

Microsoft® MS-DOS®
User's Guide and
User's Reference

Microsoft

Microsoft® MS-DOS® User's Guide

**Operating System
Version 4.0**

Microsoft Corporation

Information in this document is subject to change without notice and does not represent a commitment on the part of Microsoft Corporation. The software described in this document is furnished under a license agreement or non-disclosure agreement. The software may be used or copied only in accordance with the terms of the agreement. It is against the law to copy the software on any medium except as specifically allowed in the license or non-disclosure agreement. No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, for any purpose without the express written permission of Microsoft.

© Copyright Microsoft Corporation, 1987, 1988. All rights reserved.

Simultaneously published in the United States and Canada. Printed in the United States of America.

Microsoft, the Microsoft logo, MS-DOS, XENIX, Multiplan, and GW-BASIC are registered trademarks of Microsoft Corporation.

Lotus is a registered trademark of Lotus Development Corporation.

Contents

Welcome v

- Before You Begin vi
- Notational Conventions vii
- How to Use This Guide viii

1 Learning About MS-DOS 1

- Terms You Should Know 2
 - Program 2
 - File 2
 - Filename 3
 - Directory 4
 - Volume Label 4
 - Disk Drive 4
 - Drive Name 5
 - The Default Drive and the MS-DOS Prompt 5
 - Command 6
 - Devices 6
 - Device Names 6
 - Error Messages 7
 - Memory 7
- Keys You Use with MS-DOS 8
 - The Enter Key 8
 - Keys that Move the Cursor 8
 - Control Key Combinations 9

2 Learning About Disks, Files, and Directories 11

- Floppy Disks 12
 - Disk Protection 13
- 3.5-inch Disks 14
- Hard Disks 15
- The Format Command 16
- How to Name Your Files 16
- Invalid Filenames 17
- Directories 17

3 Getting Started 19

- How to Install MS-DOS Using the Select Program 19
- Running the Select Program 22
 - The Function and Workspace Screen 22
 - The Country and Keyboard Screen 22
 - The Select Installation Drive Screen 22
 - The Number of Printers Screen 23
 - The MS-DOS Shell Option Screen 23
 - The Installation Options Screen 23
- Continuing MS-DOS Installation 24
- An Overview of MS-DOS Shell 25
- How to Start MS-DOS Shell 25
- How to Quit MS-DOS 26
- How to Make a Backup Copy of Your MS-DOS Disk 26

4 Using Commands 29

- File Commands 29
 - The Dir Command 29
 - The Copy Command 31
 - The Delete Command 32
 - The Rename Command 33
 - The Type Command 33
 - The Print Command 35
- Disk Commands 36
 - The Format Command 36
 - The Diskcopy Command 38

5 Using Applications with MS-DOS 41

- How to Run Application Programs 41
 - A Note About Using Application Programs 43
- How to Create a File with Edlin 43

6 Setting Up MS-DOS 47

- The Config.sys File 47
- The Autoexec.bat File 49
- How These Special Files Differ 50
- Summary 51

Terms 53

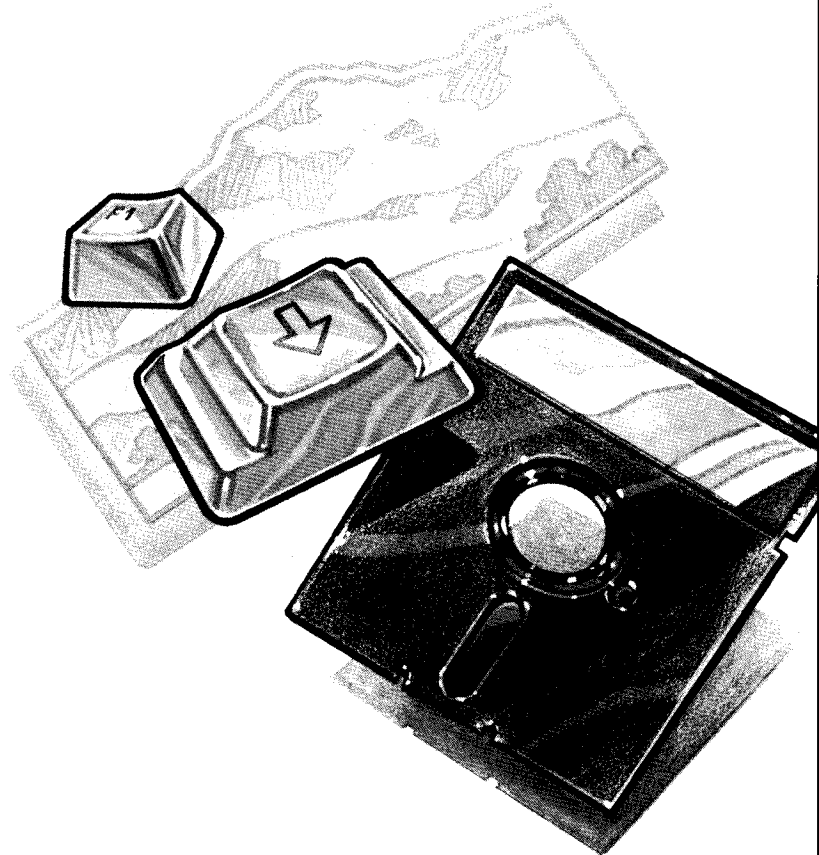
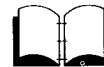
Index 59

Welcome

Welcome to the MS-DOS® operating system, version 4.0. If you are new at working with operating systems for personal computers, you will want to learn a few basics before you go on to learn about the advanced features of MS-DOS. This *MS-DOS® User's Guide* was written to help you understand the fundamentals of using MS-DOS with your personal computer.

Once you have read this *MS-DOS® User's Guide*, or if you are already an advanced personal computer user, see the *MS-DOS® User's Reference*, which presents the features of MS-DOS, and describes each MS-DOS command in detail. In addition, programmers may be interested in the *MS-DOS® Programmer's Reference*, which introduces programmers to MS-DOS, and describes all the MS-DOS system calls.

**Also see these
manuals**

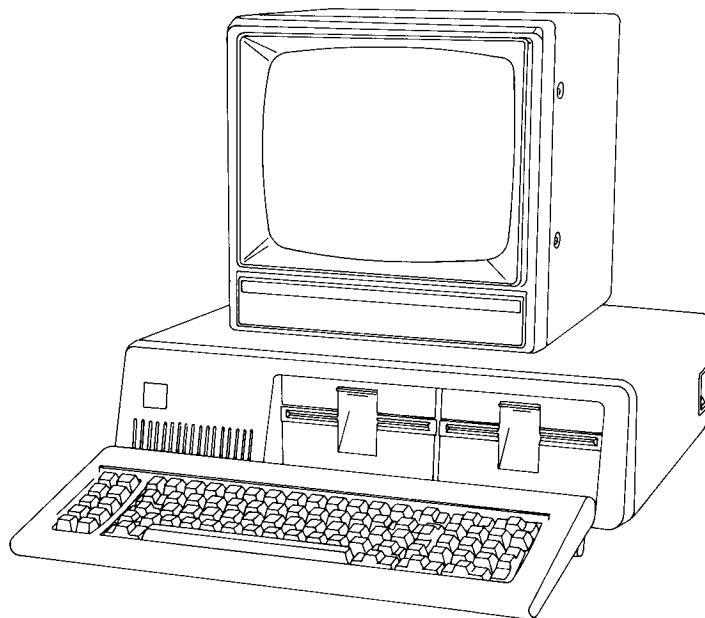


Before You Begin

System requirements

Before you begin using this *MS-DOS User's Guide*, you should have

- A 16-bit personal computer that runs MS-DOS and has at least 256K bytes of memory. Some 8-bit and 32-bit computers also support MS-DOS 4.0.
- One or two disk drives (either one or two floppy-disk drives or one hard-disk drive and one floppy-disk drive).



- The *MS-DOS User's Reference*
- The MS-DOS master disks.

The following are the installation disk titles included in each set of master disks. They vary depending on the size of the disks used by your system.

**5.25-inch disks
(360 kilobytes)**

Install (write
protected)

Select

Operating1

Operating2

Operating3

MS-DOS Shell

**3.5-inch disks
(720 kilobytes)**

Install (write protected)

Operating

MS-DOS Shell

Notational Conventions

Throughout this manual, the following conventions are used to distinguish elements of text:

bold	Used for commands, options, switches, and literal portions of syntax that must appear exactly as shown
<i>italic</i>	Used for filenames, variables, and placeholders that represent the type of text to be entered by the user
<code>monospace</code>	Used for sample command lines, program code and examples, and sample sessions
SMALL CAPS	Used for keys, key sequences, and acronyms

About this manual

How to Use This Guide

This manual introduces you to the MS-DOS operating system and teaches you how to use several MS-DOS features. The manual is organized so that you can easily find what you need to know, as in the following list, which gives you a quick overview of the topics covered.

Turn to	To learn
Chapter 1	About your keyboard
Chapter 2	About disks and files
Chapter 3	How to install MS-DOS using the Select program How to start the Shell program How to quit MS-DOS
Chapter 4	How to use MS-DOS commands How to print a file
Chapter 5	How to run a program How to create a file
Chapter 6	What the <i>config.sys</i> file does What the <i>autoexec.bat</i> file does How to modify these two files
Terms	About MS-DOS terminology



To learn more about MS-DOS, refer to the *MS-DOS User's Reference*.



1 Learning About MS-DOS

In this chapter you will learn about

- Important MS-DOS terms
- Your personal computer's keyboard



Terms You Should Know

Introducing MS-DOS terms



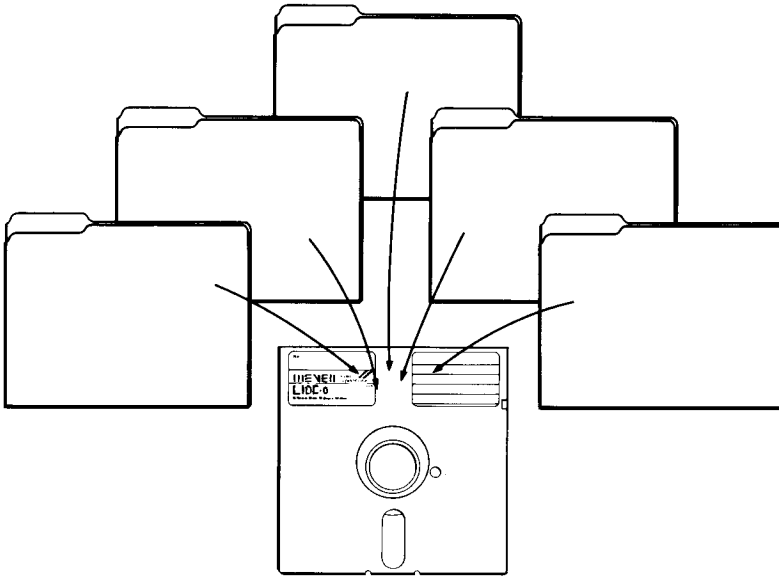
When you are introduced to a new or different idea, you must often learn a new set of words to understand the idea. The MS-DOS operating system is no exception. The following pages explain some terms you will need to know so that you can read and use this manual. If you are already familiar with MS-DOS, you may find the *MS-DOS User's Reference* more helpful.

Program

Programs, often called application programs, applications, or software, are series of instructions written in computer languages. These instructions are stored in files and tell your computer to perform a task. For example, a program might tell your computer to alphabetically sort a list of names. Spreadsheets and word processors are other examples of programs.

File

A file is a collection of related information, like the contents of a file folder in a desk drawer. File folders, for instance, might contain business letters, office memos, or monthly sales data. Files on your disks could also contain letters, memos, or data. For example, your MS-DOS master disks contain more than thirty files. Your other disks may contain files that you've created, or that came with the disk.



Filename

Just as each folder in a file cabinet has a label, each file on a disk has a name. This name has two parts: a *filename* and an *extension*. A filename can be from one to eight characters in length, and can be typed in uppercase or lowercase letters. MS-DOS automatically converts filenames to uppercase letters.

