

Getting Started  
with Disk  
Operating System  
Version 4.00



Programming Family  
10F1370



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with Disk  
Operating System  
Version 4.00



Programming Family

**First Edition (July 1988)**

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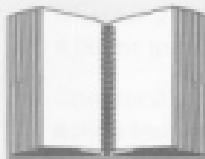
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## DOS 4.00 Library



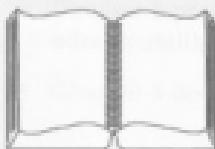
### **Getting Started with DOS 4.00**

The first part of this book provides information you need to install DOS 4.00 and supplements the online information in the SELECT program. The second part introduces you to the DOS Shell.



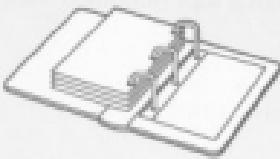
### **Using DOS 4.00**

By using examples, this book explains how to manage your information from the command prompt, how to change the configuration of your system, and how to create and change batch files.



### **DOS 4.00 Command Reference**

This book, an additional purchase item, provides detailed information on the commands used in DOS 4.00 and contains tables relating tasks to these commands.



### **DOS 4.00 Technical Reference and Application Programming**

This book, an additional purchase item, is written for programmers who develop applications for IBM Personal Computers and IBM Personal System/2®.



## Preface

This book provides information you need to install DOS 4.00 and supplements the online help information available to you in the SELECT installation program. It also introduces you to the DOS Shell and has detailed information on using its features.

The information is divided into the following chapters:

- Chapter 1 supplies diskette information and lists the key assignments used in the SELECT installation program.
- Chapter 2 describes installation procedures for installing DOS 4.00 for both fixed disk and diskette-based systems.
- Chapter 3 introduces you to the DOS Shell and provides an interactive tour, which explains its basic operations.
- Chapter 4 describes some of the more advanced tasks possible in the Shell.
- Chapter 5 provides information on customizing the Shell and other installation information.
- Chapter 6 describes the FDISK utility.

Before you install DOS 4.00, you should be able to identify the attached devices on your computer (printers, modems, and so on). You also need to know your computer's memory capacity, whether your computer has a fixed disk, and the kinds of diskettes it uses.

the first quarter of 1995, the company's sales increased from \$1.1 billion to \$1.3 billion, or 19% over the same period last year. This growth was driven by strong demand for the company's products in the U.S. and abroad.

The company's sales of fiscal 1995 were \$4.6 billion, which represents a 19% increase over the previous year. The company's sales in the U.S. were \$3.5 billion, or 19% above the previous year. The company's sales in foreign markets were \$1.1 billion, or 20% above the previous year.

The company's product line includes products in performing arts, education, and health care. The company's products include a range of products from \$100,000 to \$1 million. The company's products are sold in more than 100 countries.

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## **Chapter 1. Before Installing DOS 4.00**

The IBM Disk Operating System (DOS) makes it easier for you to manage your information, your programs, and your system resources. DOS 4.00 includes several enhancements over DOS 3.30.

The SELECT command is enhanced to be a full-screen utility designed to help you install DOS 4.00 or replace a previous DOS version. DOS 4.00 also includes National Language Support enhancements and the DOS Shell, which offers menu-oriented access to commonly used DOS commands.

DOS 4.00 is designed to support large (more than 32MB) media. It should be remembered that previous versions of DOS do not recognize partitions larger than 32MB nor files stored in those partitions. (Refer to Chapter 6 for information on DOS partitions.)

---

### **DOS 4.00 Memory Requirements**

For a diskette-only system or for a fixed disk system, a minimum memory size of 256KB is required to install DOS 4.00.

After installation, to determine your system's used and free memory and to get a list of allocated memory areas, free areas, and installed programs, you can run the MEM command. Ways to use the MEM command can be found in *Using DOS 4.00*.

### **The DOS Shell Startup Options**

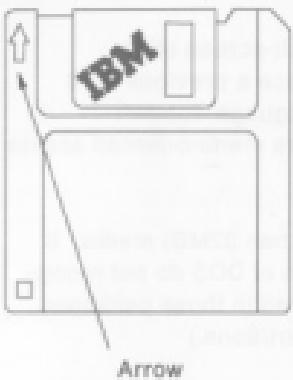
The DOS Shell can be installed with startup options that suit the memory your system has or the memory you wish to allot to the Shell.

If you have a system with at least 360KB of memory, the Shell can be installed in its entirety. If your system's memory is less than 360KB, or if you wish to use less memory for the Shell, you can choose startup options to suit your needs. Refer to page 110 for the startup options available for the Shell and three suggested startup configurations, two of which are for systems with 256KB of memory.

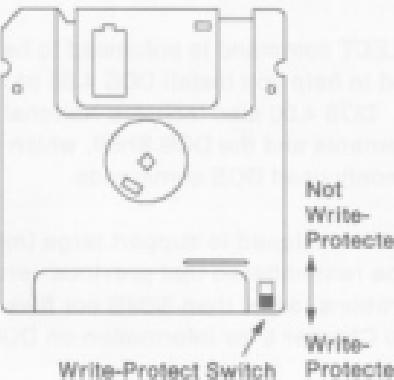
## DOS 4.00 Diskette Information

### 3.5-inch Diskettes

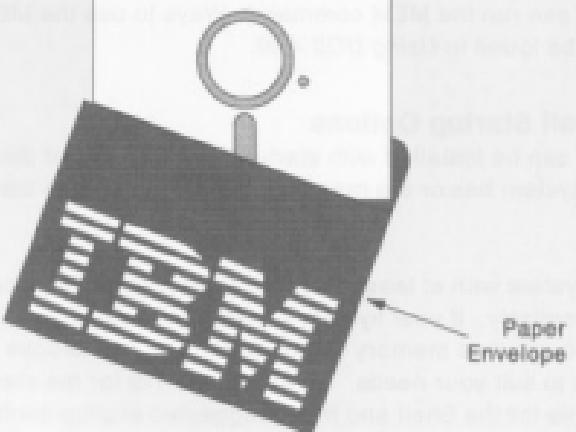
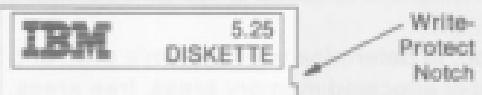
Top View



Bottom View



### 5.25-inch Diskettes



### **3.5-inch Drive Diskette Requirements**

If you are installing DOS 4.00 to diskette and have a 720KB diskette drive, you need:

The two 3.5-inch diskettes shipped with DOS 4.00 and two new or blank 3.5-inch 1MB diskettes. (The 1MB diskettes format to 720KB for installation with a 720KB drive.)

If you are installing DOS 4.00 to diskette and have a 1.44MB diskette drive, you need:

The two 3.5-inch diskettes shipped with DOS 4.00 and one new or blank 3.5-inch 2MB diskette. (The 2MB diskette formats to 1.44MB for installation with a 1.44MB drive.)

If you are installing DOS 4.00 to a fixed disk, you need:

The two 3.5-inch diskettes shipped with DOS 4.00 and one new or blank 3.5-inch 1MB diskette or, if you have a 1.44MB drive, one new or blank 3.5-inch 2MB diskette.

### **5.25-inch Drive Diskette Requirements**

If you have a 5.25-inch diskette drive and you are installing DOS 4.00 to diskette, you need:

The five 5.25-inch 360KB DOS 4.00 diskettes and four new or blank 5.25-inch 360KB diskettes.

If you are installing DOS 4.00 to a fixed disk, you need:

The five 5.25-inch 360KB DOS 4.00 diskettes and one new or blank 5.25-inch 360KB diskette.

### **3.5-inch Write-Protected Diskettes**

It is possible to format a diskette or write information to a diskette unintentionally. For this reason, some diskettes are write-protected. You can read information from write-protected diskettes, but you cannot write information to them.

A 3.5-inch diskette contains a write-protect window in the lower corner. When the window is open, the diskette is write-protected and its information cannot be changed. If you close the window, by sliding the plastic tab shut or by covering it with a piece of opaque tape, information can be written to the diskette.

To avoid writing information to the diskettes you received with DOS 4.00, they must be write-protected. If the diskettes you received are not write-protected, slide the tab so that the window is open. In this way, you can install DOS 4.00 from these diskettes, but you cannot unintentionally write something to them.

### **5.25-Inch Write-Protected Diskettes**

A 5.25-inch diskette may contain a write-protect notch on the side of the diskette. If there is no notch, or if there is a notch and the notch is covered with a tab or a piece of opaque tape, it is write-protected and information cannot be written to it.

If the DOS 4.00 diskettes you have are not write-protected, cover the notch with a piece of opaque tape. In this way, you can install DOS 4.00 from these diskettes, but you cannot unintentionally write something to them.

## **Inserting 3.5-inch Diskettes**

As you install DOS 4.00, you are asked to insert diskettes into your system. Follow this procedure:

1. Insert the diskette into the drive. The arrow side must be up and the arrow must be pointing to the diskette drive.
2. Press gently on the outer edge of the diskette until it "clicks" and drops into place.

To remove the diskette, press the disk eject button on the lower right of the diskette drive. Do not remove the diskette when the in-use light is on; this light indicates that the system unit is accessing information from the diskette drive.

## **Inserting 5.25-inch Diskettes**

As you install DOS 4.00, you are asked to insert diskettes into your system. Follow this procedure:

1. Remove the diskette from its paper envelope.
2. Open the diskette drive door.
3. Gently insert the diskette into the drive; the label must be facing up and the write-protect notch must be to the left.
4. Make sure that the diskette is all the way in; then close the drive door.

To remove the diskette, open the diskette drive door and pull out the diskette. Do not remove the diskette when the in-use light is on; this light indicates that the system unit is accessing information from the diskette drive.

---

## **SELECT Special Key Assignments**

While you are installing DOS 4.00, you need to be aware of several special functions that have been given to some of the keys on your keyboard (Figure 1). A reminder of these key assignments is available to you online from any of the help panels when F1=Help appears on your display.

Task	Key
Move the cursor to the next choice.	Tab
Move the cursor in the direction of the arrow.	↑ or ↓ or → or ←
Proceed to the next step.	Enter
Return to the previous screen. Information typed on the current screen is not saved.	Esc
Scroll Help text information.	PgUp or PgDn
Display online help information when available.	F1
End DOS 4.00 installation.	F3
View key assignments while viewing help.	F9

Figure 1. SELECT Key Assignments

---

## **Responding to Error Messages**

During installation, error messages may be displayed. Appendix A lists explanations of installation error messages and the steps necessary to recover from them. Explanations for error messages you may receive after installation can be found in Appendix D of *Using DOS 4.00*.

## **Chapter 2. Installing DOS 4.00**

The DOS 4.00 package contains two 3.5-inch 720KB diskettes labeled *Install* and *Operating*.

If you are using 5.25-inch 360KB DOS 4.00 diskettes, you have five diskettes labeled *Install*, *Select*, *Operating 1*, *Operating 2*, and *Operating 3*.

To install DOS 4.00, whether it is a new installation or you are replacing a previous version of DOS, you can let the **SELECT** program make most of the installation decisions. **SELECT** sets up the system so that it works efficiently for most applications.

If you are replacing a previous version of DOS, **SELECT** installs DOS 4.00 without jeopardizing the files that you have created.

This chapter contains instructions for each of the following installation procedures (Figure 2). If you have a fixed disk, installing to a fixed disk is usually the installation choice.

<b>Installation Procedure</b>	<b>Page</b>
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Figure 2. Installation Procedures

**Warning:** Unless you choose to install to a specified directory (one of the choices when installing to a fixed disk), DOS 4.00 overwrites all previous version DOS files, including read-only DOS files. Also, if you install DOS 4.00, modify any .MEU files, and reinstall DOS 4.00, the modified .MEU files are then overwritten.

During the SELECT installation process, the highlighted option on each screen is the choice that SELECT makes for you. This highlighting is called the "selection cursor." Press the Enter key to accept this choice. To make a different choice, use the arrow keys ( $\uparrow$  or  $\downarrow$ ) to move the selection cursor to a different option; then press Enter. When you are asked to type something, it is shown in UPPER-CASE letters. However, you can use uppercase or lowercase letters, or both.

#### **Installing to Systems with OS/2™**

On a system that has Operating System/2™ installed on the fixed disk, DOS 4.00 can be installed to diskette and then started from diskette. An alternative coexisting installation process is described on page 28.

If you choose to install DOS 4.00 to the entire fixed disk, SELECT renames OS/2's AUTOEXEC.BAT and CONFIG.SYS files to AUTOEXEC.OS2 and CONFIG.OS2.

