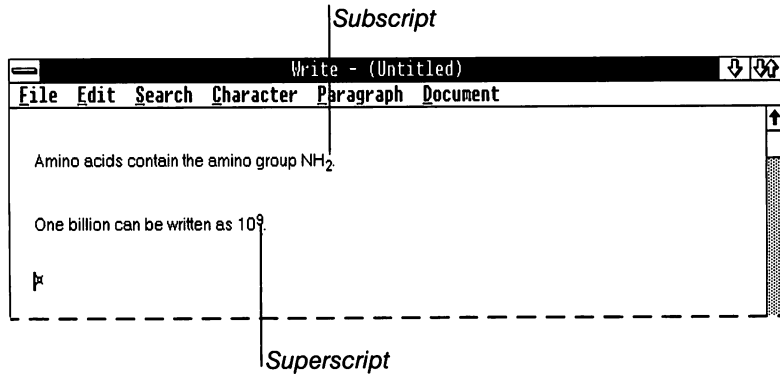
- 1 Select the text you want to be a superscript or subscript.
- 2 Select the Character menu, and choose Superscript or Subscript.

---

### Changing character styles

---

### Creating superscripts and subscripts



## Fonts

The font is the design of the alphabet in which text is displayed or printed.

On the screen, Write displays the fonts and sizes that closely resemble the output you will obtain with the current printer. The design of the alphabet may not match exactly, but the line breaks and page breaks are accurate.

### Changing Fonts and Size with the Character Menu

The Character menu contains the names of the fonts that you can assign to text in your document, and commands to reduce or enlarge the fonts. Up to three font names are displayed on the menu itself, and more may be displayed in the Fonts command dialog box. The font names you see depend on the active printer. For more information on fonts and the active printer, see the Appendix, "Fonts and the Active Printer."

**Changing Fonts** When you start typing text in a new document, Write uses the default font for the active printer. If you want to change to a different font, you can choose one of the font names displayed in the Character menu.

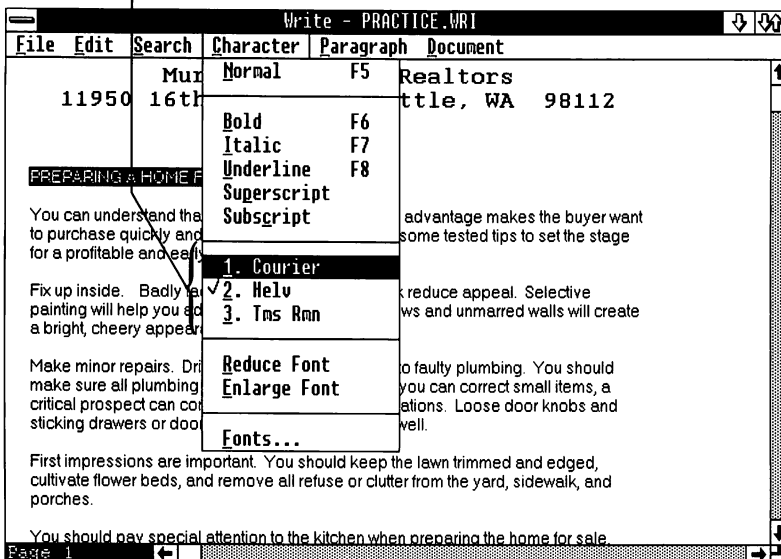
To change fonts, follow these steps:

- 1 Select the text you want to change.
- 2 Select the Character menu, and choose one of the font names.

---

### Changing fonts with the Character menu

Fonts available with the current printer



There may be more than three fonts available for the active printer. You can change to a font that is not displayed on the Character menu with the Fonts command. For more information, see “Changing Fonts and Size with the Fonts Command” later in this chapter.

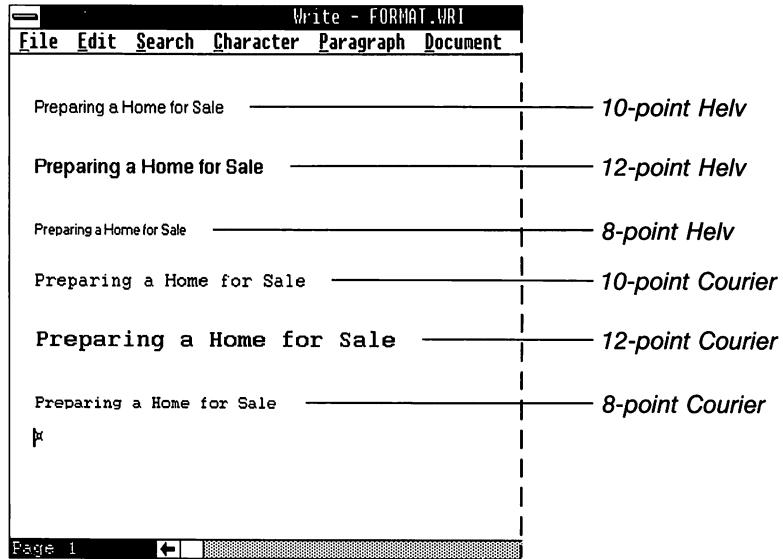
**Changing Font Size** You can change the font size with the Reduce Font and Enlarge Font commands from the Character menu.

To change the font size, follow these steps:

- 1 Select the text you want to change.
- 2 Select the Character menu, and choose Reduce Font or Enlarge Font.

---

**Changing font size  
with the Character  
menu**



When you choose Reduce Font, Write changes the font size to the next smaller size. When you choose Enlarge Font, Write changes the font size to the next larger size. The sizes are determined by Write, independent of the active printer. If you change to a font size that the active printer does not support, the text on the screen does not change size.

---

### Determining the size of selected text

To find out the current size of some text, follow these steps:

- 1 Select the text.
- 2 Select the Character menu, and choose the Fonts command.

The dialog box displays the active font size in the Size text box. Font sizes are given in points. A font size of 10 points gives about 6 lines of text to the inch when printed.

### Changing Fonts and Size with the Fonts Command

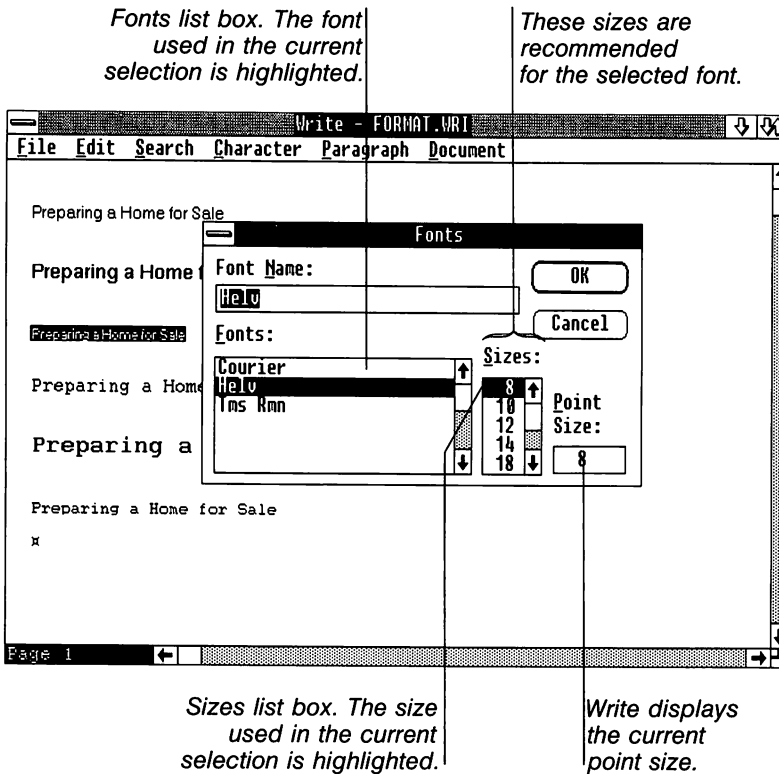
With the Fonts command you can change to a font that is not displayed on the Character menu. When you choose the Fonts command, you see a dialog box that lists all the fonts available for the active printer. If you want to select a font that is not on the list, you can add the font name to the list.

## Using the Fonts command

To change fonts or font size with the Fonts command, follow these steps:

- 1 Select the text you want to change.
- 2 Select the Character menu, and choose the Fonts command.

You will see this dialog box:



- 3 To change the font, select a font name in the Fonts list box. To change the point size, select a point size in the Sizes list box, or type a point size in the Point Size text box.
- 4 Choose the OK button to carry out the command.

If you enter a font size that cannot be printed on the active printer, Write does not change the size of the text displayed on the screen.

If the active selection has more than one font or font size assigned, the Fonts dialog box does not propose a font name or size. You can leave either of these items blank to indicate "no change." This is useful if you want to change the font size for a selection that contains various fonts, or change the font name for text that appears in various sizes.

As you assign fonts from the dialog box to your text, the font names displayed on the Character menu change to reflect the fonts you use most often.

---

### **Adding a font name to the list**

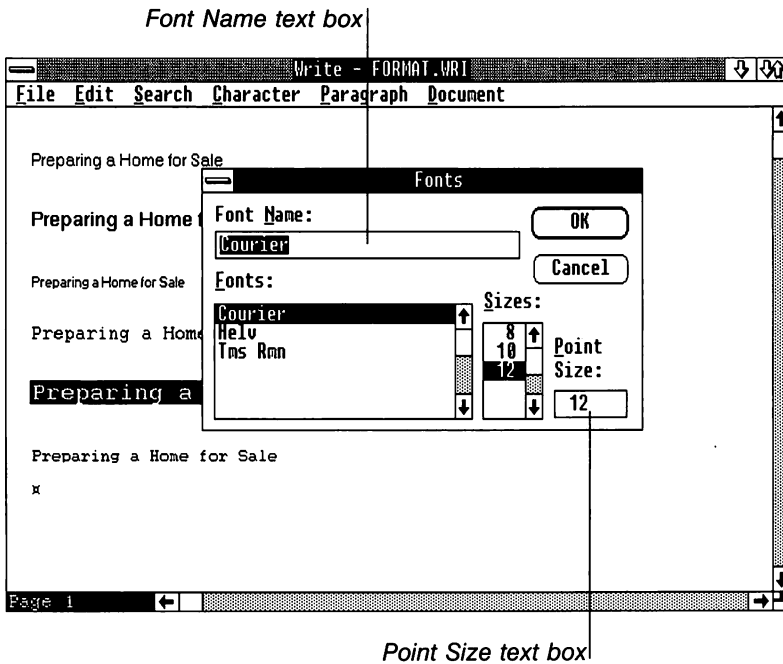
You can add a font name to the list in the Fonts dialog box and then assign that font to text in your document. This is useful if you plan to print the document on a printer other than the active printer.

For example, perhaps the Epson FX-80 is the only printer installed in your Windows system. But a coworker uses Windows with a NEC 3550, and you plan to print the document on that system. You can add NEC 3550 font names to the Fonts dialog box and assign them to text in your document. Then you can print the document in the fonts you want on the NEC 3550. You can still print the document on your Epson FX-80, or on another printer; if Spooler doesn't recognize a font name, it selects an available font and continues printing.

As an alternative, you could install the NEC 3550 (or any other printer) in Windows using Windows Setup or Control Panel. Then you could change to that printer before you format the document in Write. For more information on changing printers, see Chapter 5, "Printing a Document."

To add a font name to the list, follow these steps:

- 1 Select the Character menu, and choose the Fonts command.

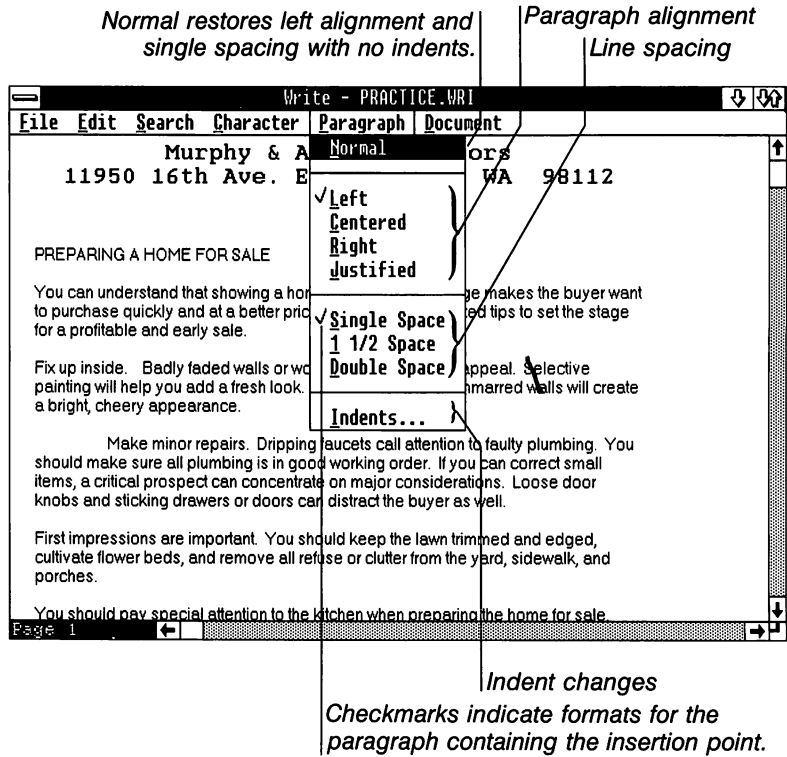


- 2 Type the name of a font in the Font Name text box.
- 3 Type the size of the font in the Point Size text box.
- 4 Choose the OK button to carry out the command.