Filename extensions consist of a period followed by one, two, or three characters. Extensions are optional, but it's a good idea to use them, since they are useful for describing the contents of a file to you and to MS-DOS. For instance, if you want to be able to quickly identify your report files, you can add the filename extension *.rpt* to each one. Here's an example of a filename with this extension:

```
progress.rpt
|           |
|filename   |filename extension
```

When you look at the directory on your MS-DOS master disks, you will see many files with the extension *.exe* or *.com*. The extension *.exe* means *executable*, and *.com* means *command*. These extensions tell MS-DOS that the files are programs that can be run. Many files will have other kinds of extensions, such as *.doc* and *.txt*, which might contain text. Another common program file extension is *.bas* for BASIC programs. Some application

programs assign filename extensions automatically. For example, Microsoft® Multiplan® assigns the extension *.mp*, and Lotus® 1-2-3 assigns one of three extensions, for instance *.wks* for worksheet files.

Directory

A directory is a table of contents for a disk. It contains the names of your files, their sizes, and the dates they were last modified.

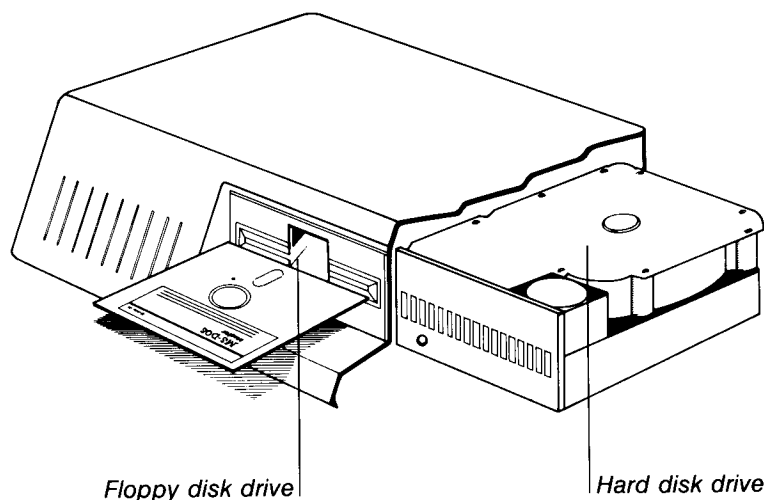
Volume Label

When you use a new disk, you can put a label on the outside of it to help you identify its contents. You can also give each of your disks an internal name, called a *volume label*.

You can look at the volume label on a disk by displaying its directory. Some programs may look at the volume label to see if you are using the correct disk. So make sure that you label your disks. See Chapter 4, "Using Commands," for step-by-step instructions on how to create a volume label for a disk.

Disk Drive

To use the files or programs that are on a floppy disk, you must first insert the disk into a *floppy disk drive*. Floppy disk drives are commonly referred to as the A drive and the B drive. A hard disk drive, normally installed inside your computer, is usually referred to as the C drive. Check your computer manual to see which drive is A and which is B (or C).



Drive Name

A complete *drive name* consists of a *drive letter* and a colon. When using a command, you may need to type a drive name before your filename to tell MS-DOS where to find the disk that contains your file. For example, suppose you have a file named *finances.doc* on the disk in drive B. To tell MS-DOS where to find this file you would type the drive name before the filename:

```
b:finances.doc
```

drive name	filename with extension

The Default Drive and the MS-DOS Prompt

If you don't specify a drive name when you type a filename, MS-DOS automatically searches for the file on the disk in the *default drive*. The default drive is where MS-DOS searches first when you type a command. To let you know that it is ready to receive a command, MS-DOS displays a symbol, called a *prompt*, that contains the default drive letter followed by a greater-than sign (>). Following the greater-than sign is the *cursor*, the blinking box or flashing underline that shows where the next character you type will appear. Here's an example of a typical MS-DOS prompt and the cursor:

```
A>_
```

	cursor
MS-DOS prompt	

So when your prompt is A>, MS-DOS searches only the disk in drive A (the default drive) for files and programs — unless you tell it to search in another drive.

To change the default drive, you simply type the letter of the desired drive, followed by a colon, and press the ENTER key. For example, if you will be working primarily with files on drive B, it is easier to change the default drive to B, so that you won't have to type the letter *b*, followed by a colon, with every command and filename.

Changing the default drive

Command

Just as you will run programs to create and update files containing your data, you will also need to run some special programs, called MS-DOS commands, that let you work with entire files.

When you type MS-DOS commands, you are asking the computer to perform tasks. For example, when you use the **diskcopy** command to copy your MS-DOS master disk, you are using a file named *diskcopy.com*, whose task is to copy the files on the MS-DOS disk.

Other MS-DOS commands

- Compare, copy, display, delete, and rename files
- Copy, format, and label disks
- Run your programs, as well as those supplied with MS-DOS
- List directories for disks
- Set the date and time
- Set printer and screen options



You'll learn more about MS-DOS commands in Chapter 4, "Using Commands." But for more detailed descriptions of commands, see the *MS-DOS User's Reference*.

Devices

Whenever you use your computer, you supply the information (input) and expect a result (output). Your computer uses pieces of hardware called *devices* to receive input and send output.

For example, when you type a command, your computer receives input from your keyboard and disk drive, and usually sends output to your screen. It can also receive input from a mouse, or send output to a printer. Some devices, such as disk drives, perform both input and output.

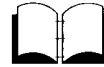
Device Names

Device names are special names given to each device that your computer "knows" about. An example of a device name is LPT1, which stands for the first parallel lineprinter connected to your computer.

When you add a new device, such as a mouse, to your computer, you sometimes need to tell MS-DOS about it by setting up (configuring) your computer for that device. Refer to the information that came with your device, or to the *MS-DOS User's Reference*, for more information on configuring your computer for devices.

Error Messages

If you or your computer make a mistake when using a device or MS-DOS command, MS-DOS displays an appropriate *error message*. Error messages apply to general errors (such as misspelling a command) or to device errors (such as trying to use a printer that is out of paper). For a complete list and explanation of each MS-DOS error message (device and general), see the *MS-DOS User's Reference*, Appendix F.



Memory

Memory is the place in your computer where information is actively used. When you run a program, MS-DOS stores that program and the files it uses in the computer's available memory. Some programs and files use more memory than others, depending on how large and complex they are.

Expanded memory is memory beyond 640 kilobytes that uses page-switching technology and that can be used in most personal computers. If you install the expanded memory-board hardware and a special program called the expanded memory manager, then applications that can use expanded memory gain access to this additional memory. When using expanded memory, follow the instructions provided by your memory-board manufacturer for installing the expanded memory manager.

Extended memory is memory beyond one megabyte on a PC-AT or compatible systems. This memory is generally not accessible to DOS-based programs but can be used by memory-disk programs such as RAMDrive. Many popular extended memory boards can be set up to be used as either expanded or extended memory (or both) if the correct software is installed.

The keyboard

Keys You Use with MS-DOS

Now that you've learned about MS-DOS terms, you can learn about the keys you will be using with the MS-DOS operating system.

In addition to the keys you'd find on a typewriter, your computer keyboard has some keys that have special meanings to MS-DOS.

Differences between keys

First, note that there are two important differences between a typewriter keyboard and a computer keyboard:

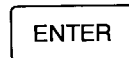


A computer understands the difference between a *one* and a lowercase *L*. Be sure you don't type a lowercase *L* when you mean a *one*.



Capital *O* and *zero* may look alike, but they have different meanings to a computer. Many computers display a zero with a diagonal line (\emptyset) through it. Make sure you type the correct letter or number when you give commands to MS-DOS.

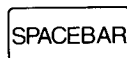
The Enter Key



Press the ENTER key after you type commands. When you press the ENTER key after typing a command, MS-DOS performs the command.

Moving the cursor

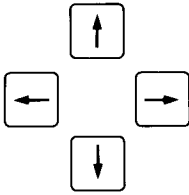
Keys that Move the Cursor



The SPACEBAR moves the cursor to the right.



Use the BACKSPACE key to correct typing mistakes on the current line. The BACKSPACE key deletes characters as it moves the cursor to the left.

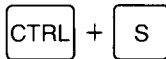


To move the cursor to the left or right *without deleting any characters*, you must use the direction keys. Direction keys move the cursor right, left, up, and down. They do not affect the characters that are displayed. Some programs ignore these keys or do not use them. In these manuals, the direction keys are also referred to as the RIGHT, LEFT, UP, and DOWN keys.

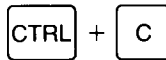
Control Key Combinations



The CONTROL key has a special task. It lets you give complex commands to your computer by pressing only two or three keys. You must hold down the CONTROL key while you press another key. That is, you use the CONTROL key as you would the SHIFT key.



When you press the CONTROL key and the s key at the same time, you can stop the scrolling of the screen display. Then to continue scrolling, press CONTROL+S again.



When you press the CONTROL key and the c key at the same time, you can stop a command.



If you want to restart MS-DOS, press the CONTROL, ALT, and DELETE keys at the same time.

In this chapter, you've learned some of the MS-DOS special terms and seen what the keys on your keyboard can do. Now you are ready to go on to Chapter 2, "Learning About Disks, Files, and Directories." There you'll learn about floppy disks and hard disks, about formatting your disks, and about naming your files.

Using the CONTROL key

What comes next?

2 Learning About Disks, Files, and Directories

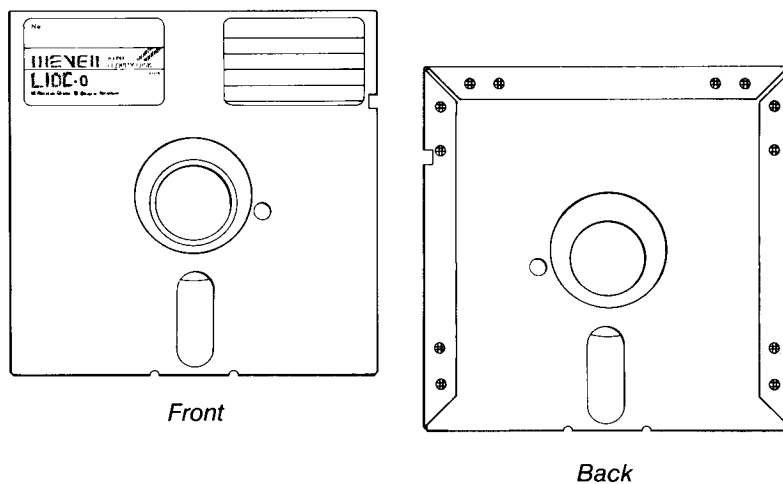
In this chapter you will learn about

- 5.25-inch floppy disks
- 3.5-inch disks
- Hard disks
- Filenames
- Directories

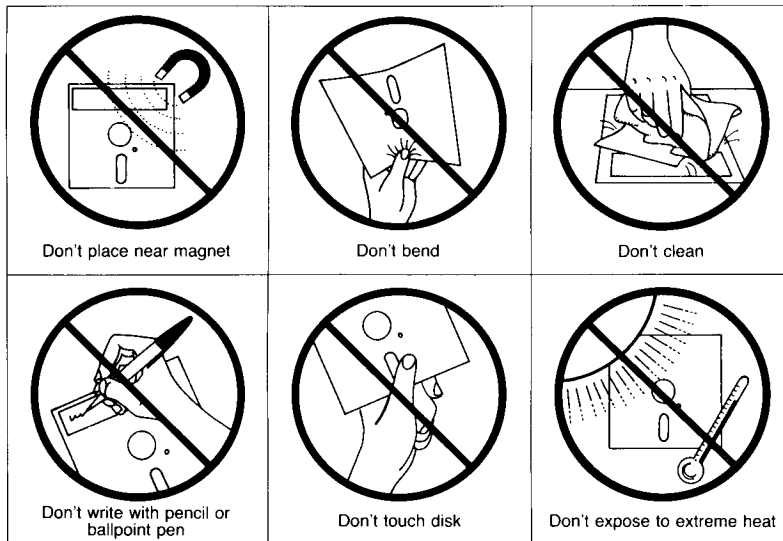
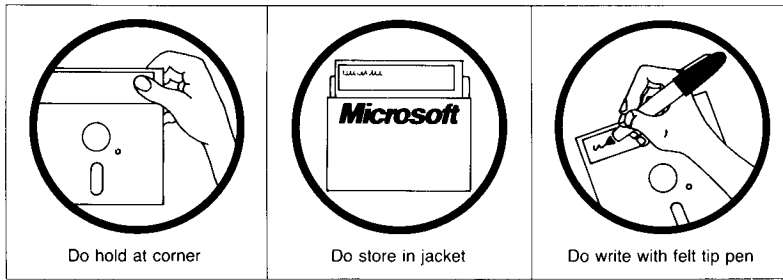
Floppy Disks

About floppy disks

A floppy disk is a flexible, magnetized plastic disk. A double-density floppy disk can store up to 400 single-spaced pages of text. A high-density disk can store about three times that amount. Every floppy disk is enclosed in its own protective cover. The front of this cover is smooth, while the back has visible seams. You should always place labels on the front of the cover, at the top, so that the label doesn't touch the magnetic surface of the disk. It's also a good idea to use a felt-tip pen when writing on labels—a pencil or ballpoint pen can damage the disk if you press too hard.