## Installing DOS 4.00 to Diskette on a System with No Fixed Disk

As you perform the install procedure, you are prompted when to insert each diskette. The drive in a one-diskette drive system is called drive A.

1. Label your two blank 3.5-inch diskettes *Startup* and *Shell*.  
If you are installing with 5.25-inch 360KB diskettes, label your four blank diskettes *Startup*, *Shell*, *Working 1*, and *Working 2*.
2. Make sure that the DOS 4.00 installation diskettes are write-protected. (Instructions on how to write-protect diskettes are on page 4.)
3. Insert the DOS 4.00 */Install* diskette in drive A.
4. Turn on your system. If your system is already on, press **Ctrl + Alt + Del** to restart your system.

**Note:** The + between key names means that the keys must be pressed and held down in the order shown and released together.

You see this screen. (If you are installing with 5.25-inch diskettes, remove the */Install* diskette and insert the *Select* diskette; then press Enter to see this screen.)

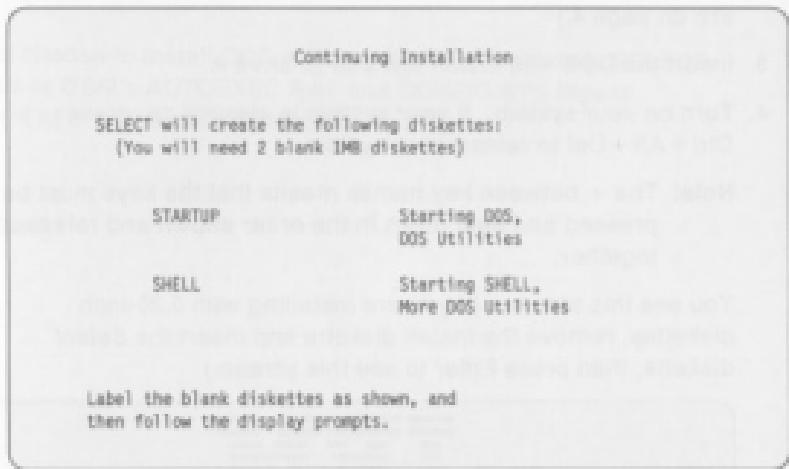


5. Press Enter and follow the instructions as they are displayed.

The messages tell you what action is occurring and when to insert diskettes. The selection cursor on each screen is on the choice that SELECT makes for you when you press the Enter key. To make a different choice, use the arrow keys (**↑** or **↓**) to move the selection cursor to a different option; then press Enter.

**Note:** You have the opportunity to review the choices you make during installation and those that SELECT makes for you. You can either accept these choices or change them. If you review your choices and want to change the Shell parameters (startup options), refer to "Customizing the DOS Shell with Startup Options" on page 110.

During the installation procedure, you see this screen:



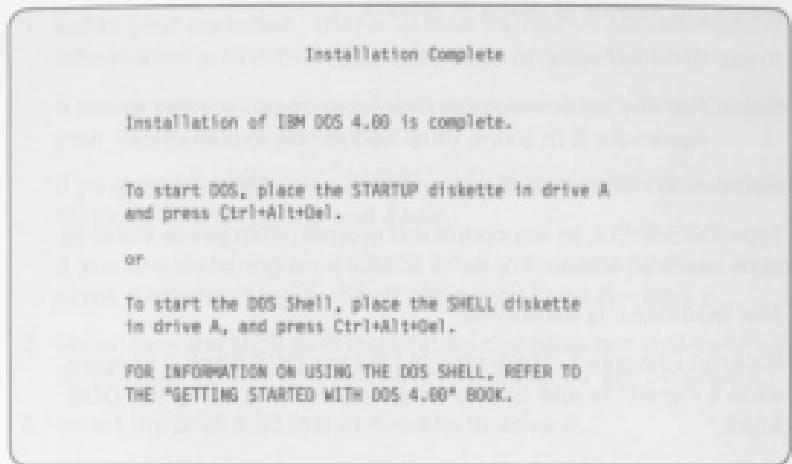
If you are installing with 5.25-inch diskettes, you are instructed to label your four blank diskettes *Startup*, *Shell*, *Working 1*, and *Working 2*.

6. Press Enter.
7. Insert the diskette identified on the screen; then press Enter to continue installing DOS 4.00.

While you install DOS 4.00, you are prompted on the screen when to insert a diskette and which diskette SELECT needs. You exchange diskettes frequently, at irregular intervals, until the installation is complete. The messages displayed tell you the activity taking place.

If you are interrupted and wish to start over, insert the *Install* diskette and press Ctrl + Alt + Del to restart the installation procedure at the first **SELECT** screen.

When you complete installation, you see this screen:



DOS 4.00 is successfully installed to your diskettes. Store the diskettes that came with DOS 4.00 in a safe place.

To start DOS 4.00:

1. Remove diskettes.
2. Write-protect the diskettes you labeled during installation.  
(Instructions on how to write-protect diskettes are on page 4.)
3. To start DOS 4.00 with the DOS Shell, insert the *Shell* diskette in drive A; then press Ctrl+Alt+Del.

To start DOS 4.00 without the DOS Shell, Insert the *Startup* diskette in drive A; then press Ctrl+Alt+Del.

**Note:** For any error messages you may receive, refer to Appendix D in *Using DOS 4.00* for an explanation.

Utilities not resident on the *Shell* diskette are on the *Startup* diskette.

4. Refer to Chapter 3, "Learning to Use the DOS Shell," to learn what a "shell" is and how to accomplish tasks using the DOS Shell.

To start DOS 4.00 if you installed to 5.25-inch diskettes:

1. Remove diskettes.
2. Write-protect the diskettes you labeled during installation.  
(Instructions on how to write-protect diskettes are on page 4.)
3. Insert the Startup diskette in drive A.
4. Press Ctrl + Alt + Del to start DOS 4.00.

**Note:** For any error messages you may receive, refer to Appendix D in *Using DOS 4.00* for an explanation.

5. Remove the Startup diskette and insert the Shell diskette.
6. Type DOSSHELL at the command prompt; then press Enter to start the DOS Shell.

The DOS Shell is displayed.

7. Refer to Chapter 3, "Learning to Use the DOS Shell," to learn what a "shell" is and how to accomplish tasks using the DOS Shell.

Utilities not resident on the Shell diskette are on the Startup, Working 1, and Working 2 diskettes.

To determine what resides on the diskettes created during installation, perform a DIR command on each diskette. (COMMAND.COM is on the Startup diskette.) Information on using the DIR command and all DOS commands is in *Using DOS 4.00*.

## **Installing DOS 4.00 to Diskette with a Fixed Disk System**

---

If you have a fixed disk but want to install DOS 4.00 to diskette, use this procedure. You are prompted when to insert each diskette.

1. Label your diskettes. (Refer to your hardware documentation for information on the drive capacities on your system.)

If you are installing on a 1.44MB drive to a single diskette, label your blank 2MB diskette *Startup*.

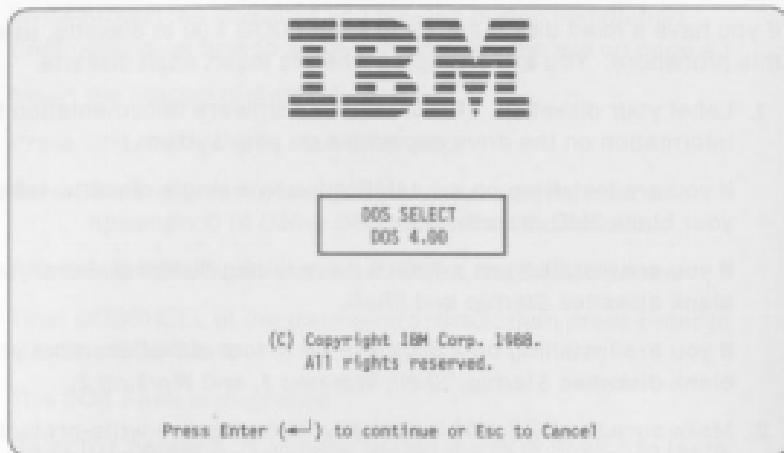
If you are installing on a 720KB drive to two diskettes, label your blank diskettes *Startup* and *Shell*.

If you are installing on a 360KB drive to four diskettes, label your blank diskettes *Startup*, *Shell*, *Working 1*, and *Working 2*.

2. Make sure the DOS 4.00 installation diskettes are write-protected. (Instructions on how to write-protect diskettes are on page 4.)
3. Insert the DOS 4.00 *Install* diskette in drive A.
4. Turn on your system. If your system is already on, press *Ctrl + Alt + Del* to restart your system.

**Note:** The + between key names means that the keys must be pressed and held down in the order shown and released together.

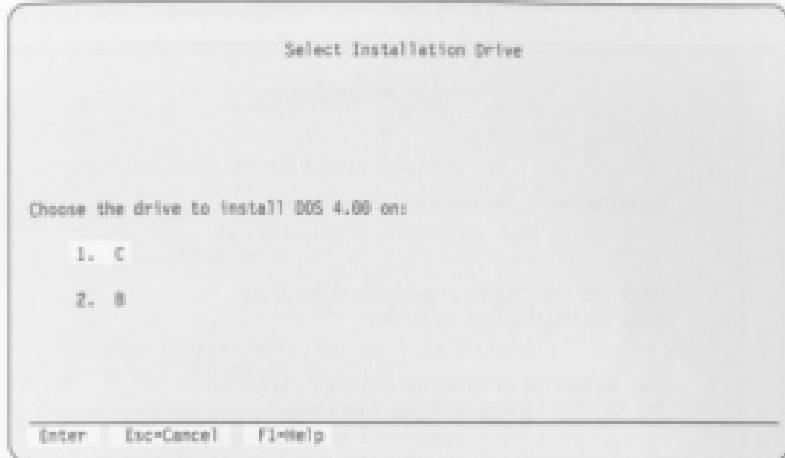
You see this screen. (If you are installing with 5.25-inch diskettes, remove the *Install* diskette and insert the *Select* diskette; then press Enter to see this screen.)



5. Press Enter and follow the instructions as they are displayed.

The messages tell you what action is occurring and when to insert diskettes. The selection cursor on each screen is on the choice that SELECT makes for you when you press the Enter key. To make a different choice, use the arrow keys ( $\uparrow$  or  $\downarrow$ ) to move the selection cursor to a different option; then press Enter.

During installation, you see the following screen:



Item 2, which is for installing to diskette, may show an A or a B on your system. If you are installing to your fixed disk, go right to "Installing DOS 4.00 to a Fixed Disk" on page 19.

6. Use the arrow key (|) to move the selection cursor to 2; then press Enter.

The messages that follow tell you what action is occurring and when to insert diskettes.

**Note:** You have the opportunity to review the choices you make during installation and those that SELECT makes for you. You can either accept these choices or change them. If you review your choices and want to change the Shell parameters (startup options), refer to "Customizing the DOS Shell with Startup Options" on page 110.

If you are installing to a single diskette on a 1.44MB drive, when you complete the installation, you see this screen:

Installation Complete

Installation of IBM DOS 4.00 is complete.

Place the new STARTUP diskette in drive A and press Ctrl+Alt+Del to start DOS.

FOR INFORMATION ON USING THE DOS SHELL, REFER TO THE "GETTING STARTED WITH DOS 4.00" BOOK.

DOS 4.00 is successfully installed to your diskette. Store the diskettes that came with DOS 4.00 in a safe place.

To start DOS 4.00:

1. Remove diskettes.
2. Write-protect the diskette you labeled Startup. (Instructions on how to write-protect diskettes are on page 4.)
3. Insert the Startup diskette in drive A.
4. Press Ctrl + Alt + Del to start DOS 4.00.

**Note:** For any error messages you may receive, refer to Appendix D in *Using DOS 4.00* for an explanation.

5. Refer to Chapter 3, "Learning to Use the DOS Shell," to learn what a "shell" is and how to accomplish tasks using the DOS Shell.

If you are installing to two 720KB diskettes, when you complete installation, you see this screen:

Installation Complete

Installation of IBM DOS 4.00 is complete.

To start DOS, place the STARTUP diskette in drive A and press Ctrl+Alt+Del.

or

To start the DOS Shell, place the SHELL diskette in drive A, and press Ctrl+Alt+Del.

FOR INFORMATION ON USING THE DOS SHELL, REFER TO THE "GETTING STARTED WITH DOS 4.00" BOOK.