---

## Formatting Paragraphs

The commands in the Paragraph menu control the alignment, spacing, and indents of lines in each paragraph.



Before choosing a command from the Paragraph menu, position the insertion point inside the paragraph you want to format. You can also format more than one paragraph at a time. To do this, make a selection that spans all the paragraphs you want to format. The command affects all the paragraphs that are included in the selection.

## Starting a New Paragraph

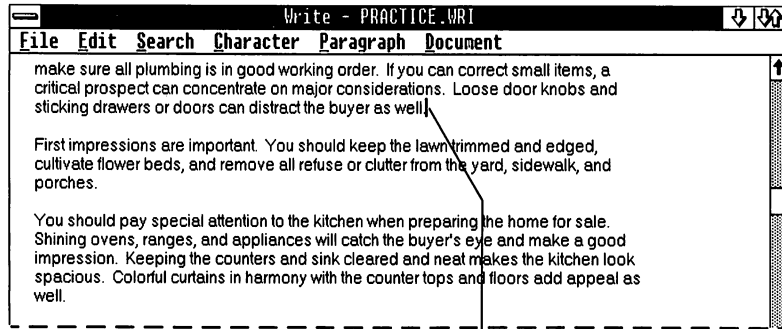
### Starting a new paragraph

To start a new paragraph, follow these steps:

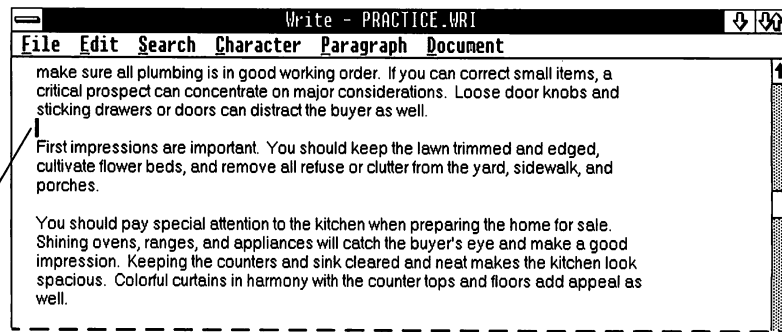
- 1 Position the insertion point where you want to start the paragraph.
- 2 Press the ENTER key.  
If you want a blank line between paragraphs, press the ENTER key twice.

Every time you press the ENTER key, Write inserts a paragraph mark in the document and starts a new line. There is no visible character for the paragraph mark, so you cannot see it on the screen. But you can select, delete, copy, and move a paragraph mark just as you do other characters.

For example, in PRACTICE.DOC, the blank lines between paragraphs were created by pressing the ENTER key twice: once to start a new line and again to leave that line blank. So there are two paragraph marks after each paragraph. You can select an individual paragraph mark as you would select any single character. Or, you can make a selection that includes text and paragraph marks.

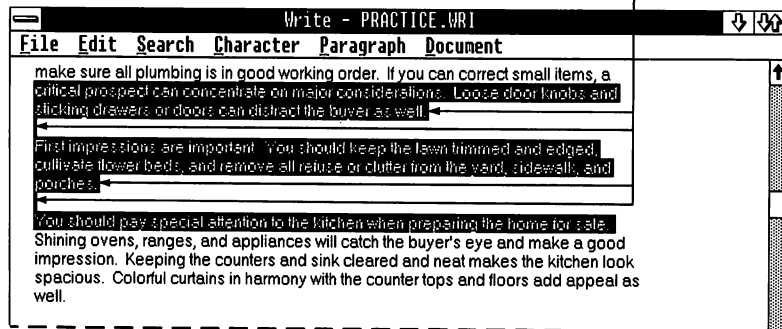


*Paragraph mark selected*



*Paragraph mark selected*

*Paragraph marks included in selection*



When you copy or move a paragraph, include the paragraph mark in the selection to keep the paragraph formats with the paragraph.

A new paragraph starts out with the same formats as the previous paragraph. For example, if you are typing a paragraph that is double-spaced and justified and you press the ENTER key, the following text you type will be double-spaced and justified.

To remove a paragraph mark, follow these steps:

1 Place the insertion point at the beginning of the paragraph following the break you want to remove.

2 Press the BACKSPACE key.

If your paragraphs have a blank line between them, press the BACKSPACE key twice.

---

### Removing a paragraph mark

## Changing Paragraph Alignment

You can align a paragraph on the left margin, the right margin, or both margins (justified), or center it between the margins.

To change paragraph alignment, follow these steps:

1 Place the insertion point inside the paragraph you want to change.

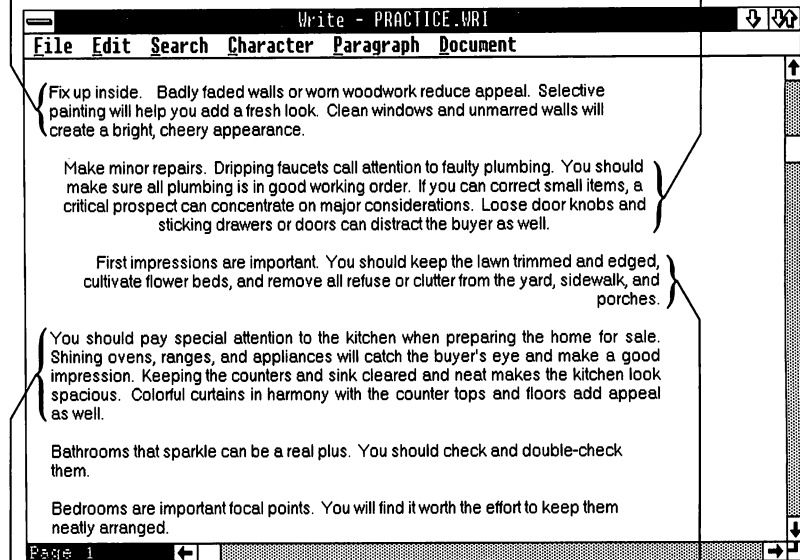
2 Select the Paragraph menu, and choose one of the alignment commands: Left, Centered, Right, or Justified.

---

### Changing paragraph alignment

*The Left command aligns a paragraph flush left on the margin.*

*The Centered command centers each line in the paragraph.*



*The Justified command adjusts spaces so text fills the line to both margins.*

*The Right command aligns a paragraph flush right on the margin.*

## Changing Paragraph Line Spacing

You can change the line spacing in a paragraph to single spacing, 1 1/2 line spacing, or double spacing.

To change line spacing, follow these steps:

- 1 Place the insertion point inside the paragraph you want to change.
- 2 Select the Paragraph menu, and choose one of the line spacing commands: Single Space, 1 1/2 Space, or Double Space.

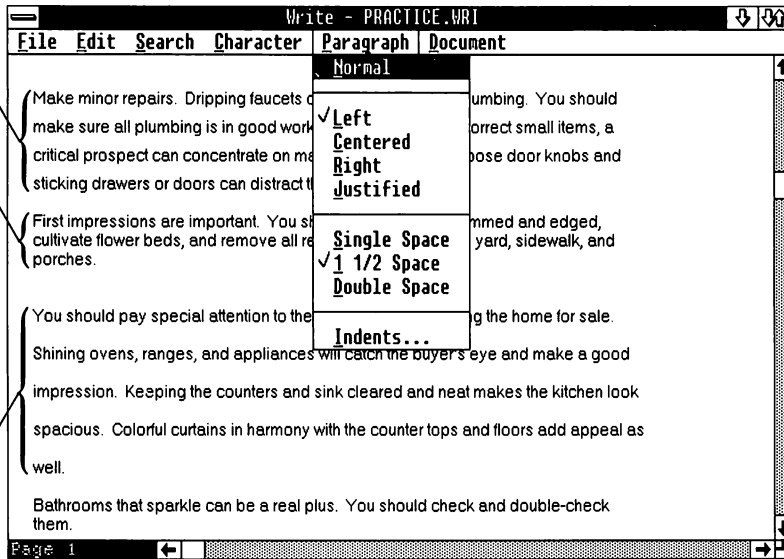
### Changing paragraph line spacing

*Single space*

*1/6 inch between lines*

*1 1/2 space*

*1/4 inch between lines*



*Double space*

*1/3 inch between lines*

## Changing Paragraph Indents

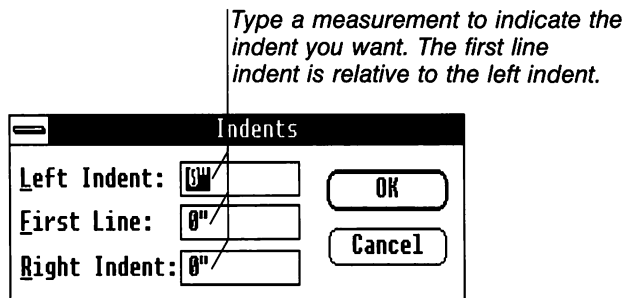
You can indent a paragraph from the left or right margin, and you can indent the first line of a paragraph. Note that indenting is not the same as moving the margin itself. To change the margins for the printed page, see "Changing the Page Layout," later in this chapter.

---

## Changing paragraph indents

To change paragraph indents, follow these steps:

- 1 Place the insertion point inside the paragraph you want to change.
- 2 Select the Paragraph menu, and choose the Indents command.  
You will see this dialog box:



- 3 Type a measurement in inches or centimeters (see "Changing the Page Layout," later in this chapter) for any indent you want to change.
- 4 Choose the OK button to carry out the command.

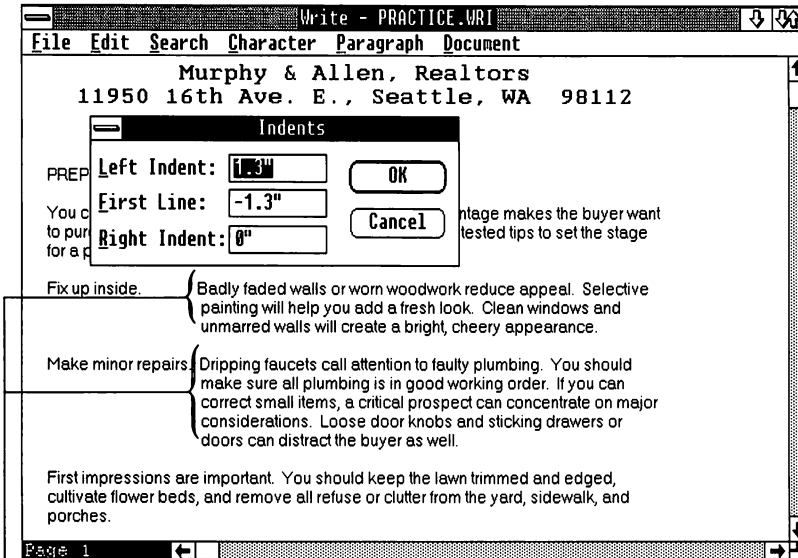
You can also create a hanging indent with the Indents command. In a paragraph with a hanging indent, the first line extends farther to the left than the rest of the paragraph.

To create a hanging indent, follow these steps:

- 1 Place the insertion point inside the paragraph you want to change.
- 2 Select the Paragraph menu, and choose the Indents command.
- 3 Enter a positive number for the measurement of the left margin indent.
- 4 Enter a negative number for the measurement of the first line indent.

---

## Creating a hanging indent



*Hanging indent*

- 5 Choose the OK button to carry out the command.

## Formatting Paragraphs with the Ruler

If you have a mouse, you can also change paragraph formats with the Ruler. The Ruler appears at the top of the window when you choose the Ruler On command from the Document menu.

To display the Ruler, use this procedure:

- Select the Document menu, and choose the Ruler On command.