You should store floppy disks in a safe place, away from dust, moisture, magnetism, and extreme temperatures. Be sure to label each disk you use, since labels help you identify what files are on the disk and remind you that the disk has information stored on it.



Disk Protection

Labels help you keep track of the information on your disks, but you may also need to protect the disks themselves. Some floppy disks are protected, letting you examine information on them without letting you change anything. These are called *write-protected* disks.

Floppy disks can be write-protected in one of two ways. Some have a small piece of tape, called a *tab*, covering a notch on the right side of the disk. You can copy information onto a write-protected disk by first removing the write-protect tab; however, you should consider why the disk was protected *before* you change its contents. After you have copied or changed a write-protected disk it's always a good idea to replace the write-protect tab.

Protecting your disks

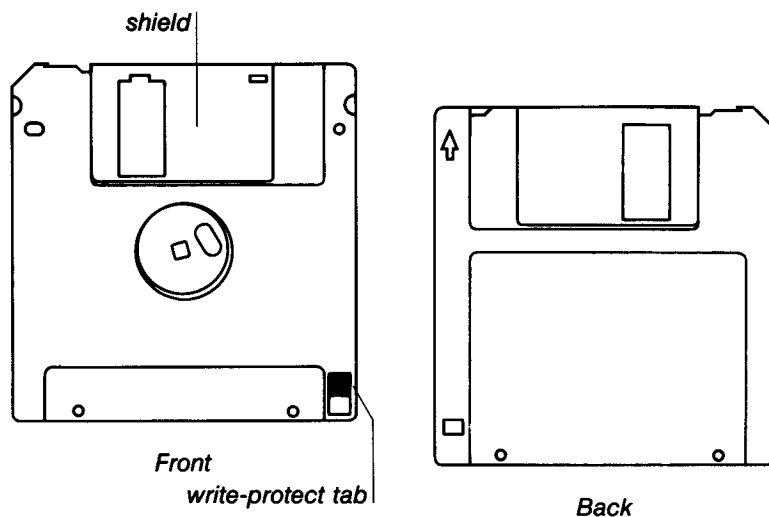
If a disk does not have a write-protect notch, it is permanently write protected. Many application programs come on write-protected disks that protect the files from being destroyed accidentally.

3.5-inch Disks

About 3.5-inch disks

The MS-DOS 4.0 operating system also supports 3.5-inch disks, which, like 5.25-inch floppy disks, are portable magnetic disks. Data on 3.5-inch disks is more densely packed, so depending on the style, a single 3.5-inch disk can store as much (or more) data as a high-density floppy disk.

These smaller disks, sometimes called *microflopies*, have rigid plastic covers with metal shields that guard the disk from dirt and fingerprints. When you place the disk into the disk drive, the computer automatically moves this shield aside to read the disk.



Notice that 3.5-inch disks have a write-protect notch. This notch can be covered with a built-in tab. When the write-protection notch is covered by the tab, no data can be written to the disk.

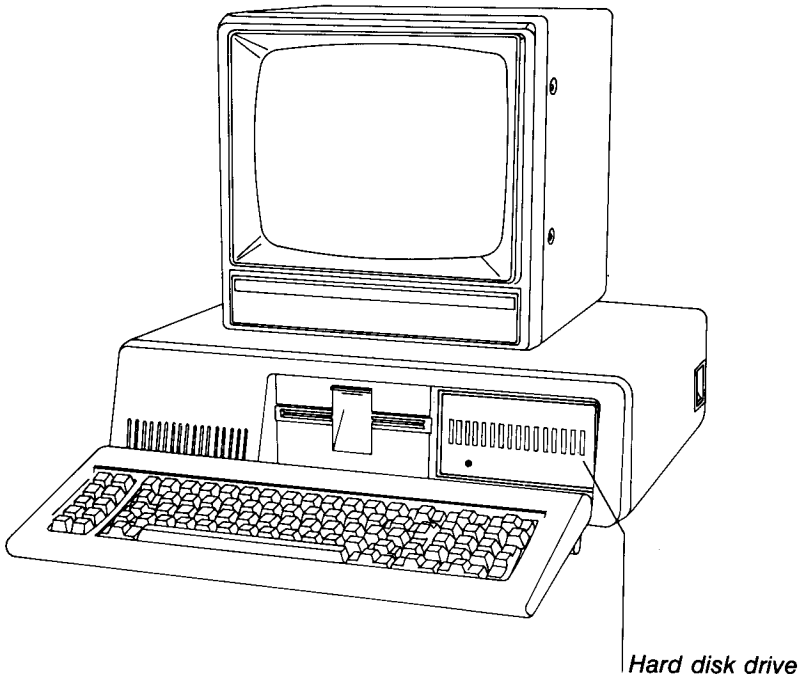
Be sure to label your 3.5-inch disks and store them in a safe place. As with 5.25-inch floppy disks, extreme temperatures, magnetism, dust, and fingerprints can all harm your data on a disk.

Note MS-DOS works virtually the same way with both 3.5-inch and 5.25-inch floppy disks. So in this documentation, the term *floppy disk* is used to mean either of these two types of disks.

Hard Disks

In addition to floppy disks, some computers use a hard disk, which can store much more information than a floppy disk. Computers also take less time to find information stored on a hard disk than on a floppy disk. A hard disk is usually built into the computer. Such a system might look like this:

About hard disks



When you store application programs, including MS-DOS, on your hard disk, you should keep a backup copy of the programs on a floppy disk in case the information on the hard disk is accidentally damaged or destroyed. (For more information about making a backup copy of your MS-DOS disks, see Chapter 3, "Getting Started.")

The Format Command

Formatting your disks

Before you can use your new disks for storing information, you must *format* them. You do this with the **format** command, a special program that structures a disk so that MS-DOS can find information on it. The **format** command also checks the disk for defective spots.

You can format both floppy and hard disks. But remember that if a disk is not blank, formatting it destroys any data already on the disk.

You will learn more about the **format** command in Chapter 4, "Using Commands."

How to Name Your Files

Naming your files

When naming a file, you may have trouble finding a name that uniquely identifies the file's contents. Dates, for example, are often used in filenames; however, they take up several characters, leaving you with little flexibility. Other common names for files are words like *budget*, *finances*, *analysis*, *report*, etc. These kinds of filenames identify the contents, but leave little room for dates. So the secret is to find a compromise—a point where you can combine a date with a word, creating a unique filename.

The name of a typical MS-DOS file looks like this:

```
customer.lst
|           |
filename   filename extension
```

Notice that the filename was typed in lowercase letters. You can type filenames in uppercase or lowercase letters, even though MS-DOS converts them into uppercase letters. Some more examples of filenames are:

```
budget.86
takeover.bid
june86
finances.doc
schedule.may
```

Many of your filenames will contain only letters and numbers. But you may also use any of the following symbols and letters in your filenames and extensions:

A-Z a-z 0-9 \$ % ' - @ { } ~ ! # () &

Warning Some applications may not let you use all of these symbols. If in doubt, use only letters and numbers.

Valid filename characters

Invalid Filenames

Although you do have some freedom when naming your files, there are certain names that you may not use, because MS-DOS reserves them for specific devices that your computer uses. These invalid names are *aux*, *clock\$*, *com1*, *com2*, *com3*, *com4*, *con*, *lpt1*, *lpt2*, *lpt3*, *lst*, *nul*, and *prn*. You may use these names as extensions (except for *clock\$*), but remember not to use them to name your files.

Avoiding invalid filenames

Directories

The names of your files are kept in a directory on each disk. The directory also contains information on the sizes of the files, and the dates they were created and updated.

If you want to know what files are on your disk, you can use the **dir** command. This command tells MS-DOS to display all the files in a specific directory on a disk. For example, if your MS-DOS disk is in drive A and you use the **dir** command, the directory display would look similar to this:

```
Volume in drive A is MSDOS400INS
Volume Serial Number is 07E9-3332
Directory of A: \
```

The MS-DOS directory

```

COMMAND  CDM      37537 06-26-88 12:00a
AUTOEXEC BAT       29 06-26-88 12:00a
CONFIG   SYS       30 16-26-88 12:00a
SELECT   HLP      27994 16-26-88 12:00a
REPLACE  EXE      21431 06-26-88 12:00a
KEYB     CDM      14537 06-26-88 12:00a
KEYBOARD SYS     23328 06-26-88 12:00a
FDISK    EXE      70763 06-26-88 12:00a
SYS      CDM      11440 06-26-88 12:00a
SELECT   CDM       3642 06-26-88 12:00a
FORMAT   CDM      30489 06-26-88 12:00a
XCOPY    EXE      17055 06-26-88 12:00a
DISKCOPY CDM      10396 06-26-88 12:00a
SELECT   PRT       1330 06-26-88 12:00a
012345   678       109 06-26-88 12:00a
          15 File(s)      12288 bytes free

```

Note The file sizes and dates you see on your screen may differ from the ones shown here, depending on your version of MS-DOS. Don't worry, though. Such variations do not affect the way you use MS-DOS or the way MS-DOS responds to your commands.

You can also get information about any file on your disk by typing the **dir** command followed by a filename. For example, to display directory information for a file named *schedule*, you could use the following command:

```
dir schedule
```

MS-DOS would respond by displaying the filename *schedule* followed by the file's size in bytes and the date and time it was last changed; for example:

```
SCHEDULE.TXT      3698      8-7-87   4:11p
```

What comes next?

So far you have learned the basic background information that you need in order to use the MS-DOS operating system. In the final three chapters of this guide, you'll learn to make your computer work *for* you, while you build a working knowledge of MS-DOS.

Preparing to run the Select program

Before you begin the Select program, there are a few things you can do to simplify the installation process.

First, make certain that you know the following information about your system:

- How much memory is available
- What type of printers you have
- Does your system include an expanded memory card

Having these facts ready allows you to respond more quickly to the information the program requires.

Next, prepare the blank disks needed to complete the installation process. The number of disks required for installation depends upon the capacity of the drives you are using. The following table specifies how many blank disks you will need according to your drive type.

Drive Type (Capacity)	Number of Disks (Capacity)
5.25-inch (360 kilobytes)	Four 5.25 (360 kilobytes)
5.25-inch (1.2 megabytes)	Four 5.25 (360 kilobytes)
3.5-inch (720 megabytes)	Two 3.5 (720 kilobytes)
3.5-inch (1.44 megabytes)	One 3.5 (1.44 megabytes)
Hard disk	One 5.25 (360 kilobytes) or one 3.5 (720 kilobytes)

Note An additional blank disk is required if you are installing MS-DOS Shell.

Last, installing a new system is always a potentially dangerous operation. Always back up all the files on your hard disk before installing MS-DOS 4.0.