DOS 4.00 is successfully installed to your diskettes. Store the diskettes that came with DOS 4.00 in a safe place.

To start DOS 4.00:

1. Remove diskettes.
2. Write-protect the diskettes you labeled during installation.  
(Instructions on how to write-protect diskettes are on page 4.)
3. To start DOS 4.00 with the DOS Shell, insert the *Shell* diskette in drive A; then press Ctrl+Alt+Del.

To start DOS 4.00 without the DOS Shell, insert the *Startup* diskette in drive A; then press Ctrl+Alt+Del.

**Note:** For any error messages you may receive, refer to Appendix D in *Using DOS 4.00* for an explanation.

Utilities not resident on the *Shell* diskette are on the *Startup* diskette.

4. Refer to Chapter 3, "Learning to Use the DOS Shell," to learn what a "shell" is and how to accomplish tasks using the DOS Shell.

To start DOS 4.00 if you installed to 5.25-inch diskettes:

1. Remove all diskettes.
2. Write-protect the diskettes you labeled during installation.  
(Instructions on how to write-protect diskettes are on page 4.)
3. Insert the *Startup* diskette in drive A.
4. Press **Ctrl+Alt+Del** to start DOS 4.00.

**Note:** For any error messages you may receive, refer to Appendix D in *Using DOS 4.00* for an explanation.

5. Remove the *Startup* diskette; then insert the *Shell* diskette in drive A.
6. Type **DOSSHELL**; then press **Enter** to start the DOS Shell.

The DOS Shell is displayed.

7. Refer to Chapter 3, "Learning to Use the DOS Shell" to learn what a "shell" is and how to accomplish tasks using the DOS Shell.

Utilities not resident on the *Shell* diskette are on the *Working 1*, *Working 2*, and *Startup* diskettes.

To determine what resides on the diskettes created during installation, you can perform a **DIR** command on each diskette.

(**COMMAND.COM** is on your *Startup* diskette.) Information on using the **DIR** command and all DOS commands is in *Using DOS 4.00*.

## **Installing DOS 4.00 to a Fixed Disk**

If you have a previous version of DOS on your system and you want to redefine your partition sizes to larger than 32MB, refer to page 32 before beginning the fixed disk installation.

The installation procedures that follow are for installing DOS 4.00 to a fixed disk in these ways:

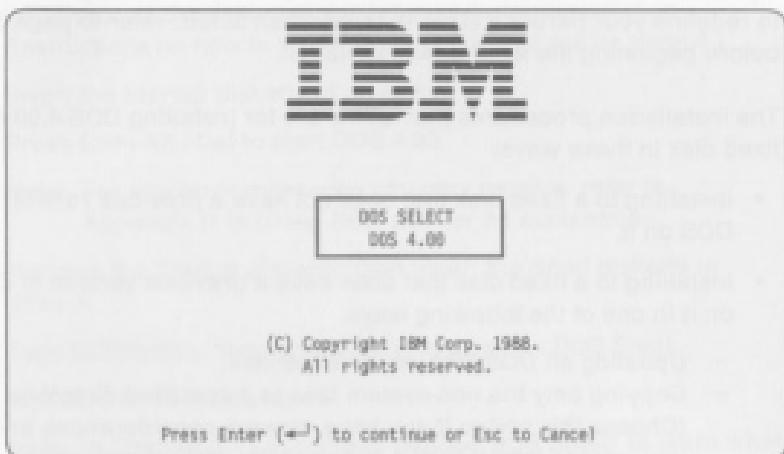
- Installing to a fixed disk that does not have a previous version of DOS on it.
- Installing to a fixed disk that does have a previous version of DOS on it in one of the following ways:
  - Updating all DOS files on the fixed disk.
  - Copying only the non-system files to a specified directory.  
(Choose this option if you have network considerations or if you want to install DOS 4.00 to coexist with your existing operating system. Refer to page 28 for instructions on installing DOS 4.00 to coexist with another operating system.)

As you perform the installation procedure, you are prompted when to insert each diskette.

1. Label your blank diskette Select Copy.
2. Make sure the DOS 4.00 installation diskettes are write-protected.  
(Instructions on how to write-protect diskettes are on page 4.)
3. Insert the DOS 4.00 Install diskette in drive A.
4. Turn on your system. If your system is already on, press Ctrl + Alt + Del to restart your system.

**Note:** The + between key names means that the keys must be pressed and held down in the order shown and released together.

You see this screen. (If you are installing with 5.25-inch diskettes, remove the *Install* diskette and insert the *Select* diskette; then press Enter to see this screen.)

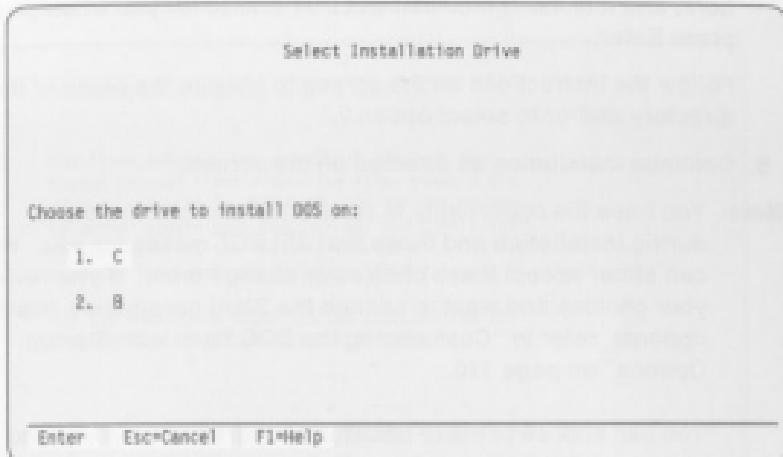


5. Press Enter and follow the instructions as they are displayed.

You exchange diskettes several times during the installation procedure. The selection cursor on each screen is on the choice that SELECT makes for you when you press the Enter key. To make a different choice, use the arrow keys ( $\uparrow$  or  $\downarrow$ ) to move the selection cursor to a different option; then press Enter.

When you see the screen below, press Enter to continue. If you want to change your selection, use the arrow keys ( $\uparrow$  or  $\downarrow$ ) to move the selection cursor to a different option; then press Enter.

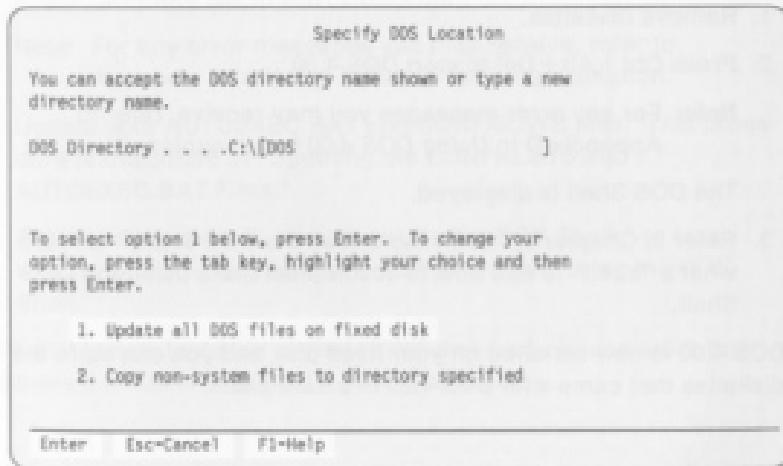
During installation, you see the following screen:



Item 2, which is for installing to diskette, may show an A or a B on your system.

6. Choose 1; then press Enter.

You see this screen:



7. To update all DOS files on your fixed disk and to accept "DOS" as the name of the directory in which to install DOS 4.00, press Enter.

Updating all DOS files on the fixed disk is generally the choice here, and it is the choice that SELECT makes for you when you press Enter.

Follow the instructions on the screen to change the name of the directory and/or to select option 2.

8. Continue installation as directed on the screen.

**Note:** You have the opportunity to review the choices you make during installation and those that SELECT makes for you. You can either accept these choices or change them. If you review your choices and want to change the Shell parameters (startup options), refer to "Customizing the DOS Shell with Startup Options" on page 110.

You can choose to make decisions in partitioning your fixed disk or let SELECT do it for you. If you choose to make your own partitioning decisions, refer to Chapter 6, "Partitioning Your Fixed Disk."

If you installed to a fixed disk that does not have a previous version of DOS on it, start DOS 4.00 by following these steps:

1. Remove diskettes.
2. Press Ctrl + Alt + Del to start DOS 4.00.

**Note:** For any error messages you may receive, refer to Appendix D in *Using DOS 4.00* for an explanation.

The DOS Shell is displayed.

3. Refer to Chapter 3, "Learning to Use the DOS Shell," to learn what a "shell" is and how to accomplish tasks using the DOS Shell.

DOS 4.00 is now installed on your fixed disk and you can store the diskettes that came with DOS 4.00 in a safe place.

If you installed to a fixed disk that has a previous version of DOS and you chose to install to the entire fixed disk, you see this screen:

Installation of IBM DOS 4.00 is complete.

The files AUTOEXEC.400 and CONFIG.400 have been copied to your fixed disk. The files contain the options selected for DOS 4.00. To get the options selected, update your AUTOEXEC.BAT and CONFIG.SYS files. Refer to the "Getting Started with DOS 4.00" book for information on updating these files.

FOR INFORMATION ON USING THE DOS SHELL, REFER TO THE "GETTING STARTED WITH DOS 4.00" BOOK.

Remove all diskettes. Press Ctrl+Alt+Del to start DOS

#### To start DOS 4.00:

1. Remove all diskettes.
2. Press Ctrl+Alt+Del to start DOS 4.00.

**Note:** For any error messages you may receive, refer to Appendix D in *Using DOS 4.00* for an explanation.

3. Update your AUTOEXEC.BAT and CONFIG.SYS files. This procedure is described in "Updating the CONFIG.SYS and AUTOEXEC.BAT Files."
4. Refer to Chapter 3, "Learning to Use the DOS Shell," to learn what a "shell" is and how to accomplish tasks using the DOS Shell.

DOS 4.00 is now installed on your fixed disk and you can store the diskettes that came with DOS 4.00 in a safe place.

If you installed to a fixed disk that has a previous version of DOS and chose to copy non-system files to directory specified, you see this screen:

Installation Complete

Installation of IBM DOS 4.00 is complete.

The files AUTOEXEC.400 and CONFIG.400 have been copied to your fixed disk. These files reflect the options selected for DOS 4.00.

To get the options selected for DOS 4.00:

1. Update your AUTOEXEC.BAT and CONFIG.SYS files
2. Copy DOS 4.00 system files to drive C

REFER TO THE "GETTING STARTED WITH DOS 4.00" BOOK FOR INFORMATION ON UPDATING THESE FILES AND ON USING THE DOS SHELL.

Remove all diskettes. Press Ctrl+Alt+Del to start DOS.

DOS 4.00 is now installed on your fixed disk in the directory you specified.

1. Remove the DOS 4.00 diskettes from your system.
2. Store them in a safe place.

If you want to start your system using DOS 4.00, the AUTOEXEC.400 and CONFIG.400 files that were created by SELECT need to be updated and the DOS 4.00 system files must be copied to drive C. These procedures follow.

### Updating the CONFIG.SYS and AUTOEXEC.BAT Files

A CONFIG.SYS file contains commands that set up your system to work in a certain way. Each time you start your system, DOS searches for a CONFIG.SYS file and, if it finds one, uses the commands contained there when setting up your system. After searching for the CONFIG.SYS file, DOS searches for an AUTOEXEC.BAT file. If DOS finds an AUTOEXEC.BAT file, it uses the commands there to further define the way it starts your system.

During installation, SELECT checks your system for a CONFIG.SYS file and an AUTOEXEC.BAT file. If either or both of these files exist on your system, rather than overwriting these two existing files,

SELECT creates a CONFIG.400 file and an AUTOEXEC.400 file. For your system to use the configuration that SELECT has created in these new files, they need to be renamed. If there are commands in the existing CONFIG.SYS file and AUTOEXEC.BAT file that you want to maintain, you also need to update these new files to contain these commands before you rename them.