To hide the Ruler, use this procedure:

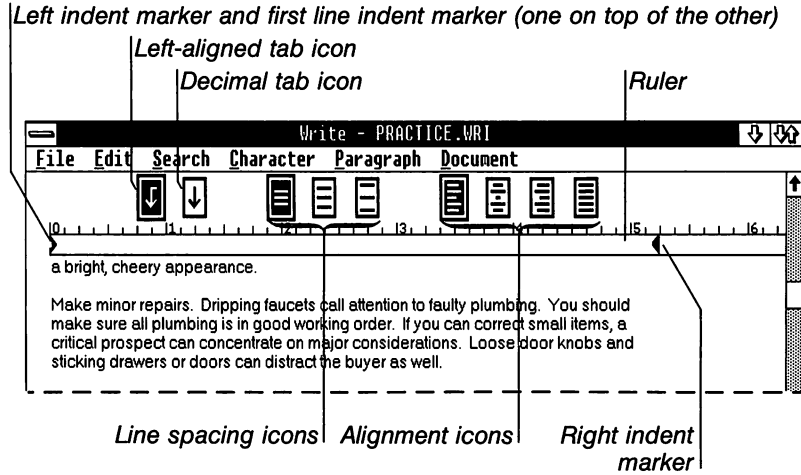
- Select the Document menu, and choose the Ruler Off command.



### Displaying the Ruler

---

### Hiding the Ruler



---

### Changing alignment with the Ruler

To change paragraph alignment with the Ruler, follow these steps:

- 1 Place the insertion point in the paragraph you want to change.
- 2 Click one of the paragraph alignment icons above the Ruler.

---

### Changing line spacing with the Ruler

To change line spacing with the Ruler, follow these steps:

- 1 Place the insertion point in the paragraph you want to change.
- 2 Click one of the line spacing icons above the Ruler.

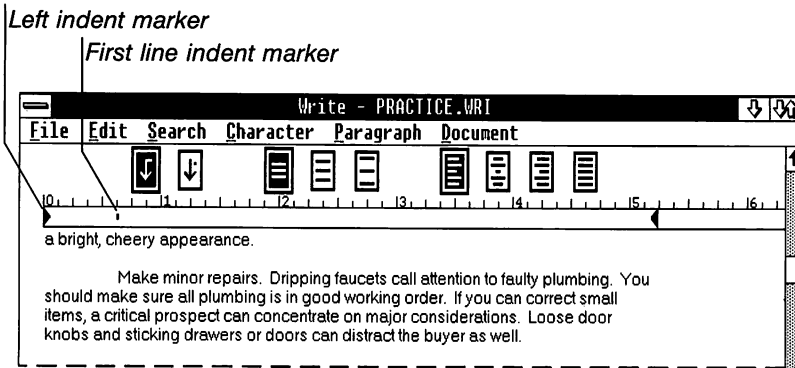
---

### Changing indents with the Ruler

To change indents with the Ruler, follow these steps:

- 1 Place the insertion point in the paragraph you want to change.
- 2 Drag one of the indent markers to a new position.

Note that the left indent marker and the first line indent marker are superimposed before you move one of them.



The indents you create with the Ruler are reflected in the Indents dialog box.

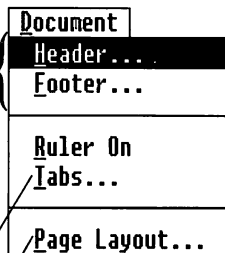
You can also change tab settings with the Ruler. For more information, see "Setting Tabs with the Ruler," later in this chapter.

---

## Formatting a Document

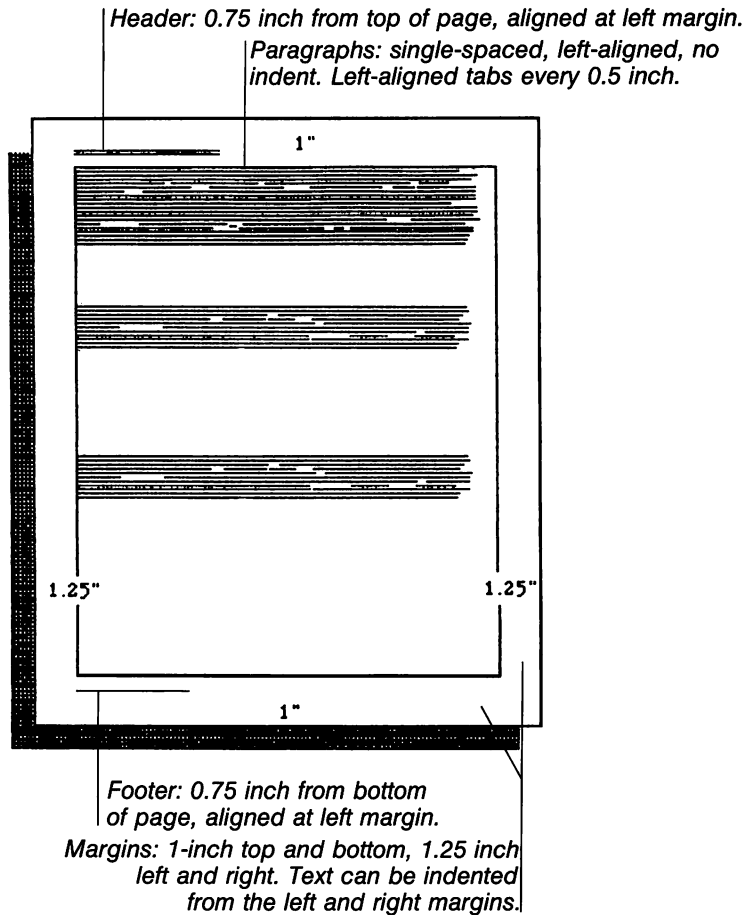
The commands in the Document menu control formats that apply to the document as a whole.

*Add headers, footers, and page numbers*



*Change margins on the printed page*  
*Change tab settings*

When you start a new document, the formats are automatically set as follows:



## Headers and Footers

A header is text that appears at the top of every page, and a footer is text that appears at the bottom of every page. Use the Header or Footer command from the Document menu to

- Enter the text you want for the header or footer.
- Include page numbers in the printed document.
- Include the header or footer on the first page.

- Change the distance between the header or footer and the top or bottom of the page.

You do not see headers and footers in the document until you print the document. You can have one header and one footer in each document.

### Adding a Header or Footer

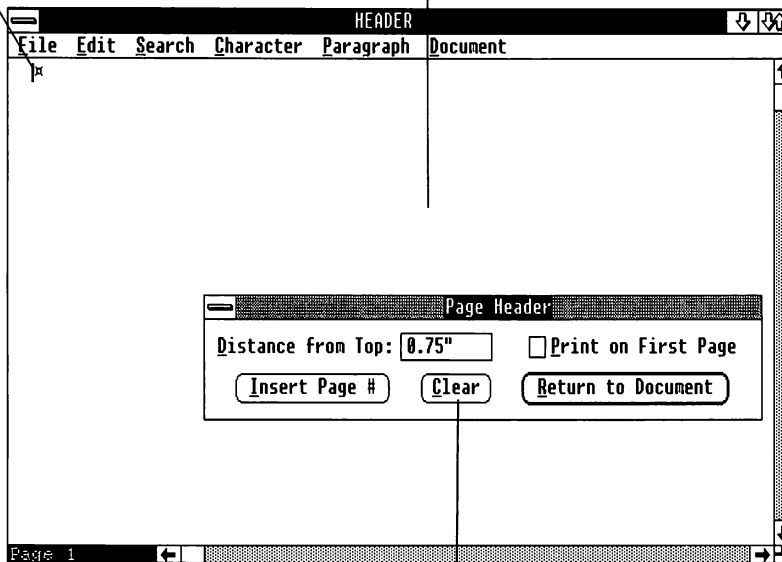
To add a header or footer, follow these steps:

- 1 Select the Document menu, and choose the Header or Footer command.

You will see the Header or Footer document and the Header or Footer dialog box:

### Adding headers and footers

Type header text here. Press ALT+F6 to switch between the header document and the header dialog box. Header document



- 2 Type the text for the header or footer in the Header or Footer document.

You can format the text as you would any other text.

- 3 Press ALT+F6 to select the Header or Footer dialog box, or click the mouse inside the dialog box.
- 4 Type a measurement in the Distance from Top box if you want to change the distance between the header and the edge of the page.  
For a footer, this measurement is Distance from Bottom.
- 5 Select the Print on First Page check box if you want the header or footer to appear on the first page of the printed document.  
Otherwise, Write does not print the header or footer on the first page.
- 6 Choose the Insert Page # button to have page numbers in the printed document.  
When you choose the Insert Page # button, Write inserts the special text "(page)" at the insertion point in the Header or Footer document. The special text becomes consecutive page numbers when you print your document.
- 7 To carry out the command and return to your document, press the ESCAPE key at any time, or choose the Return to Document button in the Header or Footer dialog box.

**Note** Pressing the ESCAPE key or choosing the Return to Document button saves the text, formatting, and editing you entered in the Header or Footer document. You cannot use the ESCAPE key in a Header or Footer document to erase all your changes. You can, however, use the Undo command in the Header or Footer document as you would in any document.

### Adding Page Numbers Only

To add page numbers only, follow these steps:

- 1 Select the Document menu, and choose the Header command if you want page numbers printed at the top of the page; choose the Footer command if you want them at the bottom.
- 2 Move the insertion point to where you want the page number to appear on the line.
- 3 Press ALT+F6 to activate the Header or Footer dialog box, or click the mouse inside the dialog box.
- 4 Choose the Insert Page # button. This button inserts the special text "(page)" in the Header or Footer document. The special text becomes consecutive page numbers on the printed page.

---

**Adding page numbers only**

- 5 Choose the Return to Document button to carry out the command.

### Aligning a Header or Footer

Normally, Write aligns the header and footer with the left margin on the printed page. You may want your header or footer aligned with the right margin or in the center of the page. You can change the alignment of a header or footer just as you would change the alignment of any other paragraph.

To change the alignment of a header or footer, follow these steps:

- 1 Position the insertion point inside the header or footer text.
- 2 Select the Paragraph menu, and choose Left, Right, or Centered.

---

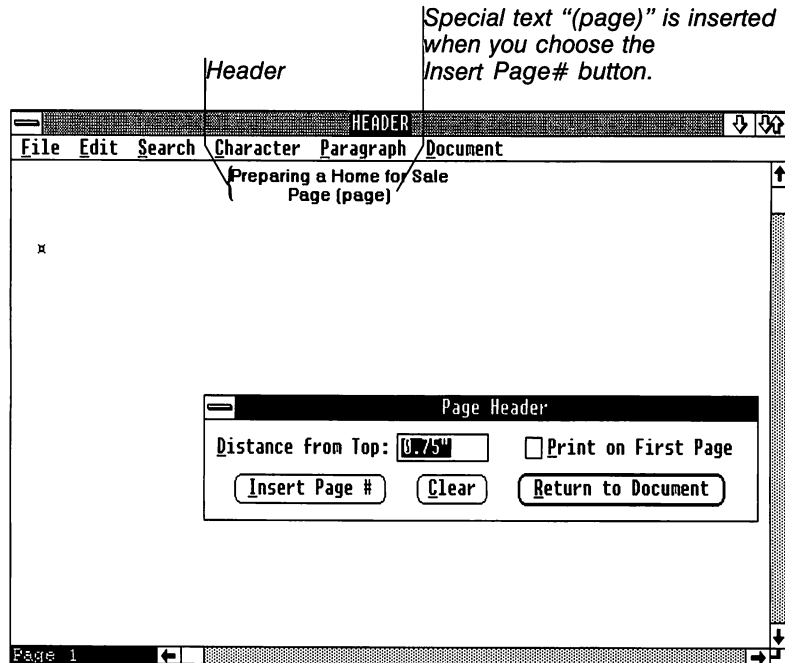
### Aligning headers or footers

### Now Try This

Add a header to PRACTICE.DOC, and format it so that it appears centered, 0.75 inch from the top of each page except the first page.

- 1 Open PRACTICE.DOC. Select the Document menu and choose the Header command.
- 2 Select the Paragraph menu and choose the Centered command.  
Now the text you type will be centered as you type it.
- 3 Type *Preparing a Home for Sale* in the Header document and press the ENTER key.
- 4 Type *Page* and press the SPACEBAR.
- 5 Press ALT+F6 to select the Header dialog box.
- 6 Press the TAB key twice so the blinking underscore is in the Insert Page # button.
- 7 Press the SPACEBAR.

Write inserts the special text "(page)" at the insertion point in the Header document.



- 8 Press ALT+F6 to select the Header document again.
- 9 Press the ENTER key twice to leave a blank line between the header and the text when you print the document.
- 10 Press the ESCAPE key to save the header and return to PRACTICE.DOC.

Try printing PRACTICE.DOC so you can see the header on each page.

## Setting Tabs

You can easily set tabs for lists or tables with Write. Use the Tabs command from the Document menu, or use the Ruler. A tab can be a left-aligned tab or a decimal tab. Use left-aligned tabs to form a column of items aligned on the left. Use decimal tabs to form a column of numbers aligned on their decimal points.