Starting the Select program

To start the Select program for either 5.25-inch or 3.5-inch floppy disks, just follow these steps:

- 1 Make sure your computer is turned off.
- 2 Take the MS-DOS Install disk out of the protective jacket.

- 3** Insert this disk into drive A. (Refer to your computer manual for the correct drive.)
- 4** Close the disk door.
- 5** Turn on the power for your monitor and your computer.
If you are using 3.5-inch floppy disks, you will skip steps 6 through 9 because the Select program is included on the Install disk. The Welcome screen will simply appear at this point, and you will continue with step 10. If you are using 5.25-inch floppy disks, continue with step 6.
- 6** Remove the Install disk and insert the Select disk.
- 7** Press the ENTER key.
- 8** Remove the Select disk and insert the Install disk.
- 9** Press the ENTER key.
The Welcome screen appears. This screen contains information about the number of disks required to install the operating system on either a hard disk or on floppy disks.
- 10** Press the ENTER key.
The Introduction screen appears. This screen contains information about the function keys that you will use to run the Select program. Make a note of the following keys and their functions:

ENTER	Proceeds to next step of program
ESC	Cancels current screen
TAB	Moves cursor to next text entry field
PAGE UP/PAGE DOWN	Scrolls information one page at a time
UP/DOWN	Moves cursor to next item
F1	Displays help information
F3	Exits Select program
F9	Displays key assignments (only when you're using help)
LEFT/RIGHT	Scrolls data horizontally

- 11** Press the ENTER key.
The first screen of the Select program appears. The following section contains more information about the Select program, including some suggestions on how to respond to some of the prompts you will see.

Running the Select Program

The Select program contains six basic screens that prompt you for information about your computer. The selected item on each screen is the default selection. Use the direction keys to select the item that applies to your computer.

The Function and Workspace Screen

Screen 1

This screen lets you allocate memory between MS-DOS and your application programs. Base your allocation on the amount of memory available with your system and the memory requirements of any application programs you may run.

Choose option 1 if your system has 256 kilobytes. This choice lets you allocate a minimum amount of memory to MS-DOS (Function) and a maximum amount to your applications (Workspace).

Choose option 2 if your system has 512 kilobytes. This choice lets you allocate equal memory for MS-DOS and your application programs.

Choose option 3 if your system has more than 512 kilobytes. This choice lets you allocate the maximum amount of memory to MS-DOS, and yet leaves ample memory for your application programs.

The Country and Keyboard Screen

Screen 2

This screen lets you select the appropriate country and keyboard for your computer. You can assign the monetary symbol, decimal separator, date and time format, and keyboard layout applicable to your country and keyboard.

Menus list all available countries and keyboards. If you choose Denmark, Portugal, Norway, or French-speaking Canada, you must set the Code-Page Switching option to Y(es) during the Installation Option Review.

The Select Installation Drive Screen

Screen 3

This screen lets you install MS-DOS onto the hard disk (drive C) or with floppy disks (drive A or B).

If you choose the hard disk, the Specify MS-DOS Location screen appears. Use the options on this screen to specify a new directory or path. If you are installing the Select program to run with a previous version of MS-DOS, you may want to copy the non-system files to a different directory.

The Number of Printers Screen

This screen lets you specify a printer model from a list of printers and choose a printer port. Up to 7 printers may be specified. You may also designate a serial printer port as a parallel port.

If the application programs that you use require a parallel port for printing, you may use this option to name your serial printer with a parallel port name. Do not choose a parallel port name, however, if there is already a parallel printer assigned to that name.

Screen 4

The MS-DOS Shell Option Screen

This screen lets you decide whether or not the Shell should be installed. If it is, then the Shell Start Programs screen appears each time you start your computer.

If you choose not to install the Shell, the MS-DOS prompt (for example, A>) appears when you start your computer. Installing the Shell to run when you start your computer gives you quick and easy access to many basic MS-DOS utilities. You can also “customize” the Shell to install your application programs.

Screen 5

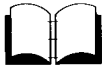
The Installation Options Screen

This screen lets you install MS-DOS using the existing *config.sys* and *autoexec.bat* files, or review and change the selections made for the *config.sys* and *autoexec.bat* files before continuing with installation.

The function and memory values allow MS-DOS and the application programs to run efficiently. Changing any of the set values may result in an increase in the amount of memory used by MS-DOS.

If you choose to continue without reviewing the selections, MS-DOS is copied onto either the hard disk or onto floppy disks. If you choose to review and change the selections, a series of parameter menus appears. The help information for these menus contains examples of valid parameters and memory ranges. In addition, the help information provides guidelines for making the choices that are correct for your system.

Screen 6

If you have a hard disk

Continuing MS-DOS Installation

If you are installing MS-DOS on a hard disk that is not partitioned, you are prompted to provide partition information before installation on the disk can proceed. Since you backed up all existing files before starting the Select program, you may now set up the new partitions, or you may choose to let the Select program partition the disk for you. Refer to the *MS-DOS User's Reference* for additional information on partitioning and formatting your hard disk.

After your hard disk is formatted correctly for version 4.0, the Select program prompts you to complete the installation of MS-DOS by copying the system files onto your hard disk. The choices you made while installing MS-DOS with the Select program were placed into two files: *autoexec.400* and *config.400*. Use these 4.0 files to update your current *autoexec.bat* and *config.sys* files to access the new information. After updating the files, restart your system by pressing the CONTROL + ALT + DELETE keys.

If you have floppy disk drives

If you are installing MS-DOS 4.0 on 1.44-megabyte disks, the Select program prompts you through the process of installing MS-DOS on a single disk. When the installation process is complete, you will have a working disk labeled Startup. This is your MS-DOS start-up disk.

However, if you are installing MS-DOS on 720- or 360-kilobyte disks, the Select program prompts you through the process of installing MS-DOS onto three 720-kilobyte disks or five 360-kilobyte disks. For a 720-kilobyte drive, the working disks are labeled

- Startup
- Working
- Shell

You can start MS-DOS from both the Startup and Shell disks. For a 360-kilobyte drive, the working disks are labeled

- Startup
- Working1
- Working2
- Working3
- Shell

Of these five disks, only Startup will start MS-DOS.

An Overview of MS-DOS Shell

MS-DOS Shell is a graphic extension of MS-DOS that lets you take advantage of the power of MS-DOS with a few keystrokes or a click on a mouse.

When you work with MS-DOS Shell, you are using the graphic extension together with the MS-DOS operating system to perform tasks from menus with a few keystrokes.

MS-DOS Shell lets you perform two kinds of tasks. You can start programs and work with your files. MS-DOS Shell has two main programs: Start Programs and File System. Start Programs lets you select (start) all the other programs available in MS-DOS Shell. That includes File System which lets you perform MS-DOS commands as you work with your files.

When the Shell is active, the Start Programs screen appears. It contains the Main Group of programs you will use. DOS Utilities is one of your choices. It isn't a program, but leads you to another group of programs—utility programs in which you can work with your disks and set the date and time on your computer.

Groups are always readily recognized by the three dots that follow every group name. There are only two groups now, the Main Group (Start Programs) and DOS Utilities, but you can add and change other groups as you want.

For a detailed list of available functions, as well as procedures for using MS-DOS Shell, see the *MS-DOS® Shell User's Guide*.

What is a Shell?



How to Start MS-DOS Shell

There are five different ways to start MS-DOS Shell. The method that you used to install the system (based on the capacity of your disk drive) determines how you restart your system and start the Shell. The five methods are described below.

If you installed MS-DOS on your hard disk and chose to install the Shell, remove all disks and press the CONTROL+ALT+DELETE keys. This restarts your system and starts MS-DOS Shell.

If you installed MS-DOS on your hard disk and chose not to install the Shell, when you start your computer, type *DOSSHELL* at the MS-DOS prompt.

If you installed MS-DOS on a hard disk

If you installed MS-DOS on floppy disks

If you installed MS-DOS on a 1.44-megabyte disk, insert the Startup disk in drive A and press the CONTROL+ALT+DELETE keys. This restarts your system and starts MS-DOS Shell.

If you installed MS-DOS on 720-kilobyte disks, insert the disk labeled Shell into drive A and press the CONTROL+ALT+DELETE keys to start MS-DOS Shell.

If you installed MS-DOS on 360-kilobyte disks, insert the disk labeled Startup into drive A and press the CONTROL+ALT+DELETE keys. This restarts the system. Then, remove the Startup disk and insert the disk labeled Shell. Type the word *DOSSHELL*. This starts MS-DOS Shell.

How to Quit MS-DOS

Ending your MS-DOS session

There is no "quit" command in MS-DOS, but you can end your MS-DOS session easily by following these steps:

- 1** Make sure that your last command is finished. You should see the MS-DOS prompt (for example, A>) on the screen.
- 2** Remove the floppy disks from the drives, put them back in their protective jackets, and store them in a safe place.
- 3** Please see the manual that accompanied your hardware for the appropriate procedures for turning off your computer.

How to Make a Backup Copy of Your MS-DOS Disk

In this section, you'll learn how to make a backup copy of your MS-DOS disk (or disks, depending upon how many disks you used during installation). Notice that you are not backing up the original MS-DOS disks, but rather the working disk(s) that you created during the installation process.

MS-DOS comes with a command named **diskcopy** that lets you copy the contents of disks. You need not format your blank disks before you use the **diskcopy** command since **diskcopy** formats the disk for you as it copies.

If you have two floppy-disk drives

- 1 Insert the first disk to be copied into drive A.
- 2 At the MS-DOS prompt, type the following:

```
diskcopy a: b:
```

- 3 Press the ENTER key.

MS-DOS responds with the following message:

```
Insert SOURCE diskette in drive A:
Insert TARGET diskette in drive B:
Press any key when ready . . .
```

- 4 Press the SPACEBAR to start the **diskcopy** command. The disk copying process takes time, so you'll have to wait awhile.

When the process is complete, MS-DOS asks

```
Copy another? (Y/N)
```

- 5 Type *N* if you only have one disk to backup, or press *Y* to copy the next disk.

When you complete the disk copying process, label the new disks and write protect them. Then, place the original disks in a safe place, away from dust, moisture, and magnetism. If anything should happen to the copy (or copies) that you have just made, you'll have to use your original disk(s) to make another copy.

If your computer has only one floppy drive, you can still use MS-DOS commands as you would on a system with more than one drive, but you must also specify a drive name when you type a command. By specifying the drive letter, you tell your computer to perform the command on that drive. The drive names A and B then represent the disks that you put into the single drive. In response to your commands, MS-DOS then prompts you to insert the proper disk, as in the following example:

If you have one floppy-disk drive

- 1 Insert the first disk to be copied into drive A.
Use the MS-DOS **diskcopy** command to make your backup copy since **diskcopy** formats the target disk for you as it copies.

- [2] At the MS-DOS prompt, type the following:

```
diskcopy a: b:
```

- [3] Press the ENTER key.

MS-DOS responds with the following message:

```
Insert Source diskette in drive A:  
Press any key when ready . . .
```

- [4] Press the SPACEBAR. The copying begins and then the following message is displayed:

```
Insert TARGET diskette in drive B:  
Press any key when ready . . .
```

- [5] Remove the source disk, place the blank disk into the drive, and press the SPACEBAR. You may need to reinsert the disks for drives A and B several times to complete the copying process.

If you have a hard-disk drive

If your computer has a hard disk, you will have used the Select program to copy all the files from the MS-DOS master disks onto the hard disk. Then each time you start MS-DOS, you won't need to use a floppy disk; instead, you'll be able to start MS-DOS directly from the hard disk. When you have copied the MS-DOS files onto your hard disk, the original floppy disks will be your backup copies.

Warning Whenever you format a disk, you destroy its files. It's a good idea to copy any files from your hard disk onto floppy disks before you format the hard disk (to learn how to copy files, see Chapter 4, "Using Commands"). Once you have formatted your hard disk you *should* never have to format it again.

What comes next?