The following is an example of what may be in the CONFIG.400 file that SELECT creates:

```
BREAK=ON  
BUFFERS=20  
FILES=8  
LASTDRIVE=E  
SHELL=C:\DOS\COMMAND.COM /P /E:256  
DEVICE=C:\DOS\ANSI.SYS  
INSTALL=C:\DOS\FASTOPEN.EXE C:=(50,25)
```

The following is an example of what may be in the AUTOEXEC.400 file that SELECT creates:

```
@ECHO OFF  
SET COMSPEC=C:\DOS\COMMAND.COM  
VERIFY OFF  
PATH C:\DOS  
APPEND /E  
APPEND C:\DOS  
PROMPT $P$G  
C:\DOS\GRAPHICS  
VER  
DOSSHELL
```

To update and rename the AUTOEXEC.400 and CONFIG.400 files that SELECT creates, follow these steps:

1. Remove all diskettes from your system; then press Ctrl+Alt+Del to reach the C> prompt.
2. Using an editor such as EDLIN, enter from the CONFIG.SYS file to the CONFIG.400 file any commands that you want to maintain. Instructions on using EDLIN are in *Using DOS 4.00*.
3. Exit the editor.
4. Do either of the following:

Rename your CONFIG.SYS file, or  
erase your CONFIG.SYS file.

5. Rename the CONFIG.400 file to CONFIG.SYS.
6. Using an editor, enter any commands that you want to retain from the AUTOEXEC.BAT file to the AUTOEXEC.400 file.

**Note:** If you have installed the Shell, the DOSSHELL command must remain as the last command in your AUTOEXEC.400 file.

7. Exit the editor.
8. Do either of the following:

Rename your AUTOEXEC.BAT file, or  
erase your AUTOEXEC.BAT file.

9. Rename the AUTOEXEC.400 file to AUTOEXEC.BAT.
10. Press Ctrl+Alt+Del to start DOS 4.00.

**Note:** For any error messages you may receive, refer to Appendix D in *Using DOS 4.00* for an explanation.

The DOS Shell is displayed.

11. Refer to Chapter 3, "Learning to Use the DOS Shell," to learn what a "shell" is and how to accomplish tasks using the DOS Shell.

### **Copying System Files to Drive C**

Follow these steps to copy system files to drive C. This is necessary if you want to start your system in DOS 4.00 and if, during installation, you chose to copy non-system files to a directory that you specified on your fixed disk.

1. Insert the *Install* diskette in drive A.
2. Turn on your system. If your system is already on, press Ctrl + Alt + Del to restart your system.
3. Press Esc; then press F3. Your system displays the A > prompt.  
If installing with 360KB 5.25-inch diskettes, press Esc. Your system displays the A > prompt.
4. At the A > prompt, type:  
`SYS C:`
5. Press Enter.

6. To copy COMMAND.COM to drive C:

At the A> prompt, type:

COPY COMMAND.COM C:

Press Enter.

(Instead of copying COMMAND.COM to drive C, if you prefer, you can copy the SHELL = statement in the CONFIG.400 file to the CONFIG.SYS file.)

7. Remove the *Install* diskette.

8. Press Ctrl+Alt+Del to start DOS 4.00.

## **Installing DOS 4.00 to a Fixed Disk to Coexist with Another Operating System**

Installing DOS 4.00 to diskette, as described on page 13, is one way to use DOS 4.00 on a system that has Operating System/2 (or any other operating system) installed on the fixed disk.

An alternative to installing to diskette is to install DOS 4.00 to your fixed disk, in a manner which allows DOS 4.00 to coexist with the existing operating system, and start DOS 4.00 from diskette. The requirements before beginning this procedure follow:

The two 3.5-inch 720KB installation diskettes shipped with DOS 4.00 or the five 5.25-inch 360KB DOS 4.00 installation diskettes

One new or blank diskette (the same media as your drive A)

OS/2 (or another operating system) installed on your fixed disk.

When this installation procedure is complete, you can start DOS 4.00 from the diskette that you create during installation; then you can remove the Startup diskette from drive A and operate DOS 4.00 from the fixed disk.

1. Label your blank diskette Select Copy.
2. Insert the DOS 4.00 /Install diskette in drive A.
3. Turn on your system.

If your system is already on, press Ctrl + Alt + Del to restart your system.

**Note:** The + between key names means that the keys must be pressed and held down in the order shown and released together.

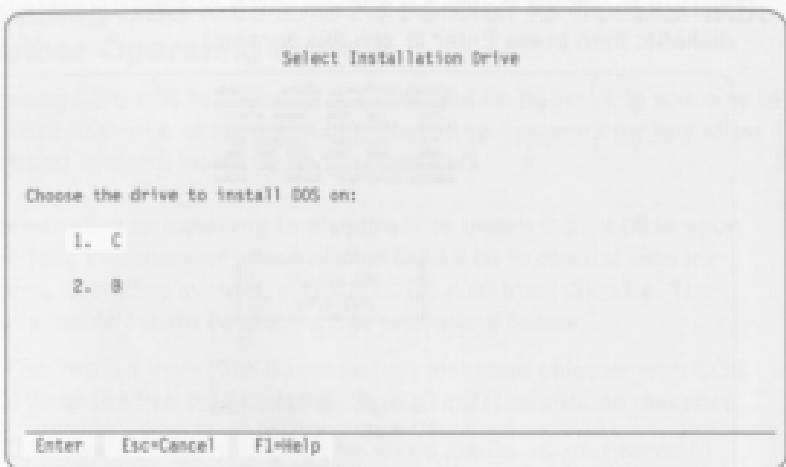
You see the following screen. (If you are installing with 5.25-inch diskettes, remove the *Install* diskette and insert the *Select* diskette; then press Enter to see this screen.)



4. Press Enter and follow the instructions as they are displayed.

The messages tell you what action is occurring and when to insert diskettes. The selection cursor on each screen is on the choice that SELECT makes for you when you press the Enter key. To make a different choice, use the arrow keys ( $\uparrow$  or  $\downarrow$ ) to move the selection cursor to a different option; then press Enter.

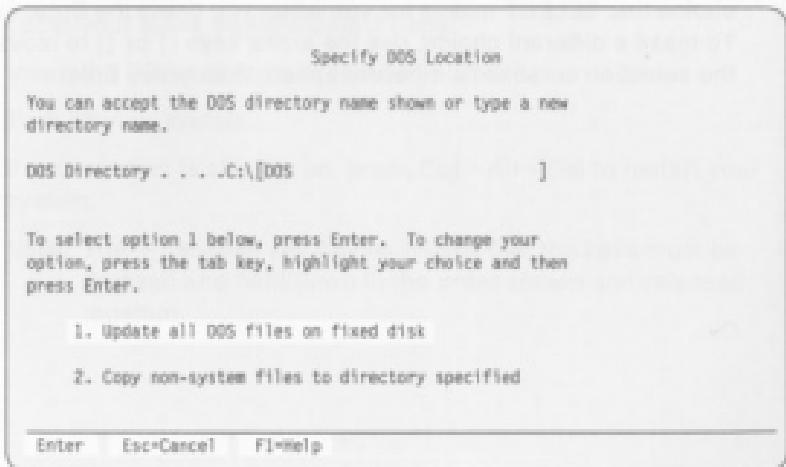
During installation, you see the following screen:



Item 2, which is for installing to diskette, may show an A or a B on your system.

5. Choose 1; then press Enter.

The following is displayed:



The cursor on this screen is at the entry field for the directory name.

6. Do either of the following:

Press the tab key to accept "DOS" as the name of the directory in which to install DOS 4.00, or

Type in a new name for the directory; then press the tab key.

7. Press the arrow key (]) to move the selection cursor to option 2.

8. Press Enter.

9. Continue installation as directed on the screen.

**Note:** You have the opportunity to review the choices you make during installation and those that SELECT makes for you. You can either accept these choices or change them. If you review your choices and want to change the Shell parameters (startup options), refer to "Customizing the DOS Shell with Startup Options" on page 110.

When you complete installation, you see this screen:

Installation Complete

Installation of IBM DOS 4.00 is complete.

The files AUTOEXEC.400 and CONFIG.400 have been copied to your fixed disk. These files reflect the options selected for DOS 4.00.

To get the options selected for DOS 4.00:

1. Update your AUTOEXEC.BAT and CONFIG.SYS files
2. Copy DOS 4.00 system files to drive C

REFER TO THE "GETTING STARTED WITH DOS 4.00" BOOK FOR INFORMATION ON UPDATING THESE FILES AND ON USING THE DOS SHELL.

Remove all diskettes. Press Ctrl+Alt+Del to start DOS.

10. Remove the Operating diskette.

11. Insert the /Install/ diskette in drive A.

12. Press Ctrl+Alt+Del to restart your system.

13. Press Esc; then press F3 to exit SELECT.

If you are installing with 5.25-inch 360KB diskettes, press Esc to exit SELECT.

14. Change the name of the Select Copy diskette to Startup.

15. At the prompt (A>) type:

```
FORMAT A: /S
```

The DOS FORMAT utility is started. (For more information on the FORMAT command, see *Using DOS 4.00*.)

When asked to insert a diskette, insert the Startup diskette.

When asked for a volume label, type any name you want, up to eleven characters long. (A suggestion is STARTUP.) Then press Enter.

When asked if you are going to format another diskette, type N (no); then press Enter.

16. To copy the AUTOEXEC.400 and CONFIG.400 files created by SELECT to your Startup diskette, enter:

```
COPY C:\*.*.400
```

17. To rename CONFIG.400, enter:

```
RENAME CONFIG.400 CONFIG.SYS
```

18. To rename AUTOEXEC.400, enter:

```
RENAME AUTOEXEC.400 AUTOEXEC.BAT
```

19. Press Ctrl+Alt+Del to start DOS 4.00.

**Note:** For any error messages you may receive, refer to Appendix D in *Using DOS 4.00* for an explanation.

The DOS Shell is displayed.

The Startup diskette can be removed after system startup. It must be used each time you want to start DOS 4.00.

20. Refer to Chapter 3, "Learning to Use the DOS Shell," to learn what a "shell" is and how to accomplish tasks using the DOS Shell.

---

## Defining Larger Partitions

If you are installing to a system with partitions defined at 32MB or smaller and you want to create larger partitions, you must back up your fixed disk and remove the current partitions before installing DOS 4.00. To do this:

1. Insert the DOS 4.00 /install diskette in drive A.

2. Turn on your system. If it is already on, press Ctrl+Alt+Del to restart your system.
3. Press Esc; then press F3. Your system displays the A> prompt.  
If installing with 360KB 5.25-inch diskettes, press Esc. Your system displays the A> prompt.
4. Remove the */Install* diskette.
5. Insert the DOS 4.00 Operating diskette in drive A.  
If installing with 360KB 5.25-inch diskettes, insert the DOS 4.00 Select diskette in drive A.
6. Define a path to the FORMAT command on your fixed disk. For example:  
`PATH C:\DOS`
7. Use the BACKUP command to back up all the partitions (drives) on the fixed disk you want to repartition.  
BACKUP automatically formats the target diskette if it is not already formatted. When the format is completed, you are asked if you want to format another diskette. Type N (no) to continue with BACKUP. After BACKUP fills a diskette, you are prompted to insert another diskette. Refer to *Using DOS 4.00* for complete instructions on using the BACKUP command.  
When the command is completed, your system again displays the A> prompt.
8. Remove the diskette from drive A.
9. Insert the */Install* diskette in drive A.
10. Use the FDISK utility to partition your fixed disk to the new partition sizes you want. Refer to Chapter 6 of this book for instructions on using FDISK.  
At the completion of FDISK, you are instructed to restart your system. Press any key when ready.
11. At the SELECT screen, press Esc; then press F3. Your system displays the A> prompt.  
If installing with 360KB 5.25-inch diskettes, press Esc. Your system displays the A> prompt.

12. Use the **FORMAT** command to format the drives you created during FDISK. Refer to *Using DOS 4.00* for instructions on using the **FORMAT** command.
13. Remove the *Install* diskette.
14. Insert the *Operating* diskette in drive A.  
If installing with 360KB 5.25-inch diskettes, insert the *Select* diskette in drive A.
15. Restore each backed-up partition using the **RESTORE** command. Refer to *Using DOS 4.00* for instructions on using the **RESTORE** command.
16. Install DOS 4.00.

---

## **IBMCACHE Command Considerations**

If you are installing DOS 4.00 on a PS/2™ and plan to use the IBM Disk Cache device driver shipped on the reference diskette, set the BUFFERS statement in the CONFIG.SYS file to BUFFERS=3.

---

### **Command Prompt**

DOS 4.00 and the DOS Shell are installed in a directory that is created during the SELECT installation program. If the name of the directory was not changed during installation, it is the DOS directory. If DOS 4.00 was installed to the fixed disk, the command prompt indicates this by showing C as the drive and DOS as the directory:

C:\DOS>

### **Changing the Default Drive**

The letter that appears in the DOS prompt is the default drive. DOS searches the default drive to find any commands or filenames that you type.