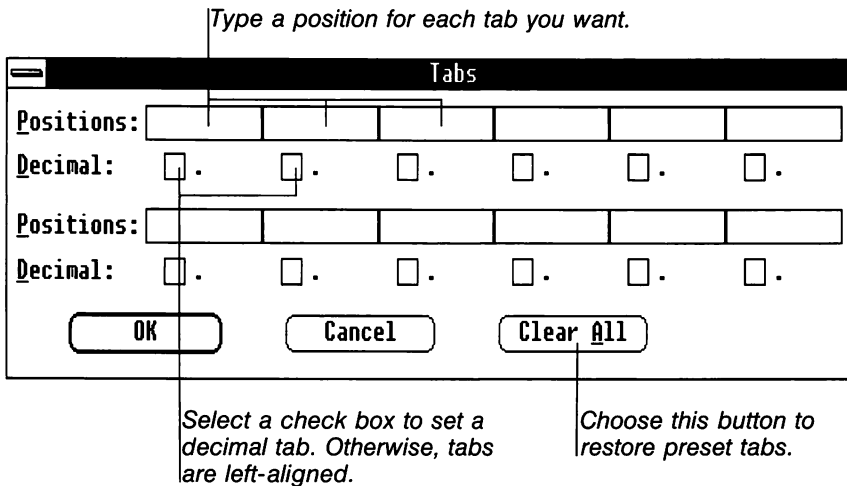
Tabs are preset at every half inch. The preset tabs are left-aligned tabs. They do not appear in the Tabs dialog box or on the Ruler. Tabs that you set override the preset tabs. You can set up to 12 tabs.

---

**Setting tabs**

To set tabs, follow these steps:

- 1 Select the Document menu, and choose the Tabs command.  
You will see this dialog box:



- 2 To change a tab, select the position and type a number. This will be the location of the tab stop, in inches or centimeters depending on which measure you have chosen. (See “Changing the Page Layout,” later in this chapter.)
- 3 To delete a tab, select the position and press the DELETE key. To delete all tabs at once, choose the Clear All button.
- 4 Choose the OK button to carry out the command.

The tabs you set with the Tabs command are shown on the Ruler.

### Decimal Tabs

A decimal tab is a special tab stop that aligns text on the decimal point. When you type text at a decimal tab stop, the characters you type are inserted to the left of the tab stop until you type a decimal point. The decimal point is inserted at the tab stop, and any additional characters you type are inserted to the right of the decimal point. If you don't type a decimal point at a decimal tab, all the text you type will be right-aligned at the tab stop. Thus, you can use a decimal tab as a right-aligned tab if you want to.

---

**Decimal tabs**



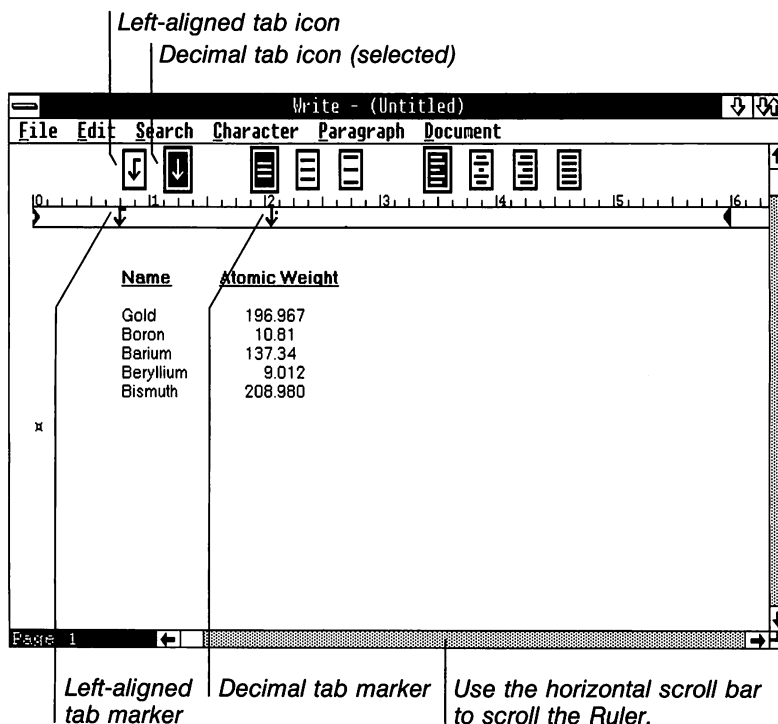
## Setting tabs with the Ruler

### Setting Tabs with the Ruler

If you have a mouse, you can also set tabs with the Ruler. The Ruler appears at the top of the window when you choose the Ruler On command from the Document menu.

To set tabs with the Ruler, follow these steps:

- 1 Select the Document menu, and choose the Ruler On command.



- 2 Click the tab icon you want to use: left-aligned or decimal.
- 3 Click the Ruler where you want to set a tab, or drag an existing tab marker to a new position.
- 4 To hide the Ruler, select the Document menu, and choose the Ruler Off command.

The tabs you set with the Ruler are reflected in the Tabs dialog box.

To remove a tab with the Ruler, follow this procedure:

- Drag the tab marker down and off the Ruler.

---

### Removing tabs with the Ruler

## Changing the Page Layout

The page layout is the arrangement of text on the page when you print your document. Use the Page Layout command to

- Change Write's margins for the printed page.
- Specify a starting page number other than 1 for the printed document.

In a printed document, indented text is indented from the margins you set with the Page Layout command.

To change the page layout, follow these steps:

- 1 Select the Document menu, and choose the Page Layout command.

You will see this dialog box:

*In the Margins boxes, enter measurements to change the margins on the printed page.*

*Type the starting page number.*

Start Page Numbers At:

Margins:

Left: <input type="text" value="1.25"/>	Right: <input type="text" value="1.25"/>
Top: <input type="text" value="1"/>	Bottom: <input type="text" value="1"/>

Measurements:

inch  cm

*Select a unit of measurement.*

---

### Changing the page layout

- 2 In the Start Page Numbers At box, type the number at which you want page numbers to start, if different than 1.

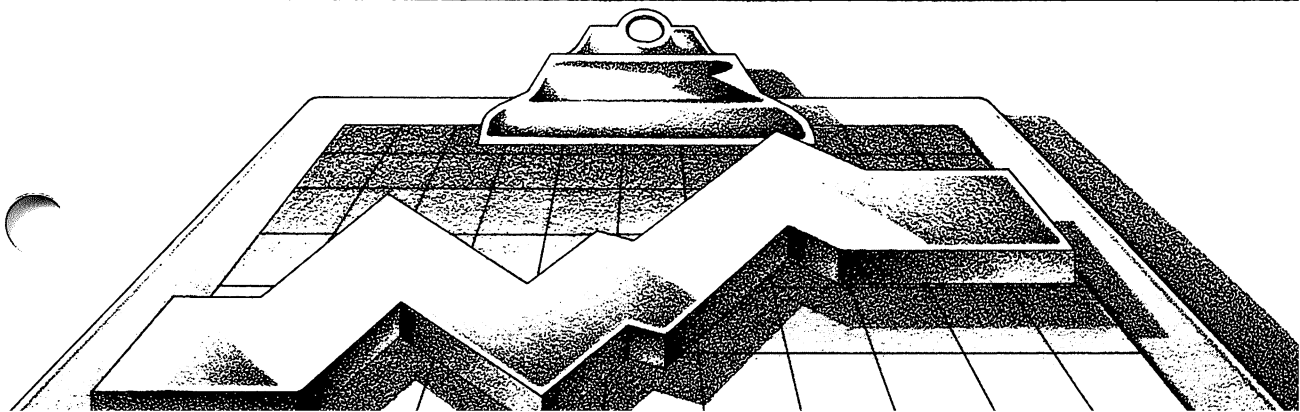
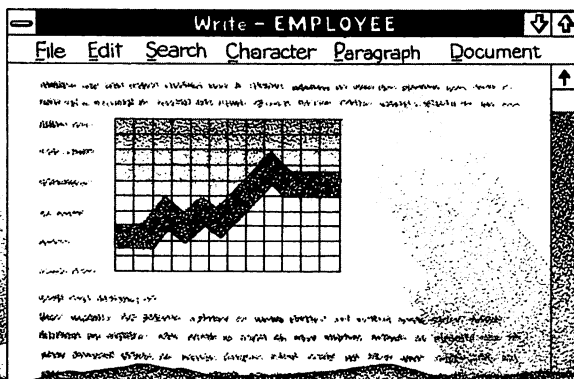
- 3 In the Margins boxes, type the margins you want.
- 4 Choose the cm button if you want metric measure.
- 5 Choose the OK button to carry out the command.

If you enter a starting page number, Write adjusts the page numbers displayed in the lower-left corner of the window. Write also uses the adjusted page numbers for the Go To Page command from the Search menu.

## 4 Pasting from Other Applications

You can paste text and graphics from other Microsoft Windows applications onto your Microsoft Windows Write documents. Pasting makes it easy to enhance documents visually and to insert text without retyping it.

This chapter describes how to paste data from both Windows applications and standard applications. It also describes how to move and size pictures in Write, how to paste from Write to other applications, and how to use Write with Microsoft Word.



You can paste information from any application that runs with Windows, whether it is a Windows application or a standard application. For general guidelines about running standard applications, see the *Microsoft Windows User's Guide*.

**Note** It is not necessary to run the two applications simultaneously. Windows holds the information you copy and paste on the Clipboard. Windows saves Clipboard even after you quit the application you copied from.

---

## Clipboard

Clipboard holds the information you want to paste. You have probably already used Clipboard to move and copy text within a Write document.

You can run Clipboard any time during a Windows session to see what is on it. This is useful if you want to check the contents of Clipboard before you paste.

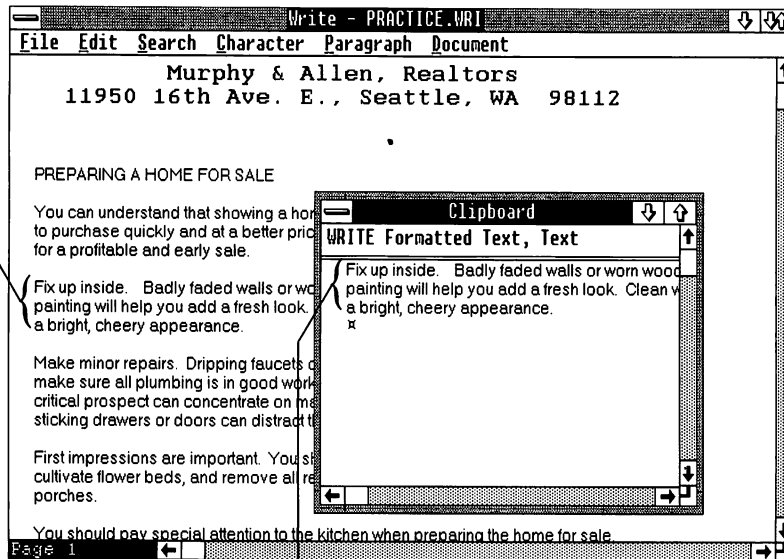
---

### Running Clipboard

To run Clipboard, follow these steps:

- 1 Open the MS-DOS Executive window.
- 2 Select and run CLIPBRD.EXE.

*This text was copied to Clipboard.*



*Run CLIPBRD.EXE to view the contents of Clipboard.*

Clipboard contains the most recent information you cut or copied from a Windows application. The next Paste command pastes this information onto an application. The contents of Clipboard remain until you cut or copy new information, or end the Windows session. The examples in this chapter describe how to

- Paste graphics from Windows Paint (a Windows application).
- Paste data from standard applications.

---

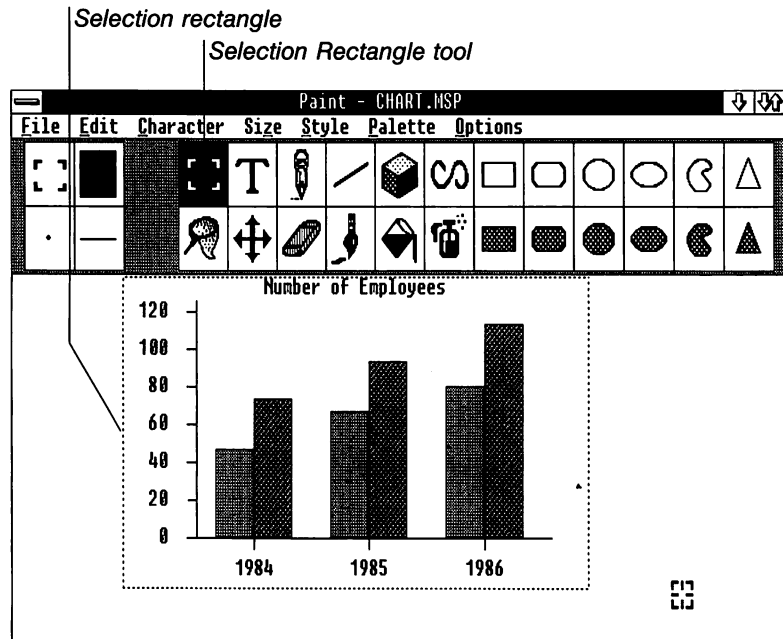
## Pasting Graphics from Windows Paint

Windows Paint is a drawing tool that is a Windows application; that is, it was designed especially to run with Microsoft Windows. You can paste all or part of a Paint canvas onto a Write document.