You now know how to install MS-DOS 4.0 and start the Shell. You've also learned how to start and quit the MS-DOS operating system, and you've used some simple commands to make backup copies of your disks. In the next chapter, you'll learn how to use more MS-DOS commands. As you read about these commands and start to use them, you'll begin to understand how the MS-DOS operating system works. And once you understand the operating system, you'll see what it can do for you.

4 Using Commands

In this chapter you will learn

- How to use file commands
- How to print files
- How to use disk commands

File Commands

You can use several MS-DOS commands to manage your files. Some of the more common commands are **dir**, **copy**, **del**, **rename**, and **print**.

Using file commands

Note The examples in this chapter assume that drive A is the default drive. Also, many of these examples use filenames which are intended for illustrative purposes only—to use these commands, you would substitute the name of a file on the default disk.

The Dir Command

If you want to find out what files are on a disk, you can list its directory by using the MS-DOS **dir** command. For example, to display the directory of the disk in drive B, you would use the following command:

```
dir b:
```

Show me ...of the disk in drive B.
the directory...

You could also display the directory on the hard disk by using the drive letter *C* instead of *B* with the **dir** command. If you use the **dir** command without a drive letter, MS-DOS lists the directory of the disk in the default drive.

Listing the MS-DOS directory

Example

Suppose you want to see how many files are in the directory of the MS-DOS disk in drive A. To display this directory you would simply follow these steps:

- 1 Make sure the MS-DOS disk is in drive A.
- 2 Make sure the disk-drive door (for drive A) is closed.
- 3 At the MS-DOS prompt, type the following command, then press the ENTER key:

```
dir
```

- 4 If the disk-drive door (for drive A) is open when you try to use this command, MS-DOS will display the following error message:

```
Not ready error reading drive A
Abort, Retry, Fail?_
```

To fix this error, you simply close the door for drive A and type *R* (for Retry).

- 5 MS-DOS then displays the directory. If necessary, you can stop the directory listing from scrolling by pressing CONTROL+S. To view the rest of the display, you simply press CONTROL+S again. Your screen should look similar to this:

```
Volume in drive A is MSDOS400INS
Volume Serial Number is 07E9-3332
Directory of A: \

COMMAND  COM      37537  06-26-88  12:00a
AUTOEXEC BAT         29  06-26-88  12:00a
CONFIG   SYS         30  16-26-88  12:00a
SELECT   HLP     27994  16-26-88  12:00a
REPLACE  EXE     21431  06-26-88  12:00a
KEYB     COM     14537  06-26-88  12:00a
KEYBOARD SYS     23328  06-26-88  12:00a
FDISK    EXE     70763  06-26-88  12:00a
SYS      COM     11440  06-26-88  12:00a
SELECT   COM      3642  06-26-88  12:00a
FORMAT   COM     30489  06-26-88  12:00a
XCOPY    EXE     17055  06-26-88  12:00a
DISKCOPY COM     10396  06-26-88  12:00a
SELECT   PRT      1330  06-26-88  12:00a
012345   678      109   06-26-88  12:00a
          15 File(s)      12288 bytes free
```

Note The file sizes and dates you see on your screen may differ from the ones shown here, depending on your version of MS-DOS. Don't worry, though. Such variations do not affect the way you use MS-DOS or the way MS-DOS responds to your commands.

The Copy Command

If you need to copy files, you can use the **copy** command to copy one or more files, either on the same disk or from one disk to another. For instance, suppose you need a copy of a file named *sales.doc* that you have on a disk in drive A, and suppose you want to call this new copy *monthly.rpt*.

Example

To copy the *sales.doc* file and call the new copy *monthly.rpt*, you would just follow these steps:

Copying a file

- 1 Make sure that the disk with the *sales.doc* file is in drive A and that A is the default drive.
- 2 At the MS-DOS prompt, type the following command:

```
copy sales.doc monthly.rpt
```

- 3 Press the ENTER key.

You cannot give the new copy of a file the same name as the original. You can, however, copy a file from one disk to another and keep the same filename. For example, to copy a file from the disk in drive A to the disk in drive B, use the following command:

```
copy a:sales.doc b:sales.doc
```

Make a copy of a file... ...named "sales.doc" on drive A.	Name the copy of the file "sales.doc" as well,... ...and put it on the disk in drive B.
--	---

Note In the previous example, if A is the default drive (that is, if the prompt is A>), you needn't type the letter A, followed by a colon, before the first filename. If you don't specify a new name, the copy will also have the name of the original file. For example, the following commands all produce the same result:

```
copy a:sales.doc b:sales.doc
copy sales.doc b:sales.doc
copy sales.doc b:
```

Again, by substituting the drive letter *C* for *B*, you could copy the *sales.doc* file to drive *C*.

The Delete Command

Just as you may need to make copies of files, you may also need to remove old or unnecessary files to clean up your file system. When you want to erase a file from a disk, you can use the MS-DOS **delete** (or **del**) command. Remember, though, that the **del** command *permanently* erases the file. To delete an old *sales.doc* file from the disk in drive *B*, at the MS-DOS prompt you would use the following command:

```
del b:sales.doc
```

Delete a file... } ...named "sales.doc" from the disk in drive B.

You could also delete a file named *sales.doc* from drive *C* by simply substituting the drive letter *C* for *B*.

Example

Deleting a file

Suppose you have an old copy of the *sales.doc* file that you no longer need. To delete this file from the disk in the default drive, you would just follow these steps:

- 1 Make sure that the disk with the *sales.doc* file is in the default drive.
- 2 At the MS-DOS prompt, type the following command:

```
del sales.doc
```

- 3 Press the ENTER key. MS-DOS then deletes the *sales.doc* file from the disk.

Note The **del** command does not work if you type the word *delete*. You can, however, substitute the word **erase** in place of the **del** command.

The Rename Command

Occasionally, you may want to change the name of a file. For example, suppose you have a file named *monthly.rpt* on a disk. When you add other monthly reports to your disk, you may want to change the name of the original file to something more specific. To change the name to *annual.rpt*, for instance, you would use the following command:

```
rename monthly.rpt annual.rpt
```

Change the name of a file...	...from "monthly.rpt"...	...to "annual.rpt."
---------------------------------	-----------------------------	---------------------

You can only rename files on the same disk, so you cannot change *a:monthly.rpt* to *b:monthly.rpt* or *c:monthly.rpt*.

Example

Suppose you want to rename a file named *payroll.doc*, on the disk in the default drive, to *salary.doc*. You would simply follow these steps:

- ❶ Make sure that the disk with the *payroll.doc* file is on the disk in the default drive (A).
- ❷ At the MS-DOS prompt, type the following command:

```
rename payroll.doc salary.doc
```

- ❸ Press the ENTER key.

Note The **rename** command can be abbreviated to **ren**.

The Type Command

If you want MS-DOS to display a file that contains text (often called a text file) on the screen, use the **type** command. For example, say you have created a file named *phone.lst* on the disk in drive A, and you want to check one of the phone numbers. To display the file on the screen, you would use the following command:

```
type a:phone.lst
```

Display on the screen...	...the file named "phone.lst" that is on the disk in drive A.
-----------------------------	--

Renaming a file

Displaying a file

Example

Suppose you want to check your employees' salary figures. So you decide to look at a file named *salary.doc* that is on the disk in the default drive. To display the *salary.doc* file, you would just follow these steps:

- 1 Make sure that the disk with the *salary.doc* file is in the default drive (A).
- 2 At the MS-DOS prompt, type the following command:

 `type salary.doc /p`
- 3 Press the ENTER key.

MS-DOS then displays the *salary.doc* file on the screen.

If the *salary.doc* file is on drive B or C, you could easily type the drive letter, followed by a colon, with the **type** command.

Hints If the file is too long to fit on the screen, remember that you can use the **/p** option to display one screen at a time. When you type *dir/p*, MS-DOS scrolls the text a page at a time. Press any key to see more of the file.

MS-DOS displays only text files on the screen. So if you try to display a program file (one with an extension of *.com* or *.exe*), you will see only strange symbols on the screen.

If you have an application program that creates files, you may need to run the application to view them. For example, if you use Microsoft Multiplan to create a file, Multiplan automatically adds the extension *.mp* to the filename. You would then have to start Multiplan to view the file.

The Print Command

If you have a printer attached to your computer, you can print files with the MS-DOS **print** command. Assume, for example, that you have a file named *invest.mnt* and want to print it on your printer. You could use the following command:

```
print invest.mnt
```

*Print a file (MS-DOS ...named "invest.mnt."
assumes this file
is on the disk in the
default drive)...*

Example

Say you have a file that contains a list of investors and their phone numbers, and suppose you want to print this file and keep it near your phone. The file is named *invest.mnt* and is on the disk in drive B. Drive A is the default drive (A> is the prompt). To print the *invest.mnt* file, you would just follow these steps:

- 1 Make sure that the MS-DOS disk is in drive A.
- 2 Make sure that the disk with the *invest.mnt* file is in drive B.
- 3 Check to see that your printer is on, has paper, and is ready to print.
- 4 At the MS-DOS prompt, type the following command:

```
print b:invest.mnt
```

- 5 Press the ENTER key.
- 6 MS-DOS prompts you for the name of the printing device connected to your computer (this name is usually the communications port that the printer cable connects to). Just type the name, or press the ENTER key to print to the default printer.

If the master disk is not in drive A, MS-DOS prompts you to insert it in the drive.

Hints While a file is being printed, you can type other commands to MS-DOS. You can even run other programs or create and modify files. But since printing a file takes a lot of your computer's resources, your tasks may take longer if you try to do them while you are printing a file. So if you have a long file to print, you might schedule the printing for when you plan to be away from your computer.

Printing a file

In addition, if you want to print a file that you've created with an application program, you may also have to use the application program's print command to print the file.

Disk Commands

Using disk commands

This section presents two commands that you use for disks: **format** and **diskcopy**.

The Format Command

When you purchase new disks, they are blank and unformatted. You must format them before MS-DOS can use them. Formatting structures a disk so that MS-DOS can find and store information on it; formatting also checks the disk for defective spots. You can format a disk by using the **format** command.

To format a blank disk in drive B, you would use the following command:

```
format b:
|
|...on drive B.
|Format a disk...
```

Note If you have only one disk drive, MS-DOS prompts you to insert the disk that you want to format. See Chapter 3, "Getting Started."

You can also format a blank disk in such a way that some special MS-DOS files are copied onto it during formatting. These files are necessary only if you want to use the disk to start MS-DOS. To format a blank disk in drive B and include these special MS-DOS files, you would use the following command:

```
format b: /s
|
|Format      |...and copy the special MS-DOS files.
|a disk...   |...on drive B,...
```

If you don't want to use the disk to start MS-DOS, you don't need to specify the `/s` option when formatting the disk. If you have a disk and don't know whether you can use it to start MS-DOS, put the disk into drive A and press the `CONTROL+ALT+DELETE` key combination. If the disk does not contain the system files, MS-DOS displays an error message.

Example

Suppose you need to create a new data disk to hold some tax records, but you don't want to copy the special MS-DOS files when formatting the disk. To format and label a blank disk (in drive B) *without including the special MS-DOS files*, you simply follow these steps:

Formatting a floppy disk

- 1 Make sure that the MS-DOS disk is in drive A.
- 2 At the MS-DOS prompt, type the following command:

```
format b:
```

- 3 Press the `ENTER` key.
Your screen should look like this:

```
A>format b:
Insert new diskette for drive B:
and press ENTER when ready . . .
```

- 4 Insert a blank disk in drive B.
- 5 Press the `ENTER` key to start the format process.
When formatting is complete, MS-DOS displays the following prompt:

Volume label (11 characters, ENTER for none)?
- 6 Type a label that identifies the contents of this disk (for example, *DATA DISK*), and press the `ENTER` key. MS-DOS then asks

Format another? (Y/N)
- 7 Type *N* (for No) to exit the **format** program.

In this example, you learned how to format a floppy disk that was in drive B, a floppy disk drive. To format your hard disk, you should follow the instructions in Chapter 3, "Getting Started."

You can only copy information to disks of comparable media. In other words, you can only copy information from a 5.25-inch floppy disk to a 5.25-inch floppy disk. You cannot copy information from a 5.25-inch floppy disk to a 3.5-inch floppy disk or vice versa.