If you start DOS from a fixed Disk, C is the default drive. If you start DOS from a diskette, A is the default drive. If you want to access information in another drive, you can change the default drive by typing the new drive letter followed by a colon. For example:

C:\> (original prompt)  
C:\>A: (new drive designation)  
Press Enter  
A:\> (new prompt)

Now A is the default drive.

the first time in the history of the country. The new government was formed by the members of the former opposition party, the People's Democratic Party (HDP). The HDP had been founded in 2001 by former members of the Kurdish Workers' Party (PKK) who had split from the group.

### Political situation

The new government has faced many challenges since it took office. One of the main issues has been the conflict between the government and the Kurdish Workers' Party (PKK), which has been fighting for independence for decades. The government has also faced criticism for its handling of the migrant crisis, particularly the influx of refugees from Syria.

### Political parties

The political landscape in Turkey has changed significantly in recent years. The HDP has become one of the most influential parties in the country, while the AKP has lost some of its power and influence.

There are also several smaller parties, such as the Nationalist Movement Party (MHP) and the Peoples' Alliance (CHP), which have gained popularity in recent years. The CHP has been a strong advocate for human rights and democracy in Turkey.

### Economic situation

The economy in Turkey has been facing challenges in recent years, particularly due to the global financial crisis. The country has experienced high inflation rates and a decline in exports.

### Geopolitical situation

Turkey's geopolitical position is becoming increasingly important in the region. The country is located at the crossroads of Europe and Asia, and has a significant influence on the politics of the Middle East.

The government has been working to improve relations with its neighbors, particularly with Syria and Iraq. It has also been involved in the conflict in Libya, supporting the opposition forces against Muammar Gaddafi.

Overall, the political situation in Turkey is complex and constantly changing. The new government has a difficult task ahead of it, but it is determined to bring about positive change in the country.

## Chapter 3. Learning to Use the DOS Shell

The DOS Shell is designed to make it easier to use DOS functions and to help you select and run your application programs. It is called a "shell" because it surrounds DOS, covering the details of the disk operating system.

This chapter takes you on a "tour" of many of the basic Shell functions, showing you how the Shell works. The next chapter describes some of the advanced tasks possible in the Shell. By pressing the F1 key, online Help is available throughout the Shell on all entry fields and selectable items. The *DOS Shell Reference Card* shows the details of the Shell, including Start Programs, the File System, and key assignments.

This tour will show you how the Shell works so that you can get started on your work as quickly as possible. Start the tour at the beginning and work your way through to the end. If you are pressed for time, there are "side trips" that you can skip and come back to later. Learning how to exit the Shell is the first activity on the tour agenda. The tour is divided into four sections:

- Introducing the DOS Shell
- Exiting and Restarting the Shell
- Exploring Start Programs
- Exploring the File System

Along the way, you see how to use online Help, select and deselect files, change directories, select a display format, and change the colors of the Shell. You will be able to set the date and time; create, rename, and delete a directory; and find, copy and delete a file.

The activities necessary to complete a task are numbered. When you are asked to type something, it is shown in UPPERCASE letters; however, you can use uppercase or lowercase letters, or both.

During this tour, you are asked to use the PgUp, PgDn, and arrow keys. If these keys do not work on your keyboard, press the NumLock key.

## Introducing the DOS Shell

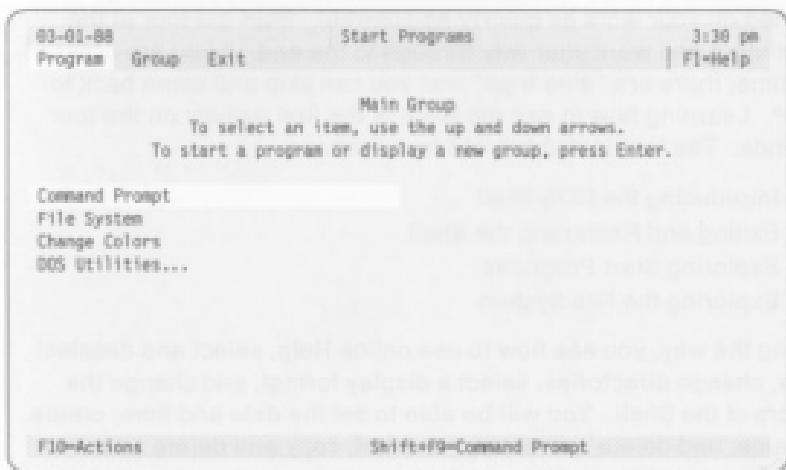
The DOS Shell makes it possible for you to complete common DOS tasks by selecting options from a list instead of entering commands for these tasks at the command prompt. Common DOS functions are available to you in the Shell in an easy-to-use format. The Shell provides easy access to the command prompt for any tasks you want to complete from there.

### Turn On Your System

If your system is already on, press Ctrl + Alt + Del to start DOS 4.00 and view the first Shell screen.

**Note:** The + between key names means that the keys must be pressed and held down in the order shown and released together.

Start Programs is the first screen you see in the Shell:



The screen shown on your system may look different from the one pictured here. There are two display modes in the Shell: text and graphics. Throughout this book, the Shell is pictured in text mode.

The screen displayed is titled Start Programs. From here you can start programs, change the items in the Main Group, display a new group, change the colors of the Shell, and reach the command prompt. File System presents you with an area of activity where you can manage your directories and files.

The Main Group is the primary listing of the items in the Shell. The Main Group can contain programs or groups. A subgroup can contain only programs. These group arrangements are discussed in the tour and in more detail in Chapter 4.

The figure on page 40 is an outline of the Shell and shows you the areas of activities and how to reach them. Many of these activities are explored in this tour.

#### **Mouse and Keyboard Information**

The Shell is designed to work with a keyboard, a mouse, or both. Keyboard information necessary to complete this tour is contained in the tour directions.

For information on using a mouse, (and the scroll bar, which is part of the Shell in graphics mode) plus additional information on keyboard operation, refer to "Mouse and Keyboard Operation" on page 76.

This figure shows the paths to the functions that are available to you in the DOS Shell.

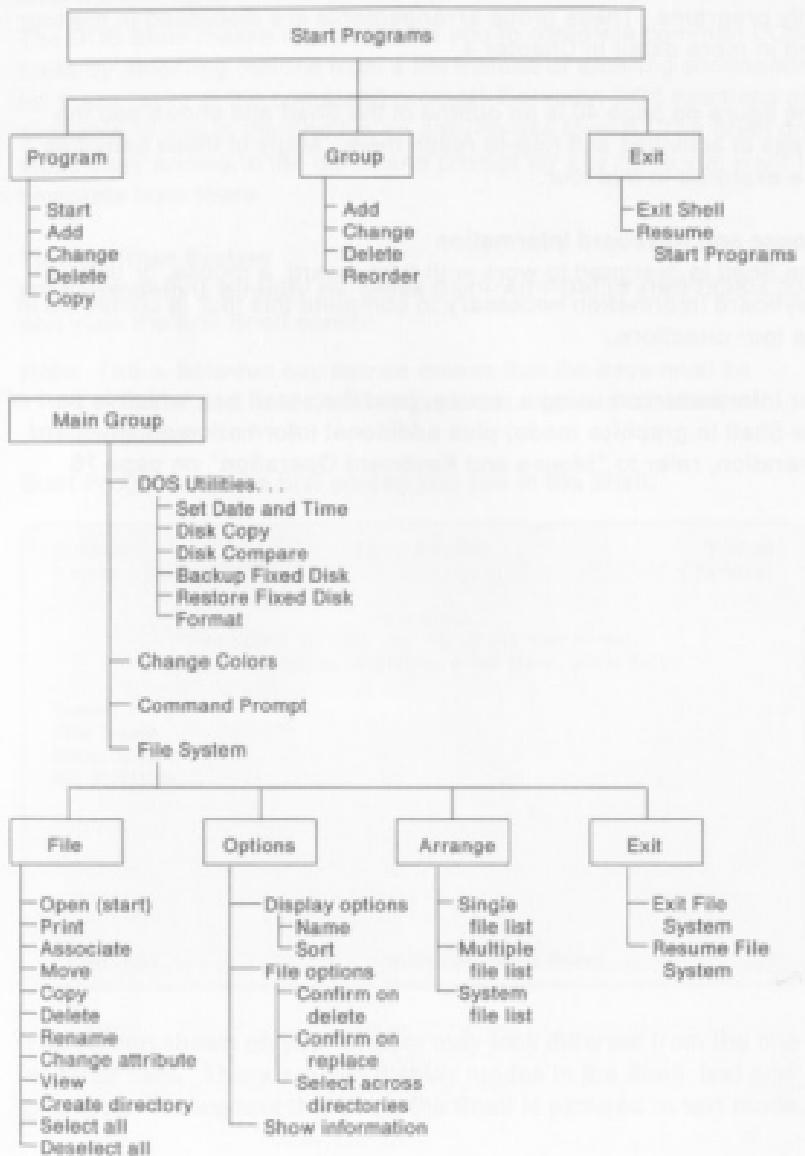


Figure 3. Available Functions in the DOS Shell

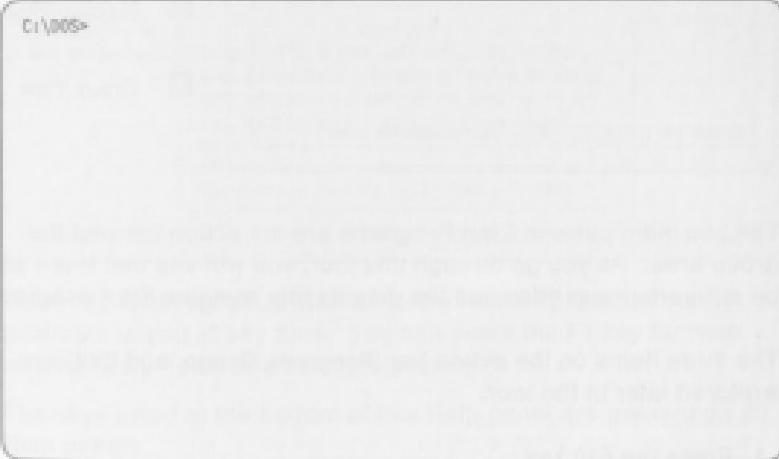
## Exiting and Restarting the Shell

You can exit the Shell from Start Programs in two ways: You can press F3 or you can select Exit at the action bar, and then select Exit Shell F3 from the pull-down that follows.

**Note:** The action bar contains keywords that, when selected, cause a group of actions or additional keywords to appear in a pull-down. A pull-down is a list of selections that follows after you select one of the items on the action bar. To exit a pull-down without making a selection from the pull-down items, press the Esc key, or with the mouse, click outside the pull-down.

To begin the tour, follow these steps to exit the Shell to the DOS prompt and then restart the Shell:

1. Press F3. You see the DOS command prompt on your screen:



```
C:\DOS>
```

This command prompt shows C as the drive and DOS as the directory. Your command prompt may be different, depending on the decisions made when DOS 4.00 was installed.

2. At the prompt, type:

```
DOSHELL
```

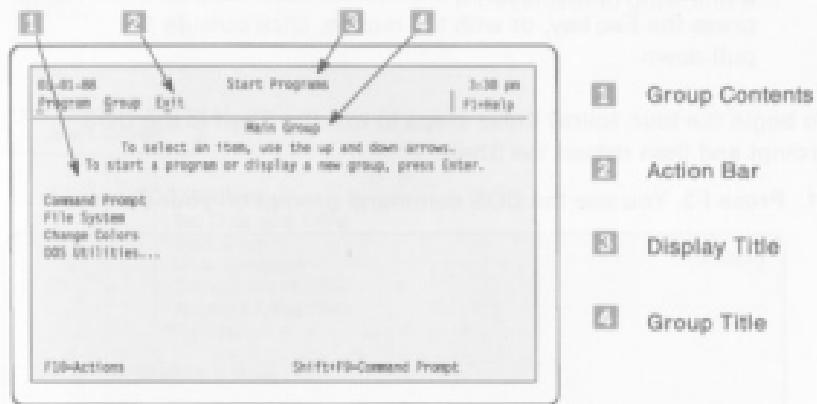
3. Press Enter to restart the Shell.

You can exit the Shell at any time during the tour. If a help message or an error message is displayed, first press Esc; then press F3 to exit the Shell. If you are in the File System, press F3 to exit the File System; then press F3 again to exit the Shell.