## Pasting graphics from Windows Paint

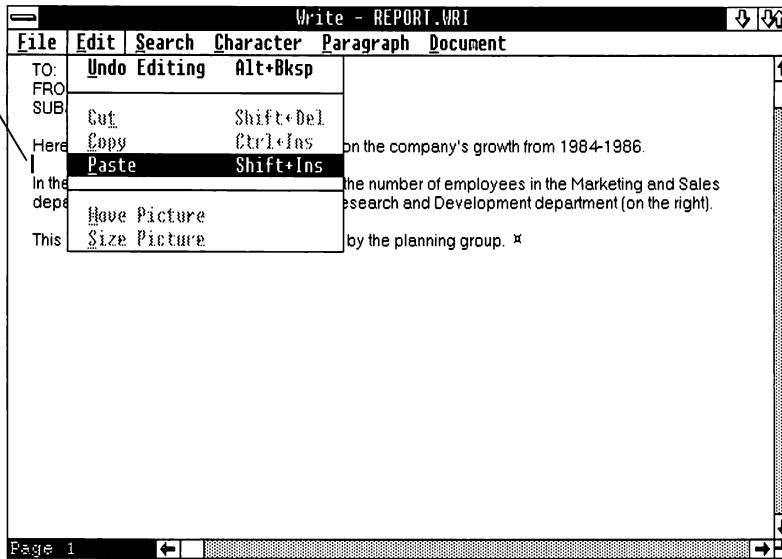
To paste from Paint, follow these steps:

- 1 Open a Paint window with the canvas you want to copy from.
- 2 Pick up the Selection Rectangle tool, and select the area of the canvas you want to paste onto Write.



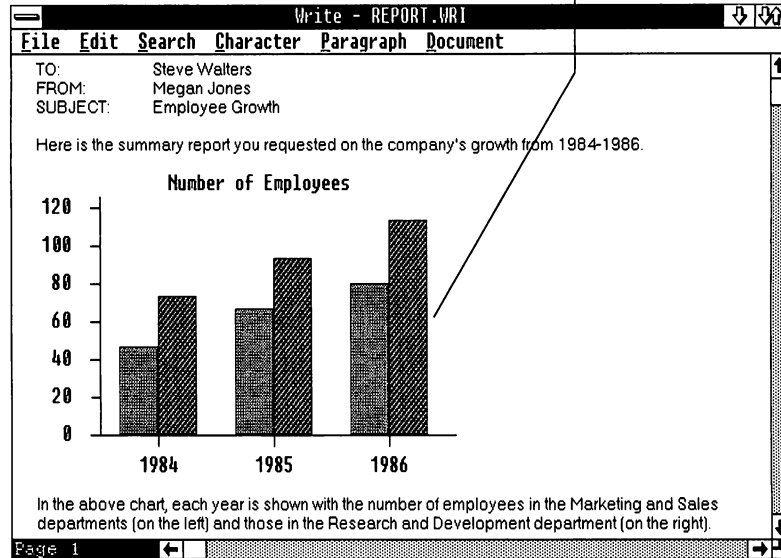
- 3 Select the Edit menu and choose the Copy command.  
This copies the selection onto Clipboard.
- 4 Open a Write window that contains the document you want to paste onto.
- 5 Move the insertion point to where you want to insert the graphics from Paint.

When you choose the Paste command, the graphics will be inserted from Clipboard at the insertion point.



- 6 Select the Edit menu and choose the Paste command to insert the graphics in the document.

Graphics pasted from Clipboard.



**Note** Choosing Paste need not be your first action after opening the document. But it is wise to paste immediately, before you choose the Cut or Copy command and inadvertently change the contents of Clipboard.

You can also use Paint to enhance text or graphics from other applications before pasting onto Write. See "Pasting from Write into Another Application," later in this chapter.

## Pasting Data from a Standard Application

You can easily paste data from standard applications into Microsoft Write. Use the Mark and Copy commands from the Control menu to select the area you want to paste onto Clipboard, or use ALT+PRINTSCREEN to copy an entire screen to Clipboard. For more information on copying to Clipboard, see the *Microsoft Windows User's Guide*.

To paste data from a standard application, follow these steps:

- 1 Copy the desired information to Clipboard.
- 2 Open a Write window that contains the document to which you want to paste.
- 3 Move the insertion point to where you want to insert the data.  
If your document is in a proportional-space font such as *Helv*, it's a good idea to change to a fixed-space font such as *Courier* before pasting data. This ensures that information will line up in your Write document.
- 4 Select the Edit menu and choose the Paste command to insert the data in the document.  
If you changed to a fixed-space font, change back to the proportional-space font before you continue typing.

---

### Pasting data from a standard application

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## Moving and Sizing a Picture in Write

After you paste a picture or graph into Write, you can select it and move, copy, or paste it just as you would text.

The picture is always pasted onto the document at the left margin. You can move the picture horizontally with the Move Picture command. You can change the size of the picture with the Size Picture command. The Move Picture and Size Picture commands are active while a picture is selected.

### Moving a Picture

You can move a picture horizontally with the Move Picture command from the Edit menu. You can move the picture with the keyboard or the mouse.

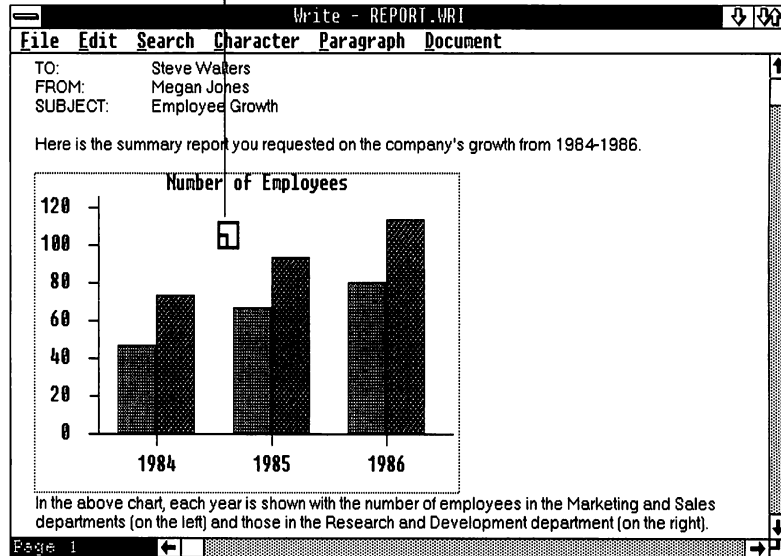
To move a picture with the keyboard, follow these steps:

- 1 Move the insertion point to the left of the picture and press **SHIFT+RIGHT** to select the picture.
- 2 Select the Edit menu and choose the Move Picture command.  
An icon appears in the center of the picture and a dotted frame surrounds the picture.

---

### Moving a picture

Use the **RIGHT** and **LEFT** keys to move the picture frame. Then press the **ENTER** key.



- 3 Press the **RIGHT** or **LEFT** direction key to move the dotted frame.
- 4 When the frame is where you want it, press the **ENTER** key.  
Or, press the **ESCAPE** key to leave it where it was.

## Moving a picture



To move a picture with the mouse, follow these steps:

- 1 Click the picture to select it.
- 2 Select the **Edit** menu and choose the **Move Picture** command.  
An icon appears in the center of the picture and a dotted frame surrounds the picture.
- 3 Without pressing the mouse button, move the mouse right or left to move the dotted frame.
- 4 When the frame is where you want it, click the mouse button.  
Or, press the **ESCAPE** key to leave it where it was.

**Note** You can also use formatting commands from the **Paragraph** menu (**Left**, **Centered**, **Right**) to move a picture.

## Sizing a Picture

You can enlarge or reduce a picture in Write with the Size Picture command from the Edit menu. You can size the picture with the keyboard or the mouse.

There are several points you should keep in mind when you size a picture:

- The lower-left corner of the Write window displays sizing information in the form of X and Y values. It is best to keep X and Y the same, and to size in whole (for example, 5) rather than fractional (5.5), numbers. This will prevent distortion of the sized image.
- Write displays pictures in a screen resolution that is appropriate to the selected printer. Because of differences in screen and printer resolutions, these pictures may seem slightly distorted on screen. When printed, the resolution will be correct.

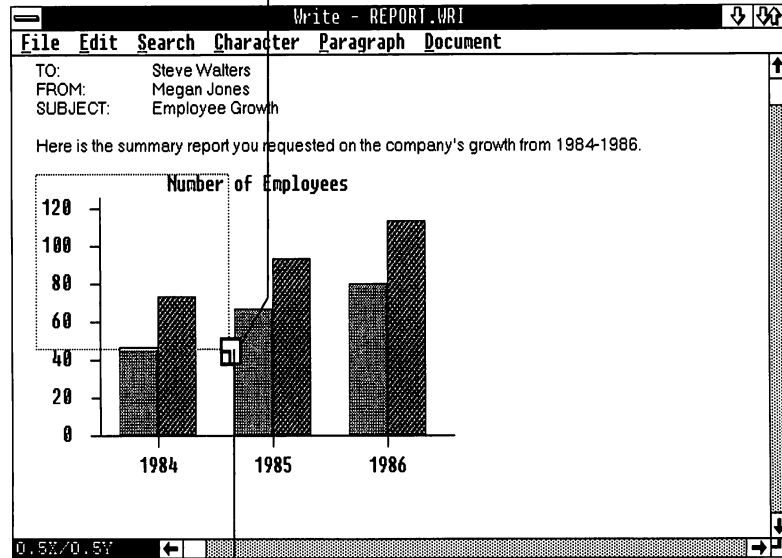
To size a picture with the keyboard, follow these steps:

- 1 Move the insertion point to the left of the picture and press SHIFT+RIGHT to select the picture.
- 2 Select the Edit menu and choose the Size Picture command. An icon appears in the center of the picture and a dotted frame surrounds the picture.

---

### Sizing a picture

Use the **LEFT**, **RIGHT**, or **DOWN** keys to move to the edge of the frame. To size in two dimensions, move to a corner.



Use the **DIRECTION** keys to size the picture.

- 3 Press the **LEFT**, **RIGHT**, or **DOWN** key to move the icon to the bottom or side of the dotted frame. To size in two dimensions, move the icon to a lower corner of the dotted frame.
- 4 Press a **DIRECTION** key to enlarge or reduce the frame. For example, if the icon is in the lower-right corner, pressing the **UP** key reduces the height of the dotted frame, and pressing the **LEFT** key reduces the width.
- 5 When the frame is the size you want, press the **ENTER** key. Or, press the **ESCAPE** key to go back to the original size.

## Sizing a picture



To size a picture with the mouse, follow these steps:

- 1 Click the picture to select it.
- 2 Select the **Edit** menu and choose the **Size Picture** command. An icon appears in the center of the picture and a dotted frame surrounds the picture.
- 3 Without pressing the mouse button, move the icon to the bottom, left, or right edge of the frame.

At the edge of the frame, move the icon in the direction you want to enlarge or reduce the picture.

- 4 When the frame is the size you want, click the mouse button.  
Or, press the ESCAPE key to go back to the original size.

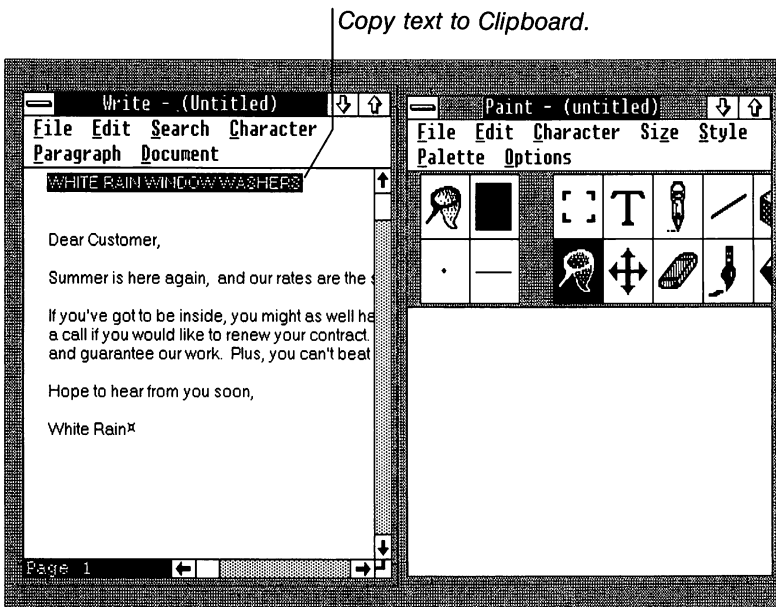
## Pasting from Write onto Another Application

You can paste text and graphics from your Write documents onto other applications. The following example shows you how to paste text onto Paint. You may want to do this to make certain text, such as a title or letterhead, more elaborate. Then you can paste the text back onto your Write document.