Note You cannot use the **diskcopy** command to copy the contents of a floppy disk to or from a hard disk. Instead, you must use the **copy** or **xcopy** commands.

Example

Suppose you want to bring a data disk with you on a business trip, but you don't want to take your original disk because it might get damaged. All you have to do is use the **diskcopy** command to make a copy of the disk. For example, to copy the contents of a disk in drive A to a disk in drive B on a two-drive system, you simply follow these steps:

Copying a floppy disk

- ❶ Put your MS-DOS disk in drive A.
- ❷ At the MS-DOS prompt, type the following command:

```
diskcopy a: b:
```

- ❸ Press the ENTER key.
Your screen should look like this:

```
A>diskcopy a: b:
```

```
Insert SOURCE diskette in drive A:
```

```
Insert TARGET diskette in drive B:
```

```
Press any key when ready . . .
```

- ❹ Remove the MS-DOS disk from drive A, replacing it with the disk you want to copy (SOURCE). Then place a blank disk (TARGET) in drive B.
- ❺ Press the SPACEBAR to start the **diskcopy** process.
When the disk has been copied, MS-DOS asks

Copy another? (Y/N)
- ❻ Type *N* (for No) to exit the **diskcopy** program.

What comes next?



If you'd like more detailed information about the commands in this chapter, see your *MS-DOS User's Reference*. But if you are satisfied that you know enough about these commands, you can go on to the next chapter, in which you'll learn how to run some applications with MS-DOS.

5 Using Applications with MS-DOS

In this chapter you will learn some common uses of MS-DOS, such as

- Running application programs
- Creating a file with **Edlin**

How to Run Application Programs

MS-DOS lets you run many different application programs, including spreadsheets, word processing programs, and graphics packages. These application programs can help you in a number of ways. For instance, they can help you balance a budget, figure income taxes, or manage information, such as stocks, monthly reports, and address lists.

Once you have started MS-DOS, you can run an application program, as follows:

- 1 Make sure that the default drive is drive A.
- 2 Put the application program disk in drive A.
- 3 Type the name of the application program you want to run.
- 4 Press the ENTER key.

Starting an application from a floppy disk

Example

Suppose you have a word processing application called Phrase that you want to use to write a monthly status report.

To start Phrase in MS-DOS, you would follow these steps:

- 1 Make sure that the default drive is drive A by typing the letter A, followed by a colon, and pressing the ENTER key.
- 2 Put your Phrase disk into drive A.
- 3 Type the name *phrase* (supposing *phrase* is the word used to start the application).
- 4 Press the ENTER key to start Phrase, which you could then use to create, edit, format, or print your status report.

Starting an application from a hard disk

If you want to run an application that is on your hard disk (drive C), follow these steps:

- 1 Change the default drive to C, the drive that contains the application program.
- 2 Type the name of the application program you want to run.
- 3 Press the ENTER key.

Example

Suppose you have a graphics program called Canvas stored in drive C, and you want to use it to create a chart showing the current month's sales data.

To start Canvas in MS-DOS, you would follow these steps:

- 1 Change the default drive to drive C by typing the letter C, followed by a colon, and pressing the ENTER key.
- 2 Type *canvas* (supposing *canvas* is the word used to start the application).
- 3 Press the ENTER key to start Canvas.

You could then use Canvas to create your chart.

A Note About Using Application Programs

After quitting some application programs, especially programs that use a lot of memory, you may receive the following error message from MS-DOS:

```
Insert disk with \command.com in drive A
```

```
Press any key to continue . . .
```

This message doesn't mean you have ruined your application program or your computer. It occurs because your application used so much of the computer's memory that it wrote over the MS-DOS *command.com* file. To fix the error, you simply reinsert a disk that contains a copy of *command.com* in the default drive (this *command.com* file must be the same version you used to start MS-DOS). You then press any key when you're ready to continue using your computer.

How to Create a File with Edlin

MS-DOS includes a line-editing program called **Edlin** that lets you create and edit files. **Edlin** is called a line editor because it lets you edit files line by line.

To help you learn how to use **Edlin**, the following section takes you through a sample editing session in which you'll use **Edlin** to create a small file.

Suppose a client asks you to write a catchy advertisement for an electric pencil sharpener, so you decide to create a file named *pencil.ad* on the disk in the default drive. You want the file to contain the following lines:

Introducing...

The X-1000 Automatic Pencil Sharpener

From Sharpe Office Supplies

The World Leader in Office Sharpeware

Creating a file with Edlin

The following example shows you how to start **Edlin**, create the *pencil.ad* file, and exit **Edlin**. All you have to do is follow these steps:

- 1 Make sure the MS-DOS disk is in drive A.
- 2 At the MS-DOS prompt, type the following command, then press the ENTER key:

```
Edlin pencil.ad
```

Since you are just creating the file, **Edlin** responds with the following message:

```
New file
*_
```

When you see the asterisk (*), type the letter *I* (for Insert) and press the ENTER key. You will see line number 1 (**Edlin** uses line numbers to help you edit, but they are not part of your file).

- 3 Type the following lines. Remember to press the ENTER key after *each* line, including the last line.

```
Introducing...
The X-1000 Automatic Pencil Sharpener
From Sharpe Office Supplies
The World Leader in Office Sharpeware
```

Correcting mistakes in Edlin

Note If you make a mistake when typing a line, use the BACKSPACE key to erase the mistake *before* you press the ENTER key. If you do press the ENTER key before correcting the mistake, don't worry about it—you'll learn later how to correct a line.

Your screen should look like this:

```
A>Edlin pencil.ad
New file
*i
1:*Introducing...
2:*The X-1000 Automatic Pencil Sharpener
3:*From Sharpe Office Supplies
4:*The World Leader in Office Sharpeware
5:*_
```

- 4 When you see 5*, press CONTROL+C to return to the **Edlin** prompt (the asterisk).

- 5 If you made a mistake when typing a line (line 3, for instance), type the number 3, press ENTER, and retype the line (remember to press the ENTER key at the end of the line).
- 6 Then at the asterisk (*), type the letter *E* (for End). You will then be returned to the MS-DOS prompt.

You now have a file named *pencil.ad* on the disk in your default drive. If you type the MS-DOS **dir** command, you should see an entry for *pencil.ad*. You can also view this file by using the **type** command as follows:

```
type pencil.ad
```

and then pressing the ENTER key.

To learn more about how to use **Edlin**, see the *MS-DOS User's Reference*.

In this chapter, you've learned how to run application programs in MS-DOS, and how to use the line editor, **Edlin**. In the next and final chapter, you'll learn how to set up MS-DOS for *your* needs, for the tasks that *you* want to do.



What comes next?

6 Setting Up MS-DOS

In this chapter you will learn about

- The *config.sys* file
- The *autoexec.bat* file
- The differences between these two files

This chapter discusses *config.sys* and *autoexec.bat*, two special files that you can use to set up MS-DOS. You'll still be able to use MS-DOS if you don't have these files, but they will help you take greater advantage of the operating system as you run commands and application programs, and as you use devices. In addition to taking greater advantage of the operating system, these special files save you time by doing tasks for you each time you start MS-DOS.

Special MS-DOS files

The Config.sys File

When you start MS-DOS, it automatically searches for a file named *config.sys* on your system disk. This file contains special commands that let you set up (configure) MS-DOS for use with devices or application programs.

You can use the **dir** command to see whether the *config.sys* file is already on your MS-DOS disk. If the file isn't on the disk, you can use **Edlin** to create it; if it is on the disk, you can use either the **type** command to display it or **Edlin** to edit it.

A sample Config.sys file

Example

Although your *config.sys* file should contain the following commands, you shouldn't worry if the file contains more than these two commands:

```
buffer=20
files=20
```

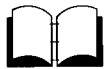
The command **buffer**=20 sets the number of *buffers*, or blocks of memory, that MS-DOS uses to store data. If your directory system is large, you might want to set the **buffer** number higher, for example, to 30.

The second command in the *config.sys* file is **files**=20. This command sets the number of files that MS-DOS can have open at the same time. Programs such as spreadsheets and databases require several files to be open while they are running. If you don't set a value for **files** in your *config.sys* file, MS-DOS assumes a value of 8, which would not be enough open files for a large program like a database.

Note If you are using MS-DOS with Microsoft Networks, you should set the **files** command to equal 255.

You may also want to add other commands to the file to configure MS-DOS for devices, such as a mouse. You should refer to the manual that came with the device, or to the *MS-DOS User's Reference*, for more information about how to do this.

If you don't have a *config.sys* file on your MS-DOS disk, simply follow these steps to create one:



Creating a Config.sys file

- 1 Type the following command line, then press the ENTER key:

```
Edlin config.sys
```
- 2 At the **Edlin** asterisk (*) prompt, type the letter *I* (for Insert) and press the ENTER key.
- 3 Now on line 1, type the *config.sys* command **buffer**=20, then press the ENTER key.
- 4 On line 2, type the command **files**=20, then press ENTER followed by CONTROL+C
- 5 Then at the asterisk (*), type the letter *E* (for End). You will then be returned to the MS-DOS prompt.

MS-DOS performs the commands in the *config.sys* file only when you first start the system; therefore, for your changes to take effect, you must restart MS-DOS after editing this file.

For more information about the *config.sys* file and the *config.sys* commands, see the *MS-DOS User's Reference*, Appendix B, "How to Configure Your System."



The Autoexec.bat File

MS-DOS also searches for a second file when you start your computer. This file is called *autoexec.bat*. It performs any set of commands you would normally give when you start MS-DOS. For example, you might use the file to prepare MS-DOS for running an application program.

If there is an *autoexec.bat* file on the disk when you start MS-DOS, MS-DOS does not automatically prompt you for the time and date at the beginning of your computer session. Therefore, unless you have an installed clock in your computer, it is a good idea to put the time and date commands in your *autoexec.bat* file. This way, MS-DOS will prompt you for the time and date, and will keep the time and date information current for the directory on your disk.

To see if the *autoexec.bat* file is already on your MS-DOS disk, you simply type the **dir** command. If the file isn't on the disk, you can use **Edlin** to create it, as you did with the *config.sys* file. If the *autoexec.bat* file is on the disk, you can use either the **type** command to display it, or **Edlin** to edit it.

Examples

For a computer with two floppy disk drives, a typical *autoexec.bat* file might contain the following lines:

```
date
time
path=a:
dir
```

In this sample file, the **date** and **time** commands ask you to set the date and time each time you start MS-DOS. The command **path=a:** tells MS-DOS to look for commands or programs on drive A in addition to the default directory. The **dir** command displays the default directory of the disk in the default drive as soon as you start MS-DOS on your computer.

Two sample Autoexec.bat files

The next sample *autoexec.bat* file is for computers with one floppy disk drive and one hard disk drive. It might contain the following lines:

```
date
time
path=c:;a:
prompt=$p$g
dir
```

The commands in this *autoexec.bat* file differ slightly because the file is intended for computers with a hard disk. For instance, the **path** command line now contains *c:*, in addition to *a:*, since when you give a command or start an application, you may want MS-DOS to search two drives, first C, then A.

Another new command in this file is the **prompt=\$p\$g** command, which tells MS-DOS to display the default drive and directory, followed by a greater-than sign (>), as the MS-DOS prompt. This prompt is handy because it reminds you what drive and directory you're in at the moment.

It doesn't matter if your *autoexec.bat* file differs from the ones listed here, but it should at least include the **time** and **date** commands. Also, if you want to start a certain application program every time you start MS-DOS (for example, Microsoft Word), you could include the command to start that application (**word**) at the end of the *autoexec.bat* file.

Once you become more familiar with MS-DOS, you will probably want to vary these commands, or include others. For more information about *autoexec.bat* files or the commands used in these examples, see the *MS-DOS User's Reference*.



How These Special Files Differ

Differences between the special MS-DOS files

MS-DOS uses the *config.sys* and *autoexec.bat* files in different ways because they perform different types of commands. While the *autoexec.bat* file may contain any MS-DOS command or program, the *config.sys* file may contain only a special set of configuration commands.