You are now back at the first Shell screen.

## Exploring Start Programs

This figure shows the different parts of Start Programs.



The two main parts of Start Programs are the action bar and the group area. As you go through this tour, you will see that there can be different group titles, but the display title remains Start Programs.

The three items on the action bar (Program, Group, and Exit) are explored later in the tour.

1. Press the F10 key.

Note that **Program** on the action bar is now highlighted. Pressing the F10 key always moves the selection cursor to and from the action bar. "Highlighting" is the method used in the Shell to indicate an item or an area of activity. This highlighting is called the "selection cursor."

2. Press the arrow key ( $\rightarrow$  or  $\leftarrow$ ) several times.

The selection cursor moves to the various items on the action bar. (If your arrow keys are not active, press the NumLock key.)

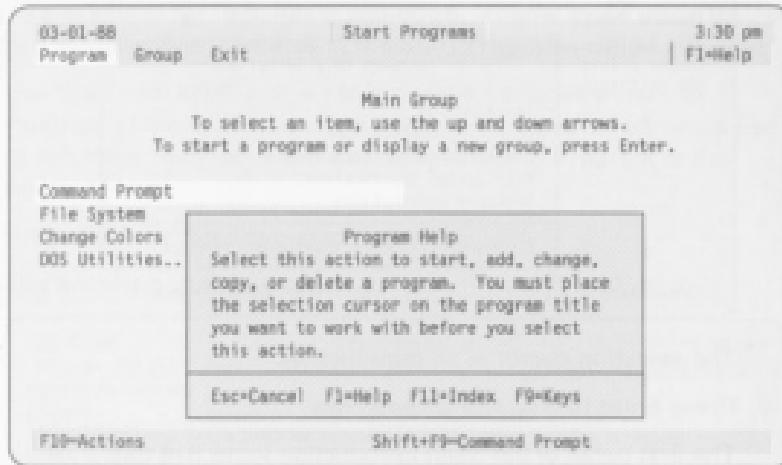
3. Continue pressing the arrow key until the selection cursor is again on Program.

## Online Help

Online help is always available to you in the Shell. By pressing the F1 key, Help is displayed for the entry field or the item highlighted with the selection cursor. Help is also available for all error messages.

1. Press the F1 key now to view the Help for the Program item.

The following is displayed:



This Help for Program is similar to the Help information that is available to you at any time. You can press the F1 key for help with all entry fields and selectable items.

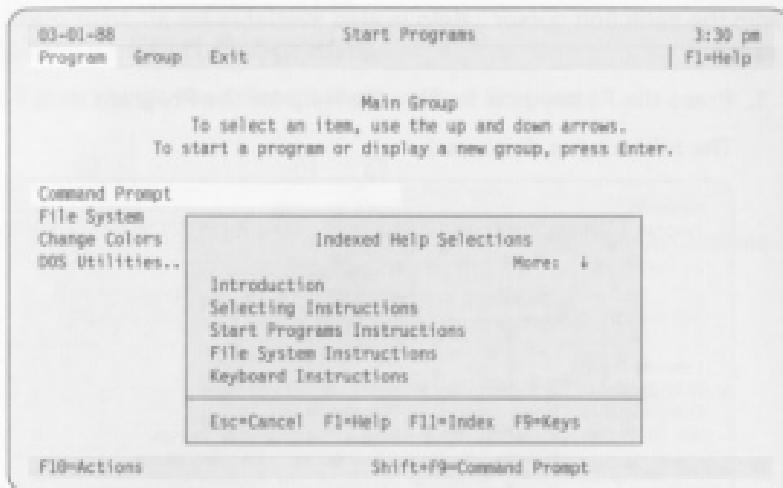
The keys listed at the bottom of this Help panel are present on all Help panels:

- Esc=Cancel** Returns you to the first Help panel; from the first help panel, lets you cancel Help.
- F1=Help** Shows you how the Help function works in the Shell.
- F11=Index** Shows you an index of the Help that is available in the Shell.
- F9=Keys** Shows you the keys that have special functions in the Shell.

2. Press F11 to see the Help index.

The Help index first shows important topics, and then an alphabetic list of the Shell Help.

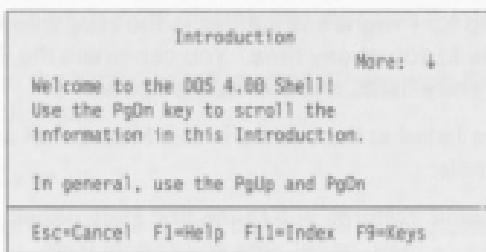
**Note:** If you do not have a key on your keyboard defined as F11, press and hold the Alt key, then press the F1 key.



The selection cursor is on **Introduction**.

3. Press Enter to view the **Introduction**.

The first panel of the Shell introduction looks like this:



4. Read through the **Introduction**.

Note the instructions to use the PgUp and PgDn keys. Use those keys now to see each page in the Introduction. The PgUp and PgDn keys work in this fashion throughout the Shell when you want to scroll a list or information. (If your PgUp and PgDn keys are not active, press the NumLock key.)

## Side Trip to the Help Function Keys

If you like, you can take time now to explore the other areas of Help. To do this:

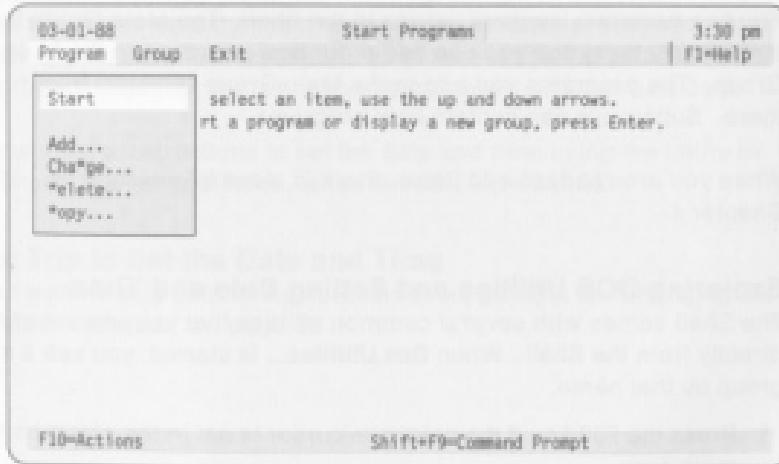
- a. Press the F1 key to see how the Shell Help function works.
  - b. Press the F9 key to view a list of special key assignments.
  - c. Press Esc to return.
5. Press Esc to exit Help.

## Exploring the Start Programs Action Bar

The Start Programs action bar has three items, Program, Group, and Exit. Each action bar item has a pull-down. Follow these steps to explore the functions available at the Start Programs action bar.

1. Use the arrow key (→ or ←) to move the selection cursor to Program at the action bar. (If a Help panel is displayed, press Esc to exit Help; then move the selection cursor to Program at the action bar.)
2. Press Enter or the down arrow key (↓).

The following is displayed:



An ellipsis (...) after an item in any pull-down in the Shell means that a pop-up follows when you press Enter. When an ellipsis is used in the Shell, it means that more information follows. An asterisk (\*) within an item means the item is not selectable. (In graphics mode, the unselectable item is shaded or "blurred.")

**Note:** A pop-up is used to request additional information concerning an item in a pull-down.

3. Press the arrow key ( $\rightarrow$ ).

The items in the Group pull-down let you add, change, or delete a group item, or rearrange the order in which the items appear.

The ellipsis (...) following each item means that a pop-up follows, requesting more information and guiding you through the activity.

4. Press the arrow key ( $\rightarrow$ ) again.

The items in the Exit pull-down let you exit the Shell or resume Start Programs.

5. Continue pressing the arrow key to view these pull-downs as often as you want.

You can view the Help text available on each pull-down item by pressing the arrow keys ( $\uparrow$  or  $\downarrow$ ) to select the item and then pressing the F1 key. Press Esc to exit Help.

6. Press Esc to exit the pull-downs.

## **Exploring the Main Group**

You can have two levels of groups in the Shell. The Main Group is the primary level and you can add programs or groups to the Main Group. The programs you add to the Main Group can start from there. Subgroups can contain only programs.

When you are ready to add items, there is more information in Chapter 4.

## **Exploring DOS Utilities and Setting Date and Time**

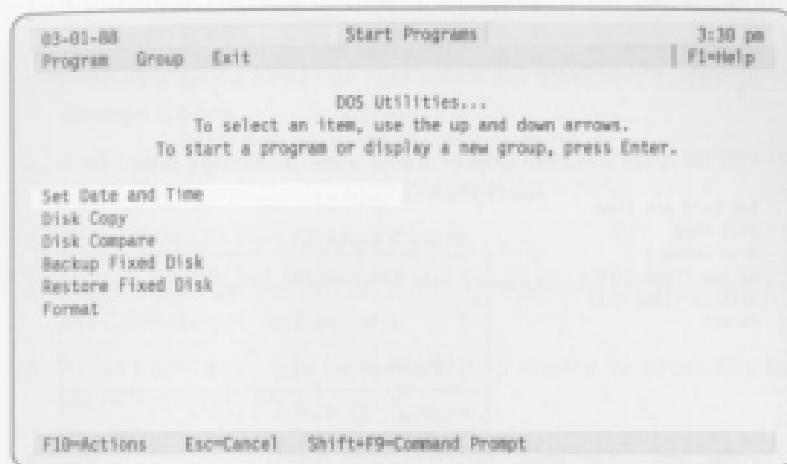
The Shell comes with several common utilities that you can access directly from the Shell. When Dos Utilities... is started, you see a subgroup by that name.

1. Press the F10 key if the selection cursor is not in the group contents area.
2. Press the arrow key ( $\downarrow$  or  $\uparrow$ ) to place the selection cursor on DOS Utilities....

If you like, you can press F1 to view the Help for DOS Utilities.... Press Esc to exit Help.

3. Press Enter to view the DOS Utilities... subgroup.

The DOS Utilities... subgroup is displayed and the selection cursor is on the Set Date and Time item.



Each of the utilities listed in the DOS Utilities... subgroup, when started, is followed by a pop-up. With the exception of Set Date and Time, they each have the most common parameters predefined. A cursor appears at the entry field in each pop-up, giving you the opportunity to accept the predefined parameters or enter new ones.

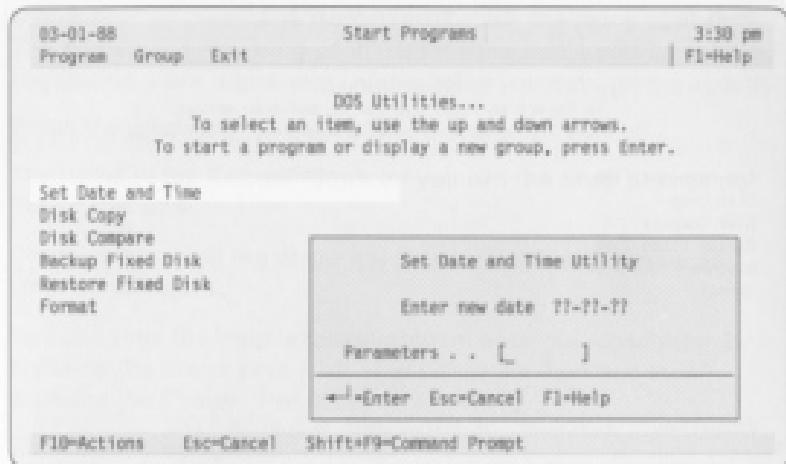
Following are instructions to set the date and time using the utility in the Shell. The other utilities, when chosen, work similarly.

### Side Trip to Set the Date and Time

If you want to skip setting the date and time, go right to "Changing the Colors of the Shell" on page 49.

The date and time are shown on the top of the screen. By following these steps, you can set the correct date and time in the Shell:

1. Press Enter to start the Set Date and Time utility. You see the following:



The cursor is at the entry field of the first prompt.

2. Enter the correct date, using the character shown in the pop-up to separate month, day and year entries.

You can press the F1 key for more information about this entry field.

3. Press Enter. The time entry field is displayed.

4. Enter the time in hours and minutes.

Use two digits for each entry. For example, 1:35 p.m. is entered like this:

13:35

Press F1 if you want more information about this entry field.

5. Press Enter. You see a prompt telling you to press any key to continue. Press the Enter key.

The DOS Utilities... subgroup is again displayed.

If date and time entry fields are again displayed, it means the entries were made incorrectly. Reenter the date and time.