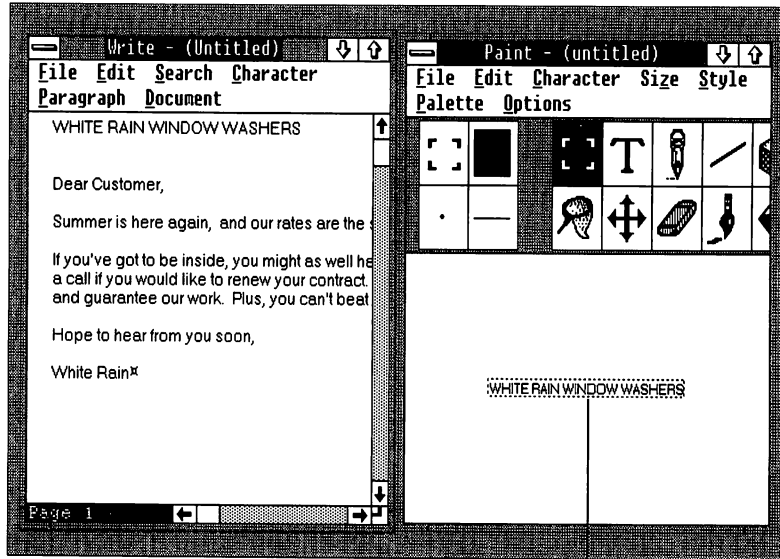
To paste from Write onto Paint, follow these steps:

- 1 Open two windows on the screen: a Write window with a document and a Paint window with a clean canvas.
- 2 Select the text in the Write document that you want to paste onto Paint.

### Pasting from Write onto Paint



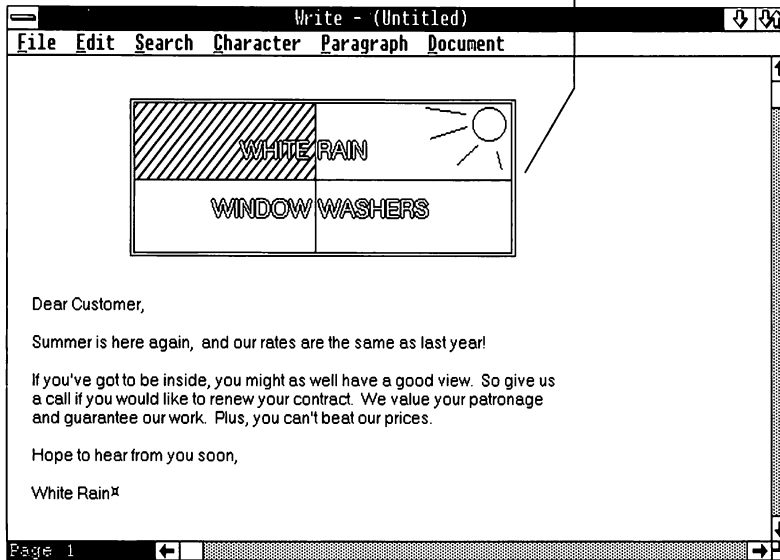
- 3 Select the Edit menu and choose the Copy command.
- 4 Select the Paint window.
- 5 Select the Edit menu and choose the Paste command.



*Text pasted into Paint*

Now you can use the Paint tools to make the text really exciting. Use your imagination and experiment. If you want to start over, erase the canvas and paste the text again.

When you finish designing the text, you can paste it back onto the Write document. For instructions on how to do this, see "Pasting Graphics from Windows Paint," earlier in this chapter.

*Graphics from Paint pasted back into document*


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## Using Write with Microsoft Word

Write is highly compatible with Microsoft's in-depth word processing program, Word. You can share documents between these two writing programs and get the benefits of both.

Microsoft Word is a word processor for people who handle long documents or need advanced capabilities. With Word, you get special features such as mail merge, spelling checker, footnotes, glossaries, style sheets, and automatic hyphenation.

Write offers the advantages of combined text and graphics and the ability to paste information from other applications. It is the perfect writing program for busy people who need to get short documents out quickly. Write is also very easy to learn because it uses the standard Windows interface.

If you are using both Write and Word, or if you have access to Write and Word documents, you will find the two products complement each other. You can move a Write document into Word and use advanced features, such as mail merge, with that document. You can move a Word document into Write and paste in graphics and text from Paint and other applications in Windows.

Both word processors are very flexible in their treatment of fonts, but they do not use the same fonts. A document transferred into Write can use only the fonts available with Write. A document transferred into Word can use only the fonts available with Word.

---

## Using Word documents in Write

### Using a Word Document in Write

To use a Word document in Write, open the document with the Open command in Write. You can begin immediately to edit the text, paste graphics from the Clipboard, or perform other Write tasks with the document.

Because Word has more ways to treat text than Write does, some aspects of the document will change. Check the following list to see how Write will handle your Word document:

- If the Word document has more than one division, Write uses only the division formats of the first division. Write discards automatic page numbers, but keeps the starting page number, if you specified it. Write does not acknowledge any margin settings made in the Word document; instead it uses the margins that are set for the active printer in Write. Write changes Word's division marks into page breaks and discards any division formats assigned after the first division.
- If the first division of the Word document has a header and if the header is the first paragraph in the document, it becomes the header in the Write document. The same is true for the footer (or for both, if they are the first two paragraphs). Headers and footers that are not the first two paragraphs are discarded. Headers and footers from later divisions are discarded.

**Note** If you are using Version 1.0 of Microsoft Word, Write discards all headers and footers.

- Write displays footnotes from the Word document as paragraphs at the end of the document. Write displays automatic footnote references as asterisks. If you entered your own footnote references in Word, Write retains them.
- Write uses the tab settings from the first paragraph of the Word document. These tab settings apply to the entire Write document.
- Write keeps the paragraph formats from Word, except extra space between paragraphs. If paragraphs have line spacing greater than double spacing (such as triple spacing), Write changes it to double spacing.

- Write keeps new-line characters.
- Write keeps the bold, italic, and underline character formats. Write discards the strikethrough, double underline, and upper-case formats and displays the text as normal text. Write displays a smaller font for small caps, but does not capitalize the text. Write keeps superscripts and subscripts.
- Write changes nonbreaking spaces to “ÿ” and nonbreaking hyphens to “iä.” Write discards optional and automatic hyphens.
- Write discards formatting that was done with Word style sheets. If you want to keep the formatting, change style sheet formatting to direct formatting before you transfer the document to Write.

To change style sheet formatting to direct formatting, follow these steps:

---

### Changing to direct formatting

- 1 Select the entire document in Word.
- 2 Press ESCAPE, F, C to open the Format Character menu.
- 3 Choose a character format that was *not* used in your document, such as Strikethrough or Double Underline, and choose No for that format.
- 4 Press the ENTER key.  
This converts the character formatting done with style sheets to direct formatting. When you apply direct formatting to all the characters, Write breaks its connection with the character formats on the style sheet.
- 5 Press ESCAPE, F, P to open the Format Paragraph menu.
- 6 Choose a paragraph format that was *not* used in your document, such as Keep Follow, and choose No for that format.
- 7 Press the ENTER key.  
This converts the paragraph formatting done with style sheets to direct formatting. When you apply direct formatting to all the paragraphs, Write breaks its connection with the paragraph formats on the style sheet.
- 8 Save the document.

Now you can transfer the document to Write without losing the formatting.

---

## Using Write documents in Word

### Using a Write Document in Word

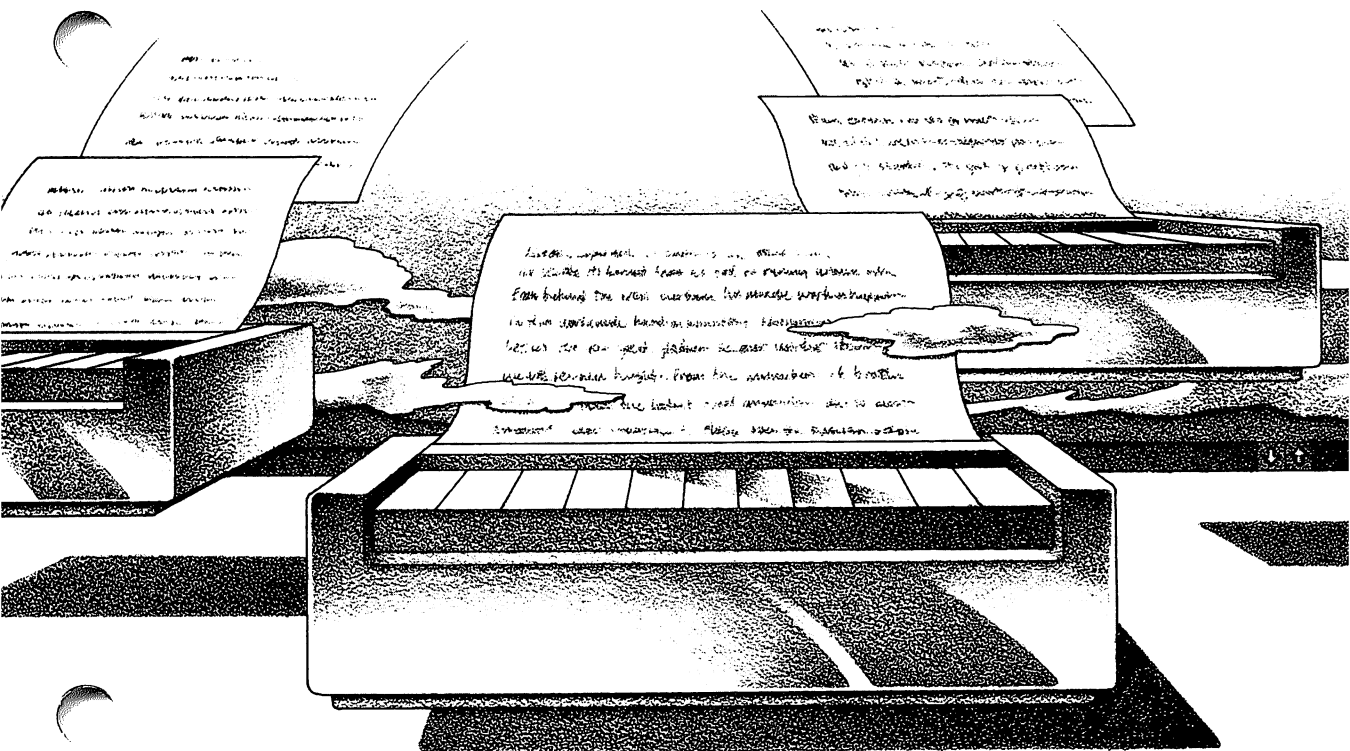
To use a Write document in Word, open the document as you would open any document with Word. You can begin immediately to use all the features of Word with the document.

Word keeps the character, paragraph, and document formats you assigned to the Write document. If you add Word-only features, such as footnotes or divisions, these will be changed if you open the document again with Write. See the previous section, "Using a Word Document in Write."

**Note** If your Write document contains graphics, delete them before transferring the document to Word. If you do open a document with graphics in Word, do not attempt to edit the graphics or print the document with Word. The Word program is not intended for use with graphics.

## 5 Printing a Document

When you are ready to print a document, use the Print command from the File menu to send the document to the printer. If you want to see where Microsoft Windows Write will break the pages before you print, use the Repaginate command to paginate the document. Write also has a Change Printer command that lets you switch to a different printer before you start printing. This chapter describes how to perform all of these commands.



---

## Using the Print Command

When you print a document, you can specify the number of copies and the range of pages you want to print. Write proposes printing one copy of the entire document. If you want to change the preset margins before you print the document, use the Page Layout command. For more information on changing margins, see Chapter 3, "Formatting Your Work."

---

### Printing a document

To print a document, follow these steps:

- 1 Select the File menu and choose the Print command.

You will see this dialog box:

*If the current printer has a draft mode, you will see this option. Select the check box if you want to print the document in draft mode.*

*To print more than one copy, type the number of copies here.*

Copies: 1      OK  
 Draft Quality      Cancel  
Page Range:  
 All  
 From:      To:

*To print a range of pages, select this option and type the page numbers in the From box and To box.*

- 2 Select the options you want in the dialog box.
- 3 Choose the OK button.

You will see this message:



Choose this button to cancel printing.

To resume printing after a pause, select the Controls menu and choose the Resume command. For more information on printing, see the *Microsoft Windows User's Guide*.

**Note** You may have to disable Spooler in order to print large files. To do this, change the Spooler= line in the [windows] section of your WIN.INI file to read *spooler=no*. Then restart Windows. When you print a file, Spooler will not be used (Write will send the file directly to the printer), and you will not be able to pause or restart printing, though you will be able to cancel it.