In addition, you *must* restart MS-DOS to perform the commands in the *config.sys* file. But to perform the commands in the *autoexec.bat* file, you simply type the word *autoexec*.

Summary

So far you have learned about the basics of the MS-DOS operating system, including some MS-DOS terms, the special keys on the MS-DOS keyboard, and two special MS-DOS files.

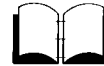
You've also learned about:

- Using disks, files, and directories
- Installing MS-DOS
- Starting MS-DOS
- Using file and disk commands
- Printing files
- Running application programs
- Using **Edlin**
- Creating *config.sys* and *autoexec.bat* files

If you don't remember everything about these topics, just refer to the appropriate sections to refresh your memory. It's also a good idea to look ahead at the "Terms" section. There you can browse through the definitions and familiarize yourself with MS-DOS terminology. Then, once you're confident in your abilities, you can go on to the more advanced *MS-DOS User's Reference*.

In the *MS-DOS User's Reference*, you'll read and learn about multilevel directories, batch files, additional features of **Edlin**, and much more. Also, if you need a more detailed explanation or example of how to use a command, you can refer to Chapter 3, "MS-DOS Commands." So if this *MS-DOS User's Guide* hasn't answered all your questions, you now know where to look for help.

What comes next?



Terms

The following terms are used in the *MS-DOS User's Guide*:

. This abbreviation means *all files in the directory*. The command **copy a:*. * b:** means copy all files from the default directory of the disk in drive A to the disk in drive B.

Application software Another name for software, programs, or application programs. Application programs are programs that apply to a specific set of tasks, for example, word processing, spreadsheets, and project management. Software is written in a computer language and consists of a series of instructions that tell the computer to perform tasks.

Autoexec.bat A special MS-DOS file that you use to customize the MS-DOS operating system to your needs. *See also* Config.sys.

Backup disk A copy of any disk you make with the **diskcopy**, **copy**, or **backup** command.

Buffer An area in the computer's memory that MS-DOS uses to store data.

Character A letter, number, or symbol that you type at your keyboard or see on your screen.

Command A short program that tells MS-DOS how to do a specific task.

Config.sys A special MS-DOS file that you use to configure the MS-DOS operating system. The *config.sys* file may contain only a specific set of MS-DOS configuration commands. *See also* Autoexec.bat.

CONTROL key Used in combination with other keys to give MS-DOS special commands such as "stop the last command" and "stop the display from scrolling." Press the CONTROL key at the same time as you press another key.

CONTROL + C A control key combination that stops a command while it is running. *See also* CONTROL key.

A

B

C

CONTROL+S A control key sequence that stops or restarts the scrolling of the screen display. *See also* CONTROL key.

Copy An MS-DOS command that copies one or more files on the same disk, or from one disk to another.

Cursor The lighted shape on the screen that shows where the next character you type will appear. The cursor is usually a blinking line or small box.

D

Default disk drive The drive where MS-DOS searches for any filenames that you may type. Unless you specify a different drive, MS-DOS looks for files in the default drive. The standard MS-DOS prompt contains the default drive letter. For example, if the prompt is A>, then "A" is the default drive.

Del An MS-DOS command that tells MS-DOS to delete one or more files. A synonym for **del** is **erase**.

Device A piece of hardware that performs a specific function. A printer is an example of a device.

Device errors Errors that occur when one of your computer's devices, usually a disk drive or printer, is not ready or has a problem. When these errors occur, MS-DOS displays a device error message.

Dir An MS-DOS command that means "directory." When you type the **dir** command, MS-DOS displays the contents of the disk in the default drive. The command **dir b:** displays the contents of the disk in drive B.

Directory A table of contents for a disk. The directory contains the names of your files, the sizes of the files, and the dates they were created or last modified.

Disk *See* Floppy disk; Hard disk.

Diskcopy An MS-DOS command that copies disks. **Diskcopy** formats a disk before copying files onto it.

Disk drive A piece of hardware attached to your computer. Typically, a disk drive is either a floppy or hard disk drive. You insert floppy disks in floppy disk drives. Floppy disk drives are commonly referred to as the A drive and the B drive. Hard disks are usually built into the computer and are referred to as the C drive. Your computer manual should tell you how your drives are labeled.

Disk operating system A group of programs that act as a translator between you and your computer. MS-DOS is a disk operating system.

Drive name Consists of a drive letter and a colon. A drive name tells MS-DOS which drive to search for the file. For example, the command *type a:progress.rpt* contains a drive name (*a:*) that tells MS-DOS to look on the disk in drive A for the file called *progress.rpt*.

Editor A program that allows you to manipulate text and data on the computer. Editors allow you to move, add, and delete characters and lines, and to save files. The MS-DOS line editor is called **Edlin**.

Edlin A line-oriented editor that comes with MS-DOS. *See also* Editor.

ENTER key The key you usually press after entering data or text, or after you type an MS-DOS command. On some computers, the ENTER key is called the RETURN key.

Erase A synonym for the MS-DOS **del** command. *See also* Del.

Error messages Messages that appear on the screen after MS-DOS detects a problem while trying to process a command or program. *See the MS-DOS User's Reference for the appropriate response to each error message.*



File A collection of related information. A file on a disk can be compared to a file folder in a desk drawer. For example, a file folder named *friends* might contain the names and addresses of your friends. A file on a disk could contain the same information, and could also be named *friends*. Programs are also stored in files.

Filename A filename can be from one to eight characters in length and can have an extension of up to three characters separated from the filename by a period (.). An example of a complete filename is *progress.rpt*.

Filename extension An addition to a filename. Extensions begin with a period and contain from one to three characters. Most application programs supply their own extensions for files they create. For example, all GW-BASIC® files use a filename extension of *.bas*. *See also* Filename.

Fixed disk *See* Hard disk.

Floppy disk Used for storing programs and files. In this documentation, the term *floppy disk* includes 3.5-inch as well as 5.25-inch floppy disks.

Format An MS-DOS command that structures blank disks so that MS-DOS can store data on them. You must format every blank disk before it can be used with MS-DOS. **Format** also checks the disk for defective spots.

E

F

G

GW-BASIC A general-purpose computer language. Often, BASIC (or GW-BASIC) is the first computer language that people learn.

H

Hard disk Sometimes called a fixed disk, one that is built into the computer. A hard disk can store much more information than a floppy disk, and the computer can retrieve information from it faster.

Hardware The equipment that makes up a computer system, not to be confused with the programs or software.

M

Memory The active part of computer storage used when the computer runs a program or command.

MS-DOS master disk The floppy disk (or disks) on which MS-DOS is distributed. You should always make a backup copy of the master disk (or disks) before you start using MS-DOS on a routine basis.

O

Operating system A group of programs that translate your commands to the computer, helping you perform such tasks as creating files, running programs, and printing documents. *See also* Disk operating system.

P

Print An MS-DOS command that prints files on your printer.

Printer A printing device attached to your computer. It lets you print files so that you have a paper copy or printout.

Program A set of instructions, written in computer language, that tells the computer how to perform some task.

Prompt A symbol that usually consists of a default drive letter (usually A, B, or C) and a greater-than (>) sign. An example of the MS-DOS prompt is B>. Other programs will use different prompts. For example, **Edlin** uses an asterisk (*) as a prompt.

R

Rename An MS-DOS command that renames files. You can use the abbreviation **ren** in place of the full command name.

RETURN key *See* ENTER key.

S

Scrolling The movement of text on your screen as it rolls up and off the top of the screen.

Software The programs, routines, or instructions that allow the computer to perform tasks. Some examples of software include: operating systems, word processing programs, and spreadsheet programs.

T

Type An MS-DOS command that displays files on the monitor.

Volume label An internal name on a disk. You should put a volume label on each of your disks to help you identify them.

Write-protected disk A floppy disk that you can examine information on but cannot change. These disks usually have a write-protect tab. If a disk does not have a write-protect tab, you cannot change any information on the disk. *See also* Write-protect tab.

Write-protect tab The small tab that covers the write-protect notch on a disk. On 5.25-inch disks, this tab is a removable piece of tape. On 3.5-inch disks, the built-in tab slides up to uncover the write-protect notch. After removing the tab, you can copy information onto the disk. *See also* Write-protected disk.

V

W

Index

- .bas extension 3, 55
- .com extension 3
- .doc extension 3
- .exe extension 3
- .rpt extension 3
- .txt extension 3
- 3.5-inch disk
 - description 14
 - storage capacity 14
 - storing 14
- Abbreviation, *. * 53
- Advanced topics
 - MS-DOS User's Reference 48, 51
- Application program
 - database 48
 - Microsoft Networks 48
 - Microsoft Word 50
 - definition 2, 53
 - running 41-43
 - spreadsheet 2, 48
 - starting from autoexec.bat 50
 - starting from hard disk 42
- Application software 53
- Applications 2
- Arrow keys. *See* Direction keys; Key
- Asterisk (*)
 - Edlin prompt 45, 48
- Autoexec.bat file
 - creating with Edlin 47, 49-50
 - differences from config.sys file 50
 - hard disk settings 50
 - including time and date commands in 50
 - purpose 47, 49
 - sample file
 - for one floppy disk and one hard disk drive 50
 - for two floppy disk drives 49
 - settings
 - date 49
 - dir 49
 - path 49
- Autoexec.bat file (*continued*)
 - settings (*continued*)
 - time 49
- Backing up your MS-DOS disks 26-28
- BACKSPACE key 9, 44
- Backup command 53
- Backup disk, definition 53
- Blank disk 36-39
- Buffer, definition 48, 53
- Buffers command, config.sys
 - description 48
 - setting a value for 48
- Capital letters 3, 8, 17
- Changing a filename 31, 33
- Character 53
- Clock, internal 49
- Colon (:)
 - use of with drive name 5
- Command.com file 43
- Command
 - Backup 53
 - Copy 29, 31-32, 39, 53, 54
 - definition 6, 53
 - Del 29, 32, 54
 - Dir 17-18, 29-30, 49, 54
 - Diskcopy 27, 38-39, 53, 54, 55
 - Erase 55
 - Format 16, 36-38
 - how to stop 9, 53
 - Print 29, 35-36, 56
 - Prompt = \$p \$g 50
 - Rename 29, 33, 56
 - Type 34, 56
- Communications port 35
- Computer language, GW-BASIC 56
- Computer memory 8, 56
 - See also* Memory

Config.sys command
 buffers 48
 files 48
 Config.sys file
 commands for 47-48
 creating with Edlin 47-48
 differences from autoexec.bat file 50
 purpose 47
 restarting after changes 49
 sample file 48
 Configuration commands, config.sys 48, 50
 Configuring your computer 8, 47
 CONTROL key 9, 53
 CONTROL key sequence
 CONTROL+ALT+DELETE 9, 37
 CONTROL+C 9, 45, 48, 54
 CONTROL+S 9, 30, 34, 54
 Copy command 31-32, 39, 40, 53, 54
 Copying a disk 39
 Copying files 31
 Correcting typing mistakes 44
 Country and Keyboard screen 22
 Country
 selecting when installing MS-DOS 22
 Creating a config.sys file 48
 Creating a file, Edlin 43-45
 Creating an autoexec.bat file 49-50
 Cursor 5, 8-9, 54

Database program 48
 Date format 22
 Date prompt 49, 50
 Decimal separator 22
 Default directory 50
 Default disk drive 31, 32, 33, 34, 35, 50
 changing 5
 definition 5, 54
 Del command 32, 54
 Deleting a file 32
 Device
 definition 6, 54
 device errors 54
 device name 6-7, 17, 18
 printing device 35
 Dir command 17-18, 29-30, 49, 54
 Direction keys 9
 Directory
 contents 18
 default 50

Directory (*continued*)
 definition 4, 54
 displaying files 17-18
 listing 29-30
 MS-DOS 17-18

Disk commands 36-39

Disk drive
 default 5, 31, 32, 33, 34, 35, 50
 definition 4, 54
 floppy 4
 hard 4
 Disk operating system, MS-DOS 54, 56