6. Press Esc to return to the Main Group.

## **Changing the Colors of the Shell**

One item in the Main Group allows you to change the colors of your Shell. Do that now by following these steps:

1. If you are in the DOS Utilities... subgroup, press Esc to return to the Main Group.
2. Press the arrow key ( $\uparrow$  or  $\downarrow$ ) to move the selection cursor to **Change Colors**.

If you like, you can press the F1 key to view the Help on this item. Press Esc to exit the Change Colors Help.

3. Press Enter to start **Change Colors**.
4. Press the arrow key (either  $\leftarrow$  or  $\rightarrow$ ) to see the color selections available.
5. Press Enter when you have made your choice, or press Esc to leave the colors as they were.

The Shell returns to the Main Group displayed in the colors you chose.

## **Exploring the Shell Command Prompt**

By following these steps, you will see how you can reach the Shell command prompt, use DOS commands, and return to your task at the point where you left it.

Using the Shell command prompt differs from exiting to the DOS prompt as illustrated at the beginning of this tour. From the DOS prompt, you restart the Shell. From the Shell prompt, you return to the Shell at the point where you left it.

1. Press the arrow key ( $\uparrow$  or  $\downarrow$ ) to move the selection cursor to **Command Prompt**.
2. Press Enter.

The Shell command prompt looks like this:

When ready to return to the DOS Shell, type EXIT then press enter.

IBM DOS Version 4.00

(C)Copyright International Business Machines Corp 1981, 1988

(C)Copyright Microsoft Corp 1981-1988

C:\DOS>

**Note:** You can press Shift+F9 and reach the Shell command prompt at any point in the Shell. If an additional panel is being displayed (for example, a Help panel), press Esc; then press Shift+F9 to reach this command prompt.

You can use all the DOS commands from this prompt. For information on DOS commands, refer to *Using DOS 4.00*.

3. At the prompt, type:

EXIT

4. Press Enter.

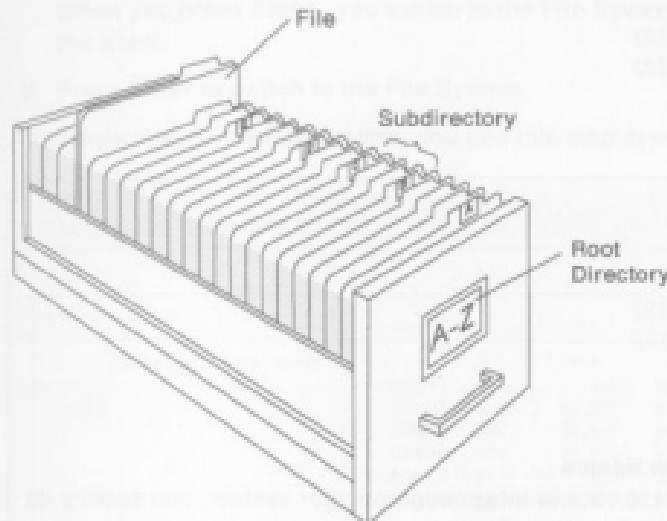
You are returned to the Shell at the point where you left it.

### **Side Trip to Files and Directories**

Switching to the File System is the next item on the tour. While touring the File System, you will be working with files and directories. If you are familiar with the way to organize information on a system, skip this side trip and go directly to "Switching to the File System" on page 53.

Information on a system is organized in directories. A directory is a grouping of files containing related information. A file is like a document.

It helps to think of the root directory on your system as a file drawer, a subdirectory as a division within that drawer, and a file as a file folder within that division.



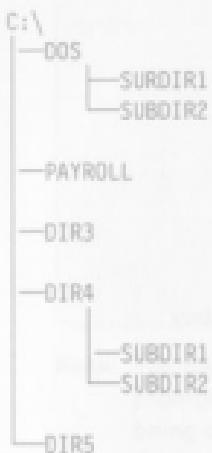
When DOS 4.00 was installed on your computer, it copied some of its files from the DOS 4.00 diskettes to the root directory. The root lists all the directories.

#### **Current Directory**

Whichever directory you are using is called the *current directory*. If you stay, for example, in the root directory, then the root (\) is your current directory. If DOS 4.00 was installed in the DOS directory, when you are using the Shell, DOS is your current directory.

## **Directory Trees**

A directory tree is a diagram of the directories on a system as they branch out from the root. (In the File System portion of the Shell, one of the areas is titled Directory Tree and diagrams the directories on your system.) The following is an example of a directory tree:



## **Specifying Path Names**

When you want to access information on your system, you specify its location, or path, in terms of:

- The drive storing the information**
- The directory containing the information**
- The filename of the information.**

For example, if you are at the C prompt and you want to specify a file named MYFILE which resides on drive A, you type and enter:

A:MYFILE

If you are at the A prompt and you want to specify the EDITOR.CMD file in the PAYROLL subdirectory on drive C, you type and enter:

C:\PAYROLL\EDITOR.CMD

## Switching to the File System

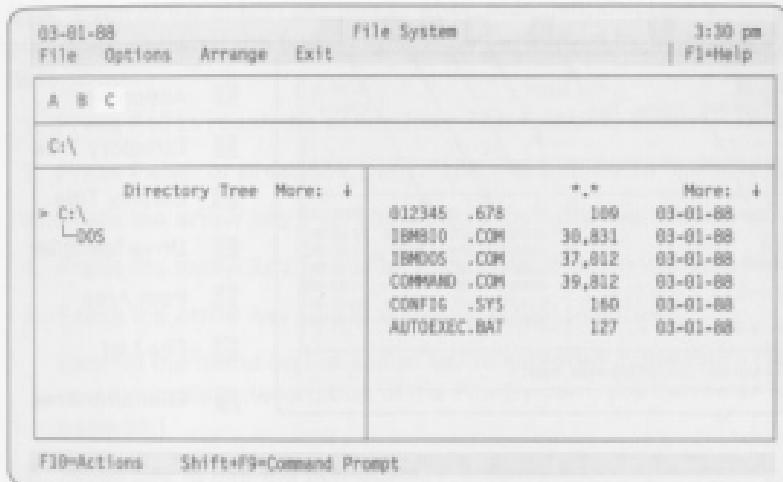
In the next section, you will create a directory and copy and delete a file while exploring the File System. To get started, follow these steps:

1. Press the arrow key ( $\downarrow$  or  $\uparrow$ ) to move the selection cursor to File System.

When you press Enter, you switch to the File System portion of the Shell.

2. Press Enter to switch to the File System.

After switching to the File System, you see this displayed:



In the File System, the action bar has four items. The Exit item allows you to return to the Main Group of Start Programs.

To switch back to Start Programs:

1. Press the F10 key if the selection cursor is not at the action bar.
2. Use the arrow key ( $\rightarrow$ ) to move the selection cursor to Exit.
3. Press Enter. The selection cursor is on Exit File System.

4. Press Enter. The Start Programs screen is displayed.

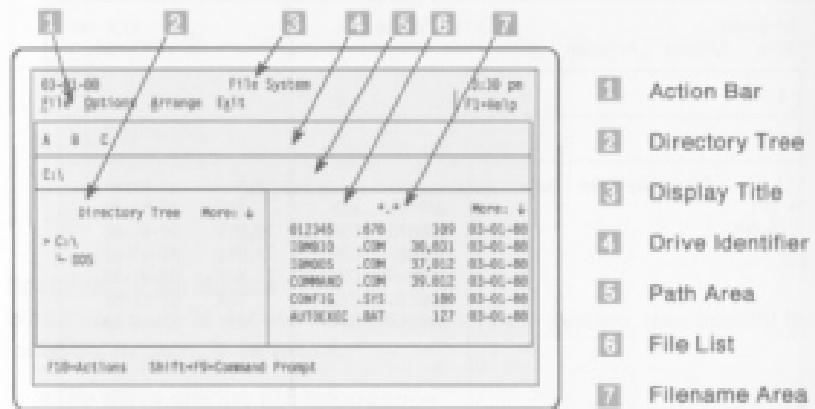
To switch back to the File System:

5. Use the arrow key ( $\uparrow$  or  $\downarrow$ ) to move the selection cursor to File System; then press Enter.

The File System is again displayed.

## Exploring the File System

This figure shows you the different parts of the File System.



In the File System, you can manage your files and directories, and you can start a program from here, too. (For a complete diagram of the activities that are possible with each action bar item, refer to the figure on page 40.)

1. Press the F10 key several times. Note that the selection cursor moves to and from the action bar.
2. Press the tab key several times to move the the selection cursor to the active parts of the File System.

As you move the selection cursor to the different areas, you can press F1 to view the online Help for each area. Also, note the area title for Directory Tree. Next to the Directory Tree area is the file list area.

Just above the file list is a designation showing which files are displayed. The “.” are global characters, and these are discussed later in this tour. Which files are displayed, and this designation, is determined by the entry in the Display options... pull-down. The Display options... pull-down is discussed in “Sorting Files” and “Finding Files.”

There is more information on displaying files in “Exploring the File System Screen Arrangements” on page 57.

### **Exploring the File System Action Bar**

The File System action bar has four items, **File**, **Options**, **Arrange**, and **Exit**. Each of the action bar items, when selected, displays a pull-down showing the tasks that can be performed by selecting that item.

1. Press F10 to reach the action bar. The selection cursor is on **File**.
2. Press Enter, or press the ↓ key. The **File** pull-down is displayed.
3. Press the arrow key (→). The **Options** pull-down is displayed.
4. Press the arrow key (→). The **Arrange** pull-down is displayed.
5. Press the arrow key (→) to display the **Exit** pull-down.

Each of the items on the action bar is explored in the tour. (For a more complete description of the File System, you can refer to page 95.)

6. Press Esc to exit the pull-down.

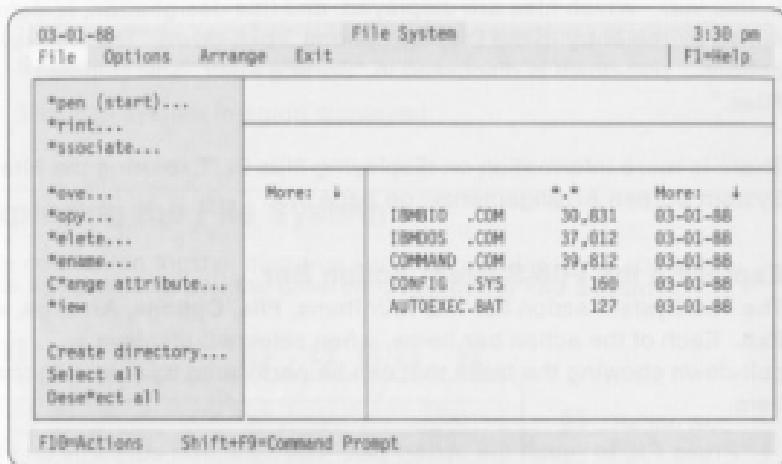
### **Selecting and Deselecting All the Files**

The Shell lets you select all the files in the current directory at one time, and also lets you deselect all the files at one time. Follow these steps to learn how this is done.

#### **Selecting all the Files**

1. If the selection cursor is not at the action bar, press F10. The selection cursor is on **File**.

2. Press Enter. The File pull-down is displayed, and it shows you the tasks you can perform by selecting File.



The steps that follow describe how to select and deselect all the files; however, each of the items in the File pull-down works similarly, and pressing F1 displays Help for each item. You can see by the ellipses that some of the items are followed by pop-ups.

**Note:** An asterisk (\*) within an item means the item is not selectable. (In graphics mode, the unselectable item is shaded or "blurred.")

For example, after selecting a file, **Change attribute...** lets you change the file's attributes. Possible choices are **Hidden**, **Read-only**, and **Archive**. At each of these choices in the **Change attribute...** pop-up, you can press F1 for explanations and help in selecting it.

3. Press the arrow key (↓) to move the selection cursor to **Select all**, then press Enter.

Note that the screen changes and the selection symbol is now in front of each of the filenames, indicating that it is selected for whatever activity you choose. (In graphics mode, the symbol in front of a file is shaded when it is selected.)

## Deselecting all the Files

1. At the File System action bar, press the arrow key ( $\rightarrow$  or  $\leftarrow$ ) to move the selection cursor to **File**.
2. Press Enter. The File pull-down is displayed.
3. Press the arrow key ( $\downarrow$ ) to move the selection cursor to **Deselect all**; then press Enter.

Note that the screen changes and now there are no symbols preceding the filenames, which indicates that none of the files is selected. (In graphics mode, the symbols in front of the files are no longer shaded, indicating that none of the files is selected.)