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## Printing large files

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## Hyphenation

Write recognizes two kinds of hyphens, both of which you need to enter by hand. Write doesn't hyphenate automatically.

Normal hyphens are always visible. Use them for those hyphens you always want to appear; for example, in words such as *long-range*. Write breaks at normal hyphens that appear at the end of a line.

To insert a normal hyphen, simply type a dash in the desired location.

Optional hyphens are invisible unless they appear at the end of a line. Use them to specify correct hyphenation points in words.

To insert optional hyphens, follow this procedure:

- Press CONTROL + SHIFT + DASH at each desired hyphenation point.

---

## Using hyphens

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## Paginating

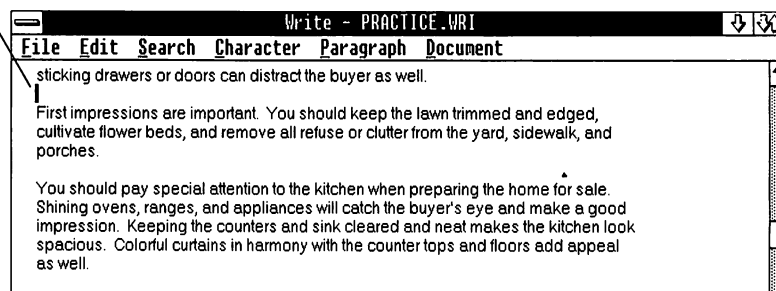
Paginating is the process of breaking a document into pages. Write paginates a document for you automatically when you print it. Write controls pagination so that a single line in a paragraph is not printed by itself at the top or bottom of a page.

If you know you want a new page to start at a specific place, you can insert a page break.

To insert a page break, follow these steps:

- 1 Position the insertion point where you want the page break to occur.
- 2 Press CONTROL + ENTER.

*Press CONTROL + ENTER to insert a page break here.*



---

### Inserting a page break

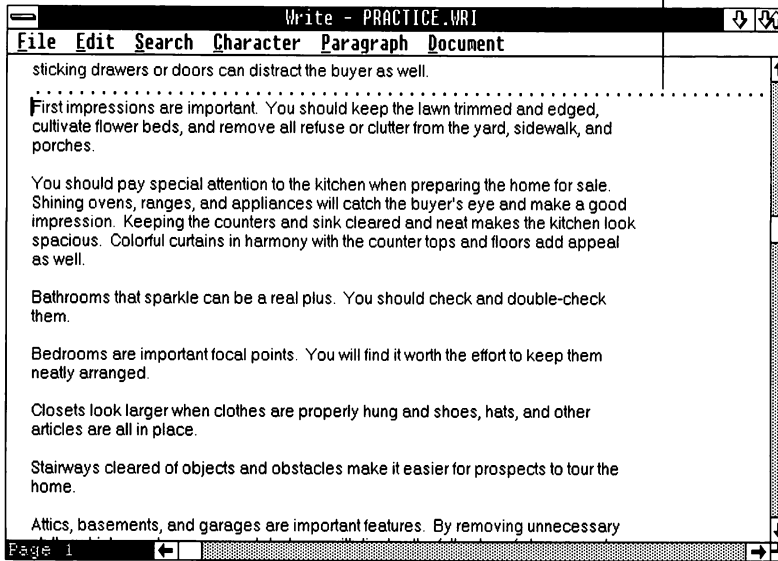
---

### Paginating a document

You can use the Repaginate command on the File menu to paginate a document. Then you can preview the page breaks on the screen before you print the document. The Repaginate command has an option called Confirm Page Breaks. It lets you approve or move each page break Write proposes during pagination.

After pagination, two arrows (») in the left margin indicate the first new line of each page. The page breaks that you move or insert yourself appear as a dotted line across the document, followed by the two arrows. The dotted line can be selected, deleted, or copied just like any other character.

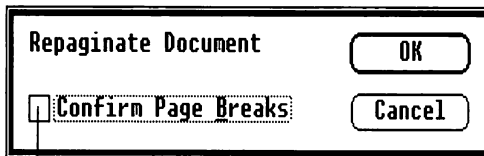
A dotted line indicates an inserted page break.



To paginate a document, follow these steps:

- 1 Select the File menu and choose the Repaginate command.

You will see this dialog box:

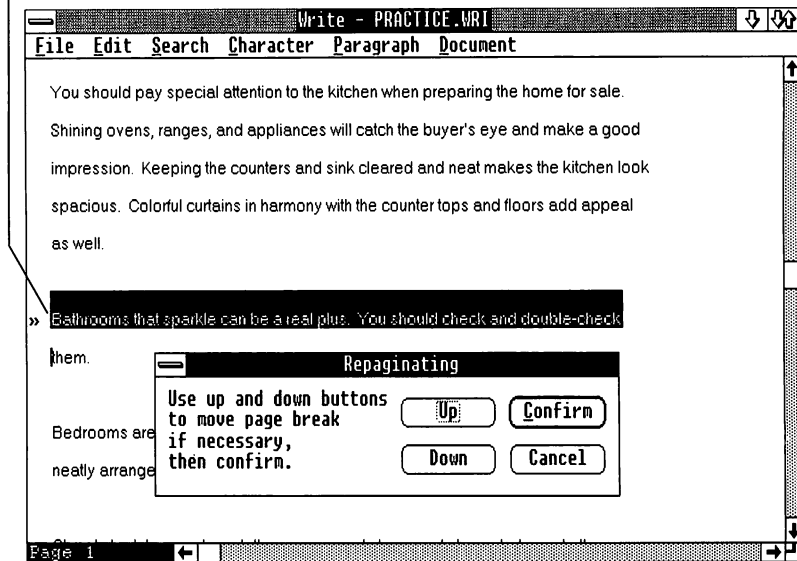


Select the check box if you want to approve each page break during pagination.

- 2 Select the Confirm Page Breaks check box if you want to approve each page break during pagination.
- 3 Choose the OK button.

If you elected to confirm page breaks, you will see this dialog box at each page break:

*Write proposes to break the page here.*



**Note** You cannot move a page break down from where Write proposes it. If you do not like the page break, you must move it up. Use the Down button if you move the page break up too far and want to move it back.

The Repaginate command does not change a page break you inserted with CONTROL+ENTER. However, while you are confirming page breaks, Write stops at each page break you have inserted and asks if you want to keep or remove it.

After a document has been paginated, you can jump to a specific page with the Go To Page command from the Search menu. This is a quick way to scroll through a long document once it has been paginated. For more information on the Go To Page command, see Chapter 2, "Editing a Document."

---

## Changing the Printer

Write prints your documents on the active printer. The active printer is the printer you installed with Windows. If you have installed more than one printer, you can change to a different printer in Write with the Change Printer command. The printer you change to then becomes the active printer.

The Change Printer command lists all the printers you installed with Windows during setup and also with the Add New Printer command in the control panel.

You can change printers in order to print on a different printer, or just to format your document for a different printer. The printer you change to need not be physically connected to your computer, but it must be installed in Windows.

When you change printers, the appearance of your document may change on the screen. This is because Write applies the fonts and character formats available with the active printer. These changes may affect the line breaks and page breaks in the document. If you change printers and want to see the new page breaks, use the Repaginate command.

To change the printer, follow these steps:

- 1 Select the File menu, and choose the Change Printer command.  
You will see a dialog box with a list of the installed printers.
- 2 Select the name of the printer you want to change to.
- 3 Choose the OK button.

If the new printer has options for the mode of operation, you will see another dialog box. Select the options you want to use with the printer and choose the OK button.

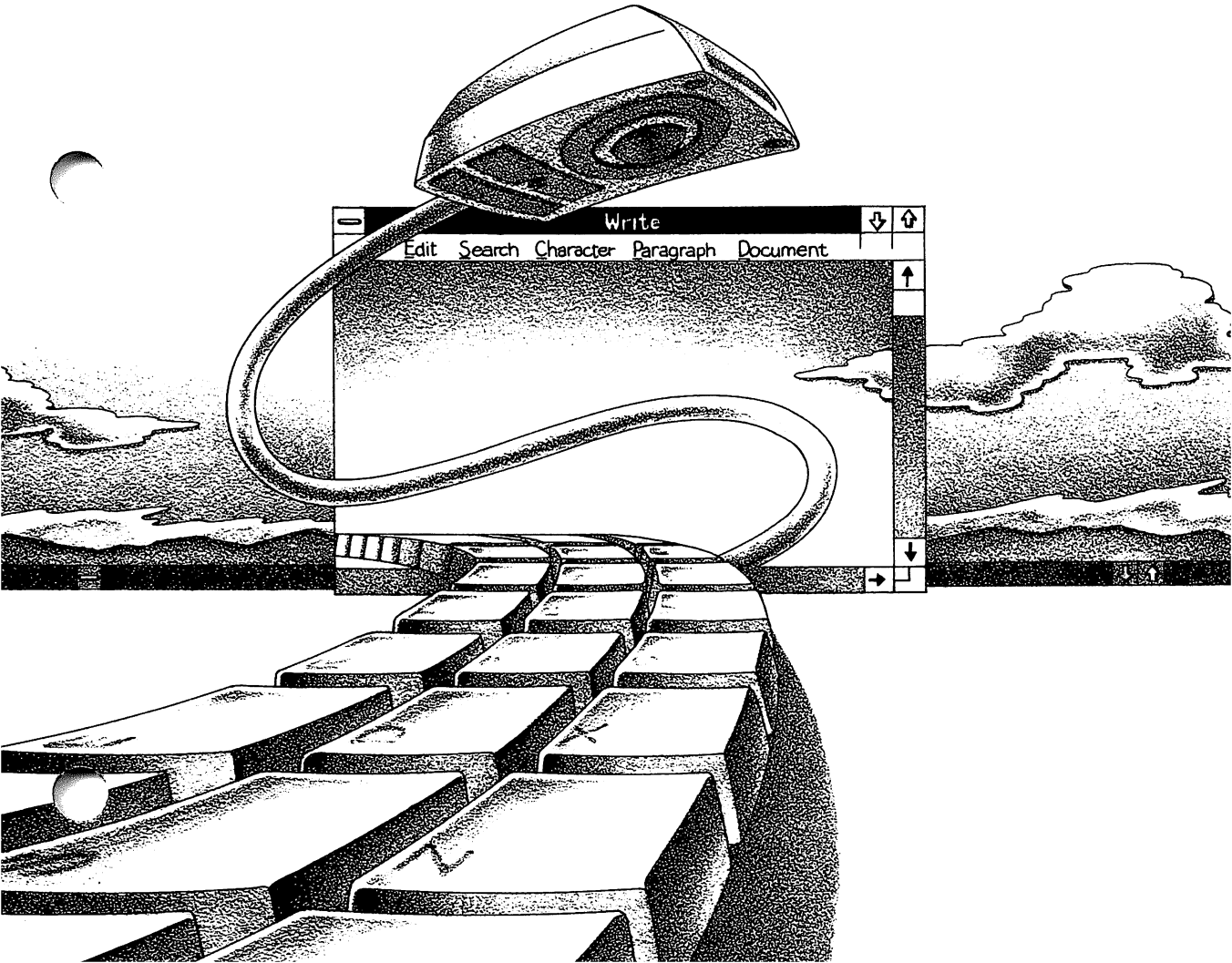
---

## Changing the printer

## 6 Command Summary

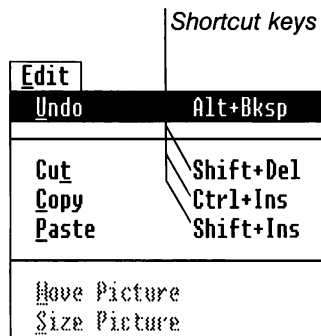
Microsoft Windows Write commands help you create, edit, format, and print your documents. You choose commands from the menus on the menu bar at the top of the Write window.

This chapter describes shortcut command keys, and describes each of the Write commands in the order in which they appear on the menus.



## Shortcut Command Keys

Some commands have shortcut keys. Pressing a shortcut key is the same as choosing the command. For example, pressing CONTROL+INSERT carries out the Copy command from the Edit menu. The shortcut key names are displayed next to the commands on the menus. Not all commands have shortcut keys, but the most commonly used commands do.



With shortcut keys, you bypass opening the menu and choosing the command, and immediately carry out the command. You will find shortcut keys convenient, whether you have a keyboard system or a mouse system.

For this command	Press this key
Undo	ALT + BACKSPACE
Cut	SHIFT + DELETE
Copy	CONTROL + INSERT
Paste	SHIFT + INSERT
Repeat Last Find	F3
Go To Page	F4
Normal (Character)	F5
Bold	F6
Italic	F7
Underline	F8

## The File Menu

Use the File menu commands to create, save, and print your Write documents. Both the Open and New commands let you save any changes to the active document before proceeding.

### New

The New command clears the window and opens a new, untitled document with the preset format and tabs. The document remains untitled until you give it a name with the Save command.