Disk
 3.5-inch 14
 backup 26-28, 53
 blank 36-39
 copying 39
 external label 12, 27, 37, 38
 floppy 12
 formatting 16, 36-38
 hard 15-16
 labeling 12, 27, 37, 38
 protecting 13-14, 27, 57
 volume label 4, 37, 38, 57
 write-protected 13, 27, 57
 See also Disk drive; Default disk drive.
 Diskcopy command 27, 38-39, 53, 54, 55
 Displaying a file 33-34
 Double-density floppy disk 12
 DOWN key 21
 DOWN ARROW key 9
 Drive letter 4, 5
 Drive name
 definition 5, 55
 floppy disk 22, 54
 hard disk 22, 54

Editing a file, Edlin 43-45

Editor, definition 55

Edlin

 asterisk (*) prompt 45, 48
 creating a config.sys file 47-48
 creating a file 43-45
 creating an autoexec.bat file 48-49
 definition 55
 description 43
 editing a file 43-45
 End command (e) 45, 48

Edlin (*con*)
 exiting
 Insert c
 inserting
 line edit
 line num
 prompt,

End comm
 Ending MS
 ENTER key 8
 Erase 32, 5
 Erase comm
 Erasing a fil
 Error messa

 command
 definition
 device err
 Errors, devic
 ESC key 21

Executable f
 Expanded m
 definition
 expanded
 Extended me
 definition

extended m
 Extension
 .bas 3, 55
 .com 3
 .doc 3
 .exe 3
 .rpt 3
 .txt 3
 command 3
 executable 3
 filename 3-4

F1 key 21

F3 key 21

F9 key 21

File commands

File

 autoexec.bat
 command 3
 config.sys 47-
 copying 31
 creating with
 definition 2, 5
 deleting 32

Edlin (continued)

- exiting a file 44, 45, 48
- Insert command (i) 44, 48
- inserting text 48
- line editor 43, 55
- line numbers 44
- prompt, asterisk (*) 45, 48

End command (e), Edlin 45, 48

Ending MS-DOS session 26

ENTER key 8, 55

Erase 32, 55

Erase command. *See* Del

Erasing a file 32

Error message

- command.com file 43
- definition 7, 55
- device error 54

Errors, device 54

ESC key 21

Executable file, .exe 3

Expanded memory

- definition 7
- expanded memory-board hardware 7

Extended memory

- definition 7
- extended memory-board hardware 7

Extension

- .bas 3, 55
- .com 3
- .doc 3
- .exe 3
- .rpt 3
- .txt 3
- command 3
- executable 3
- filename 3-4, 17, 55

F1 key 21

F3 key 21

F9 key 21

File commands 29-36

File

- autoexec.bat 47, 49-50
- command 3
- config.sys 47-48, 49, 50
- copying 31
- creating with Edlin 43-45
- definition 2, 55
- deleting 32

File (continued)

- displaying 33-34
- executable 3
- naming 16-17
- printing 35-36
- program 34
- renaming 31, 33
- text 33-34

Filename

- allowed length 3, 55
- definition 3, 16-17, 55
- extension 3-4, 17, 55
- invalid 17
- renaming 31, 33
- valid characters in 17

Files command 48

Fixed disk. *See* Hard Disk

Floppy disk drive

- definition 4, 50, 54

Floppy disk

- backing up, with one disk drive 27-28
- backing up, with two disk drives 27
- care of 12-14, 27
- and MS-DOS installation 19-24
- description 12-14, 55
- double-density 12
- formatting 36-38
- high-density 12
- starting applications programs from 41-42
- starting MS-DOS Shell from 26
- storage capacity 12
- write-protected 13-14, 57

Format command

- copying special MS-DOS files 37-38
- description 16, 36-38, 55
- formatting a floppy disk 36-38
- options 37
- volume label 37
- warning 38

Formatting a disk 16, 36-38, 55

Function and Workspace screen 22

Function keys 8-9, 21

Further reference

- MS-DOS User's Reference* 48, 51
- terms, MS-DOS 53-57

Glossary 53-57

Greater-than sign (>)

- used with default drive letter 5, 54, 56

62 Index

GW-BASIC

definition 56

Hard disk drive

definition 4, 50, 54

Hard disk

installing MS-DOS 20, 22, 28

backing up MS-DOS installation disks 16, 20, 28

backing up programs on 16, 20, 28

description 15-16, 56

drive 4, 54

formatting 22-24

partitioning 24

starting applications programs from 42

starting MS-DOS Shell from 25

High-density floppy disk 12

Input

definition 6

Insert command (i), Edlin 44, 48

Install disk, MS-DOS 20-21

Installation Options screen 23

Internal name. *See* Volume label

Invalid filenames 17

Key 8

BACKSPACE 8, 44

CONTROL 9, 53

CONTROL+ALT+DELETE 9, 37

CONTROL+C 9, 45, 48, 54

CONTROL+S 9, 30, 34, 54

direction

DOWN ARROW 9

LEFT ARROW 9

RIGHT ARROW 9

UP ARROW 9

ENTER 8, 21, 55

Function

DOWN 21

ESC 21

F1 21

F3 21

F9 21

LEFT/RIGHT 21

PAGE UP/PAGE DOWN 21

TAB 21

Key (*continued*)

Function (*continued*)

UP/DOWN 21

SHIFT 9

SPACEBAR 8

special keys 8

Keyboard

differences between typewriter and computer keyboards 8

keyboard layout 22

keys 8

selecting when installing MS-DOS 22

Label 12, 27, 37, 38

Labeling a disk 27, 37, 38

LEFT ARROW key 9

LEFT/RIGHT key 21

Letters, lowercase 3, 9, 17

Letters, uppercase 3, 9, 17

Line editor, Edlin 43, 55

Line numbers, Edlin 44

Listing a directory 29-30

Lowercase letters 3, 9, 17

Master disk, MS-DOS 28, 56

backing up

floppy disk 27-28

hard disk 16, 20, 28

Memory

allocating memory when installing MS-DOS 22

and application programs 43

buffers 48, 53

definition 7, 56

expanded memory 7

extended memory 7

Message, error 7, 43, 54, 55

Microfloppy disk. *See* Disk

3.5-inch

Microsoft Networks 48

Microsoft Word 50

Mistakes in typing, correcting 44

Monetary symbol 22

Moving the cursor 5, 8-9, 54

MS-DOS backup disks 26-28

MS-DOS command

Backup 53

Buffers 48

Copy 31-32, 39, 53, 54

MS-DOS command (*continued*)

- definition 7, 53
- Del 32, 54
- Dir 17-18, 29-30, 49, 54
- Diskcopy 27, 38-39, 53, 54, 55
- Erase 32, 55
- Files, config.sys 48
- Format 16, 36-38, 55
- Print 29, 35-36, 56
- Prompt = \$p\$g 50
- Rename 33
- Type 33-34, 56, 58
- MS-DOS directory 17-18
- MS-DOS Install disk 20-21
- MS-DOS Select disk 21
- MS-DOS Shell Option screen 23
- MS-DOS Shell
 - description 25
 - how to start 25-26
- MS-DOS start-up disk 26
- MS-DOS User's Guide*
 - summary 51
- MS-DOS User's Reference* 48, 51
- MS-DOS Select disk 21
- MS-DOS
 - a quick guide 51
 - advanced topics 51
 - backing up your MS-DOS disks 26-28
 - config.sys commands 47-48
 - default drive letter 5, 54, 56
 - ending session with 26
 - further information
 - MS-DOS User's Reference* 48, 51
 - terms 53-57
 - glossary 53-57
 - installing 19-24
 - installing on a hard disk 20, 22, 24, 28
 - keys 8-9
 - line editor, Edlin 43, 55
 - memory, buffer 48, 53
 - open files 48
 - operating system, definition 54, 56
 - prompt 5, 54, 56
 - Select program 19-24
 - Shell 23, 25
 - special files
 - autoexec.bat 24, 47, 49-50
 - config.sys 24, 47-48, 50
 - starting 24-26
 - restarting 9

MS-DOS (*continued*)

- terms 2-7, 53
- See also* MS-DOS command.

Networks. *See* Microsoft Networks

Notational conventions vii

Notch, write-protect 13-14, 27, 57

Number of Printers screen 23

Operating system, MS-DOS

- configuring 47-50

- description 54-56

- setting up 47-50

- special files

- autoexec.bat 47, 49-50

- config.sys 24, 47-48, 50

Output

- definition 6

PAGE UP/PAGE key 21

Path command 49, 50

Port, communications 35

Print command 35-36, 56

Printer port

- specifying 23

Printer

- definition 56

- specifying 23

Printing a file 35-36

Program

- database 48

- definition 2, 56

- Microsoft Networks 48

- Microsoft Word 50

- spreadsheet 2, 48

- See also* Application program.

Programming language, GW-BASIC 56

- Prompt = \$p\$g command 50

Prompt

- default drive letter 5, 54, 56

- definition 56

- Edlin, asterisk (*) 45, 48

- MS-DOS 5, 54, 56

Protecting disks 13, 14, 27, 57

64 Index

Quitting

Edlin 45, 48

References

MS-DOS User's Reference 48, 51

terms, MS-DOS 51, 53-57

Removing a file 32

Rename command

abbreviation 56

purpose 29, 33, 56

Renaming a file 31, 33

RESET key *See* CONTROL + ALT + DELETE

Restarting MS-DOS 9, 49

RETURN key. *See* ENTER

RIGHT ARROW key 9

Running application programs 41, 43, 49

Sample autoexec.bat file 49-50

Sample config.sys file 48

Screens

Country and Keyboard 22

Function and Workspace 22

Installation Options 23

MS-DOS Shell Option 23

Number of Printers 23

Select Installation Drive 22

Select program screens 22-23

Shell Start Programs 23

Specify MS-DOS Location 22

Scrolling through text 9

Scrolling

starting 9, 30, 34, 53, 54

stopping 9, 30, 34, 53, 54

Select disk, MS-DOS 21

Select Installation Drive screen 22

Select program

and MS-DOS installation 24

Country and Keyboard screen 22

description 19

Function and Workspace screen 22

Installation Options screen 23

installing MS-DOS 19-24

MS-DOS Shell Option screen 23

Number of Printers screen 23

preparing to run 20-21

running 22-24

Select Installation Drive screen 22

starting, with floppy disks 20-21

Select program (*continued*)

using with hard disk 20, 22, 23, 24

Setting up MS-DOS 19-24, 47-48

Shell Start Programs screen 23

Shell

installing 23

overview 25

starting 25-26

SHIFT key 9

Software

application 53

definition 2, 53, 56

operating system 56

program 2, 56

spreadsheet 56

word processing 56

Source diskette 27, 28, 39

SPACEBAR key 8

Special files

autoexec.bat 24, 47, 49-50

config.sys 47-48

differences between config.sys and

autoexec.bat 50

Special keys 8, 9, 21

Specify MS-DOS Location screen 22

Spreadsheet program 48

Start-up disk 24, 26

Starting an application program 41-42

Starting MS-DOS 9, 24-26

Stopping a command 9, 53

Stopping scrolling 9, 30, 34, 53, 54

Storage area

buffer 48

See also Memory.

System prompt, MS-DOS 5, 54, 56

System requirements vi-vii

TAB key 21

Tab, write-protect 13, 57

Target diskette 27, 28, 39

Tasks 6, 7, 25

Terms

MS-DOS 2, 53-57

Text editor, Edlin 43-45

Text file 33-34

Time format 22

Time prompt 49

Type command 33-34, 56

Typing mistakes, correcting 44

UP ARROW key 9

UP/DOWN key 21

Uppercase letters 3, 9, 17

Valid filename characters 17

Volume label 4, 37, 38, 57

Word. *See* Microsoft Word

Write-protect notch 13-14, 27, 57

Write-protect tab 13, 57

Write-protected disk 13, 27, 57

Write-protecting your disks 13-14, 27, 57

Xcopy command 30, 39