### Open

The Open command opens the document you select from the Open list box. If there is a active document, Write closes it.

You can also open different directories and disk drives with the Open command. Disk drives and directories are shown in square brackets in the list box. If you open a disk drive, the list box displays the documents and directories that are on the disk in that drive. If you open a directory, the list box displays the documents and subdirectories that are in that directory.

Write allows you to open Microsoft Word documents and other documents that are not in Write format. Some of these can or must be converted to Write format when you open them.

### Save

The Save command saves the document on the active disk in the active directory. If the document is untitled, the Save As dialog box appears.

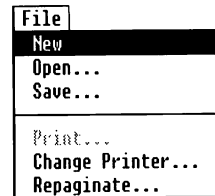
### Save As

The Save As command lets you name or change the name of the active document, or save a new copy of the active document on a different disk or in a different directory.

You can save to a subdirectory by preceding the document name with the subdirectory name; for example, *jobs*.

If you have a hard disk, you can save to a different disk by preceding the document name with the drive name; for example, *b:*.

The Save As command has options for saving a backup copy (selected automatically) and for saving a document as text (Windows ANSI format), in Microsoft Word format, or as non-formatted text (Microsoft Word Text format).



## Print

The Print command paginates the document and sends it to the active printer. Unless you have disabled the Windows Spooler (see "Printing Large Files" in Chapter 5), the Print command automatically runs it, and the Spooler icon appears on the screen. The Print command has options for the number of copies you want to print and for printing a selected page range. Write is preset to print one copy of the entire document. The Print command is disabled (gray) if you have not installed a printer using Windows Setup or the Add New Printer command in the Control Panel.

## Change Printer

The Change Printer command changes the active printer. You select the printer you want from a list box. The list box has the names of the printers you have installed in Windows. The appearance of your document on the screen may change when you choose Change Printer because Write always formats the document for the active printer.

## Repaginate

The Repaginate command paginates the document so you can preview the page breaks before printing. Write indicates page breaks by placing » in the left margin. While Write is repaginating, you can approve or change page breaks with the Confirm Page Breaks option.

## Exit

The Exit command ends your Write session. If you have made changes in the active document (if any), but haven't yet saved them, Write asks you whether you want to save the changes. If you say yes, the Save dialog box appears.

## About Write...

The About Write command opens an information box that gives pertinent information about the Windows Write program, including its revision level. This box remains open until you press OK.

## The Edit Menu

The Cut and Copy commands in the Edit menu are disabled (gray) until you select some text. The Move Picture and Size Picture commands are disabled until you select a picture (graphics).

Edit	
Undo	Alt+Bksp
Cut	Shift+Del
Copy	Ctrl+Ins
Paste	Shift+Ins
Move Picture	
Size Picture	

### Undo

The Undo command reverses your most recent action. The command name changes, depending on your most recent action: Undo Typing, Undo Formatting, or Undo Editing. If your most recent action was undo, the command changes to Undo, and you can use it to reverse the undo.

### Cut

The Cut command removes selected text or graphics from the document and puts it in the Clipboard. Pressing SHIFT+DELETE is the same as choosing Cut.

### Copy

The Copy command copies selected text or graphics to the Clipboard. Pressing the CONTROL+INSERT key is the same as choosing Copy.

### Paste

The Paste command inserts the contents of the Clipboard at the insertion point. Pressing the SHIFT+INSERT key is the same as choosing Paste. The contents of the Clipboard can be from a Write document or from another Windows application.

### Move Picture

The Move Picture command puts a move icon in the selected picture and a dotted frame around the picture. Move the icon with the LEFT and RIGHT keys or with the mouse until the dotted frame is positioned where you want the picture. Then press the ENTER key or click the mouse button to set the new position. Or, press the ESCAPE key to return to the original position.

## Size Picture

The Size Picture command puts a size icon in the selected picture and a dotted frame around the picture. Use the DIRECTION keys or the mouse to move the size icon to the edge of the dotted frame. If you move to a corner, you can size in two dimensions. Move the size icon until the dotted frame is the size you want the picture to be. Then press the ENTER key or click the mouse button to set the new size. Or, press the ESCAPE key to return to the original size.

Search	
Find...	
Repeat Last Find	F3
Change...	
Go To Page...	F4

## The Search Menu

The Find command starts searching for text at the insertion point or at the end of the selection and goes to the end of the document; then it goes to the beginning of the document and continues searching to the insertion point or to the end of the selection. The Change command searches like the Find command. But, if you have characters or words selected, Change searches only within the selection.

You can use a question mark as a wildcard character in the search. For example, hea? might find "head," "heal," and "heap."

The Find and Change commands both have the Whole Word and Match Upper/Lowercase options. Select the Whole Word check box to assure that Write does not find the search text embedded in other text, such as "main" in "remainder." Select the Match Upper/Lowercase check box to find only those occurrences with the same capitalization as the search text. Otherwise, Write ignores capitalization while searching.

## Find

The Find command searches for a specific piece of text and selects it. The Find dialog box stays on the screen while Write searches. You can choose the Find Next button to continue searching. To close the Find dialog box, press the ESCAPE key.

## Repeat Last Find

The Repeat Last Find command continues the search for the text from the last Find or Change command. You can continue the search with Repeat Last Find even after you have closed the Find or Change dialog box. Pressing the F3 key is the same as choosing Repeat Last Find.

## Change

The Change command searches for a specific piece of text and selects and/or changes it. The Change dialog box stays on the screen while Write searches. You can choose the Find Next button or the Change then Find button to continue searching and changing. You can choose the Change All button to change all occurrences of the text automatically. If you make a selection before choosing the Change command, the command operates only within the selection. To close the Change dialog box, press the ESCAPE key.

## Go To Page

The Go To Page command scrolls to a specific page number. Write assigns page numbers when you print the document or paginate it with the Repaginate command. Pressing the F4 key is the same as choosing Go To Page.

---

## The Character Menu

To change the appearance of characters, select them before choosing a command from the Character menu. If you do not make a selection, the command applies to the next text you type. Otherwise, the text you type has the character formats of the text immediately preceding it.

Character formats do not appear on the screen if they are not supported by the active printer.

The formats assigned to the selected text have a checkmark by them on the menu. Choosing a command that is already checked unchecks it and removes the formatting.

Character	
Normal	F5
<b>Bold</b>	F6
<input checked="" type="checkbox"/> <i>Italic</i>	F7
<u>Underline</u>	F8
Superscript	
Subscript	
<hr/>	
<input checked="" type="checkbox"/> 1. Helv	
<input type="checkbox"/> 2. Courier	
<input type="checkbox"/> 3. Tms Rmn	
<hr/>	
Fonts...	

### Normal

The Normal command removes all character formatting except font and font size changes from your text. Pressing the F5 key is the same as choosing Normal.

### Bold

The Bold command changes the character style to boldface. Pressing the F6 key is the same as choosing Bold.

## **Italic**

The Italic command changes the character style to italic. Pressing the F7 key is the same as choosing Italic.

## **Underline**

The Underline command underscores text. Pressing the F8 key is the same as choosing Underline.

## **Superscript**

The Superscript command raises characters above the baseline of the text. The superscript appears in a smaller size.

## **Subscript**

The Subscript command lowers characters below the baseline of the text. The subscript appears in a smaller size.

## **Font Names**

Up to three font names appear on the Character menu, depending on the active printer. Choose a font name to assign that font to text. Write changes the names and their order on the menu depending on the fonts you use most often.

## **Reduce Font**

The Reduce Font command reduces the size of a font to the next smaller size. If a smaller size is not supported by the active printer, there is no visible change on the screen.

## **Enlarge Font**

The Enlarge Font command increases the size of a font to the next larger size. If a larger size is not supported by the active printer, there is no visible change on the screen.

## **Fonts**

The Fonts command displays all the fonts and sizes available for the active printer. You can select a font and size from the lists to assign them to text. Or, you can enter a font name and size for a different printer and assign them to text.

## The Paragraph Menu

The commands in the Paragraph menu change the formats of a paragraph that contains the insertion point, or of all of the paragraphs in the active selection. When you start a new paragraph by pressing the ENTER key, it begins with the same formats as the preceding paragraph.

### Normal

The Normal command restores the preset paragraph formats: left-aligned, single-spaced, unjustified, with no indents.

### Left

The Left command aligns the paragraph flush left on the margin.

### Centered

The Centered command centers each line of the paragraph inside the active margins.

### Right

The Right command aligns the paragraph flush right on the margin.

### Justified

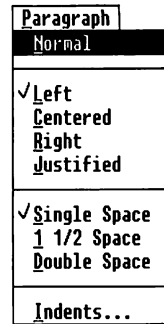
The Justified command justifies the paragraph. It fills in the spaces between words to align the paragraph on the left and right margins.

### Single Space

The Single Space command sets the line spacing with one-sixth inch between lines. If the line includes different font sizes, the line spacing will vary to accommodate the tallest character in the line.

### 1 1/2 Space

The 1 1/2 Space command sets the line spacing with one-quarter inch between lines.



## Double Space

The Double Space command sets the line spacing with one-third inch between lines.

## Indents

The Indents command sets the distance that lines are indented from the margin. You can indent from the left and right margin, and you can indent the first line of a paragraph. Note that the Indents command does not change the margin itself. To change margins, you use the Page Layout command.

Document
Header...
Footer...
Ruler On Tabs...
Page Layout...

---

## The Document Menu

The commands in the Document menu affect the entire document. Headers, footers, and page numbers are displayed only on printed pages, not in your document on the screen.

### Header

The Header command opens the Header document and dialog box. The text you type in the Header document becomes the running header when you print the document. The dialog box options let you include page numbers, change the distance of the header from the top of the page, and print the header on page one.

### Footer

The Footer command opens the Footer document and dialog box. The text you type in the Footer document becomes the running footer when you print the document. The dialog box options let you include page numbers, change the distance of the footer from the bottom of the page, and print the footer on page one.

### Ruler On/Off

The Ruler On command displays the Ruler at the top of the window. If you have a mouse, you can use the Ruler to set tabs and paragraph formats. The Ruler Off command hides the Ruler.





## **Tabs**

The Tabs command sets tabs. You can set left-aligned tabs or decimal tabs. Write has preset tabs set at every half inch. The preset tabs do not appear in the Tabs dialog box or on the Ruler.

## **Page Layout**

The Page Layout command changes the margins for the printed page, changes the starting page number, and toggles the measurement between English and Metric (inches and centimeters; the preset is inches). The preset page layout leaves a 1-inch margin at the top and bottom of the page, and a 1.25-inch margin at the left and right of the page.






## Appendix Fonts and the Active Printer

This appendix describes how Microsoft Windows Write uses fonts with different types of printers.

The fonts provided with Windows are Courier, Helv, and Tms Rmn. Courier is a fixed-space font, and Helv and Tms Rmn are proportional-space fonts. Whether you can use a particular font with your Write documents depends on the printer(s) you have installed with Windows.


---

### The Active Printer



When you start Write, the active printer is the printer you specified when you installed Windows. If you installed more than one printer in Windows, you can change to a different printer in Write with the Change Printer command. The printer you change to becomes the active printer, and Write formats the document for that printer. Write also sends the document to that printer when you choose the Print command. For more information on the Change Printer command, see Chapter 5, "Printing a Document." For more information on installing printers and fonts, see the *Microsoft Windows User's Guide*.

When you change printers, you may notice a change in the font names on the Character menu and in the Fonts command dialog box. You may also notice that Write displays the text in your document in a different font. This is because Write uses the fonts that are available with the active printer. The rest of this appendix provides information on dot matrix and daisy wheel printers, and on the Hewlett-Packard LaserJet printer.



**Note** On some two-drive floppy disk systems, you may not be able to use all three of the fonts provided with Windows, even though your printer supports all three fonts. To see which fonts you have, look at the font names listed on the Character menu. For information on deleting one font and adding another, see the *Microsoft Windows User's Guide*.

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**Dot matrix printers****Dot Matrix Printers**

If the active printer is a dot matrix printer, such as the Epson FX-80 or the IBM Graphics Printer, the list box in the Fonts command dialog box displays font choices available. Font names other than Courier, Helv, and Tms Rmn may be in the list box if you installed additional fonts from Windows Control Panel, or if the active printer is an Epson.

---

**Daisy wheel printers****Daisy Wheel Printers**

If the active printer is a daisy wheel printer, such as the NEC 3550, the list box in the Fonts command dialog box displays the names of fonts (print wheels) that are available for that printer. During printing, Windows Spooler prompts you to change the print wheel if it encounters a font change in the document.

---

**Hewlett-Packard  
LaserJet printer****Hewlett-Packard LaserJet Printer**

If the active printer is the Hewlett-Packard LaserJet, look at your font cartridge to see which fonts are available. When you use the Fonts command to specify font sizes, be sure to specify a size that is on your font cartridge.

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