## Exploring File System Screen Arrangements

The screen presently being displayed shows you the files in one directory. You also can view the files in two different directories or all the files in the specified drive.

1. Use the arrow key ( $\rightarrow$ ) to move the selection cursor to **Arrange** at the action bar.

If the selection cursor is not at the action bar on your screen, press F10; then move the selection cursor to **Arrange**.

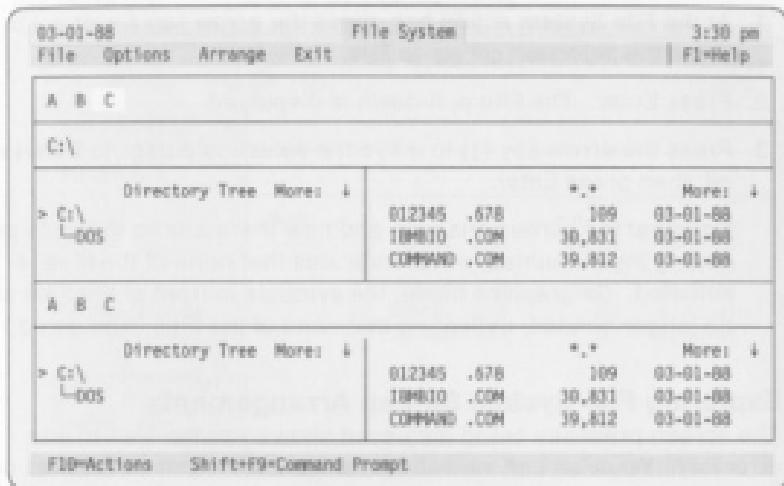
2. Press Enter. The selection cursor is on **Single file list**.
3. Press Enter again.

If an item is not selectable, in text mode, an asterisk (\*) appears within the item. In graphics mode, the unselectable item is shaded or "blurred."

If the screen format presently being displayed on your system is **Single file list**, it is not selectable.

4. Press the arrow key ( $\downarrow$ ) to move the selection cursor to **Multiple file list**; then press Enter.

The screen changes and the multiple file list is shown:



The multiple file list lets you view two directories on the same drive or two directories on two different drives at the same time. The display pictured shows the root (\) directory on drive C displayed twice.

To display a different directory on the same drive, change the directory in one of the directory trees:

- Tab to the Directory Tree area.
- Use the arrow key (↓ and ↑) to move the selection cursor to the desired directory; then press Enter.

The files in the directory you selected are displayed in the file list area.

The path area in a multiple file list display shows the path for the current (active) directory (the directory in which you are working). For example, if the root (\) directory is active in the top of the screen and you change to the DOS directory in the bottom of the screen, as you tab to the two areas, the path area changes to reflect the currently active directory. The same is true if you display two drives. The path area changes to reflect the currently active drive.

To display directories on two drives, select another drive letter in one of the drive identifier areas.

- Tab to the drive identifier area.

- b. Use the arrow key ( $\rightarrow$  or  $\leftarrow$ ) to move the selection cursor to the desired drive; then press Enter.

The drive you selected now replaces one of the displays. As you press the tab key to move to the different areas of the screen, the path area changes to reflect the currently active drive and directory.

5. Press F10 to reach the action bar.
6. Use the arrow key ( $\rightarrow$ ) to move the selection cursor to **Arrange** at the action bar; then press Enter.
7. Press the arrow key ( $\downarrow$ ) to move the selection cursor to **System file list**; then press Enter.

By selecting **System file list**, all the files on your drive can be viewed. A file information panel is also shown. (There is an explanation of this information on page 62, and it is also discussed later in this tour.)

## Sorting Files

The Shell lets you sort your files so that they are displayed in order of name, extension, date, size, or disk order. The following steps guide you in sorting your files by extension. (If you want to sort all the files on a drive, and you have not been following the tour, first select the **System file list** item from the **Arrange** pull-down as described in "Exploring File System Screen Arrangements.")

1. Press F10 to reach the action bar.
2. Use the arrow key ( $\rightarrow$  or  $\leftarrow$ ) to move the selection cursor to **Options**; then press Enter. The selection cursor is on **Display options...**.
3. Press Enter. The **Display options...** pop-up is shown. The cursor is at the **Name:** entry field.
4. Press the tab key to reach the **Sort by:** list.
5. Press the arrow key ( $\downarrow$ ) to move the selection cursor to **Extension**; then press Enter.

The file list area now lists the files on drive C sorted alphabetically by extension.

If you like, you can practice now sorting the files by any of the other sort options.

## Finding Files

The Shell lets you find a file easily no matter where it is on your drive. The System file list screen format (the format presently on your screen) displays all the files in the specified drive (the drive you have selected).

Follow these steps to find all the files with the .BAT extension, and then to find and view a file called DOSSHELL.BAT:

1. Press F10 to reach the action bar if the selection cursor is not already on it.
2. Use the arrow key (→ or ←) to move the selection cursor to Options; then press Enter. The selection cursor is on the **Display options...** item.
3. Press Enter. The **Display options...** pop-up is shown. The cursor is at the **Name:** entry field.
4. Type over the asterisks:

\*.BAT

**Note:** The \* is a global character. When you use it in place of the filename, all the files in the current directory with that extension, regardless of their names, are listed in the list of files.

The same is true if you use the global character in the extension position. Typing FILENAME.\* lists all the files named FILENAME, regardless of their extensions.

This is a good way to find a file when you are unsure of either the name or the extension. For more information about global characters, see *Using DOS 4.00*.

5. Press Enter.

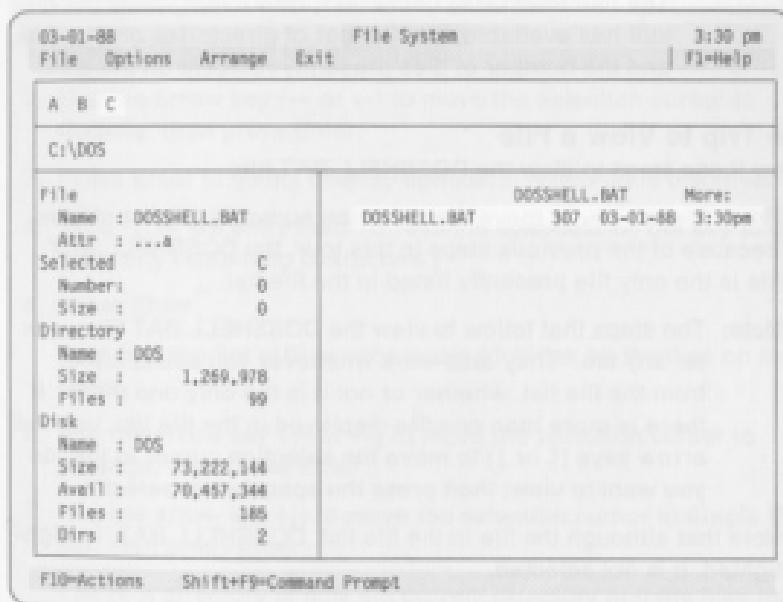
The File System is again displayed and the file list area now shows only the files on drive C with the .BAT extension. The selection cursor is on Options at the action bar.

6. Press Enter to select Options.

7. Press Enter to select **Display options...** from the pull-down.
  8. Type over the asterisks:
- DOSSHELL.BAT
9. Press Enter.

The File System is displayed and the file list area now shows only the DOSSHELL.BAT file.

Because you entered a specific filename (DOSSHELL.BAT) in Display options..., the screen you see shows only the DOSSHELL.BAT file listed in the file list area. The panel on the left has status information about the DOSSHELL.BAT file.



In this display, the DOSSHELL.BAT file is shown in the DOS directory on drive C. (The file status numbers in the panel on the left of your screen may be different from those shown in the figure.)

## **Reading the File Status Information**

The file status panel on the System file list screen can be read as follows:

<b>File</b>	The name of the most recently highlighted file and its attribute (a). The "a" attribute means archive. Other possible attributes are "h" (hidden), "s" (system), and "r" (read only).
<b>Selected</b>	The number of selected files. <i>It is a good idea to check how many files are selected before you delete files.</i>
<b>Directory</b>	The name and size of the directory containing the most recently highlighted file. Also shown is the number of files in that directory.
<b>Disk</b>	The name and size of the disk, how much space the disk still has available, the number of directories on the disk, and the number of files presently resident on the disk.

## **Side Trip to View a File**

Follow these steps to view the DOSSHELL.BAT file:

1. Press the tab key to move the selection cursor to the list of files. Because of the previous steps in this tour, the DOSSHELL.BAT file is the only file presently listed in the file list.

**Note:** The steps that follow to view the DOSSHELL.BAT file work for any file. They also work whenever you select a file from the file list, whether or not it is the only one there. If there is more than one file displayed in the file list, use the arrow keys ( $\uparrow$  or  $\downarrow$ ) to move the selection cursor to the file you want to view; then press the spacebar to select it.

Note that although the file in the file list, DOSSHELL.BAT, is highlighted, it is not selected.

2. Press the spacebar to select the DOSSHELL.BAT file.

Note the symbol at the beginning of the filename when it is selected. Also, the file information panel changes to indicate that one file is now selected on drive C.

3. Press the F10 key to return the selection cursor to the action bar; then press Enter to select File.
4. Use the arrow key ( $\downarrow$ ) to move the selection cursor to the View item; then press Enter.

The DOSSHELL.BAT file is displayed.

Note the action keys shown at the bottom of the screen. You can press the F9 key to view a file in hexadecimal (base 16 numbering system used by programmers). Press F9 again to return to ASCII (readable text).

5. Press Esc to return to the File System display.

Note that the file that was previously selected is now deselected. The Shell deselects files when you perform an operation on the selected files.

Because you replaced the "\*" with a filename, only one file, DOSSHELL.BAT, is listed in the file list. Replace the global characters ("\*") to have all the files listed.

Follow these steps to replace these characters:

1. Press F10 to reach the action bar.
2. Use the arrow key ( $\rightarrow$  or  $\leftarrow$ ) to move the selection cursor to Options; then press Enter.
3. Press Enter to select Display options.... A pop-up is displayed.
4. Type "\*" in the entry field. (Press the spacebar or Del key to eliminate any remaining characters.)
5. Press Enter.

Note that the list of files once again includes all the files on the drive.

6. Use the arrow key ( $\rightarrow$  or  $\leftarrow$ ) to move the selection cursor to Arrange; then press Enter.
7. Use the arrow key ( $\downarrow$ ) to move the selection cursor to Single file list; then press Enter.

The root directory is now the current directory and the files in the root directory are again listed.

## **Working with Directories and Files**

This part of the tour shows you how to create a directory, copy a file into that directory, delete the file, rename the directory, and finally, delete the directory that you made. These tasks are accomplished in the File System. All of the steps are accompanied with complete instructions, and there are explanations and examples of what you can expect to see on your screen. (If you are unfamiliar with the DOS Shell, refer to the beginning of this chapter before starting these tasks.)

The procedures outlined here for creating, renaming, and deleting a directory also apply to subdirectories.

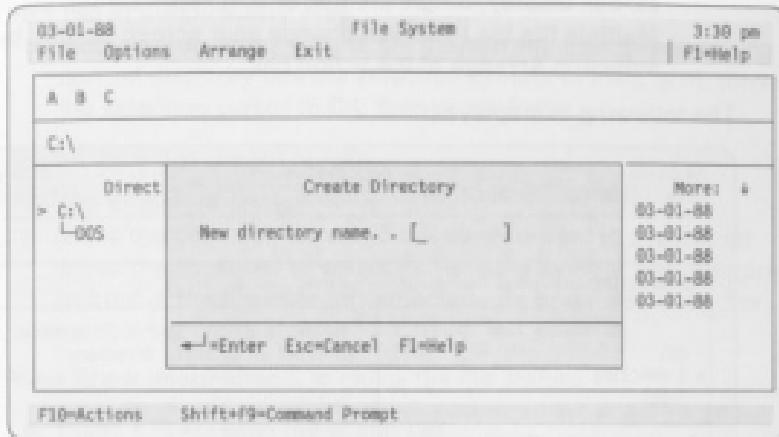
### **Creating a Directory**

The first task is creating a directory. Because the selection symbol is at the root (\) directory, this new directory will be a subdirectory of \. Any directory you create is a subdirectory of the current (selected) directory.

Follow these steps:

1. Press F10 to reach the action bar.
2. Move the selection cursor to File; then press Enter.  
The File pull-down is displayed.
3. Move the selection cursor to Create directory...; then press Enter.

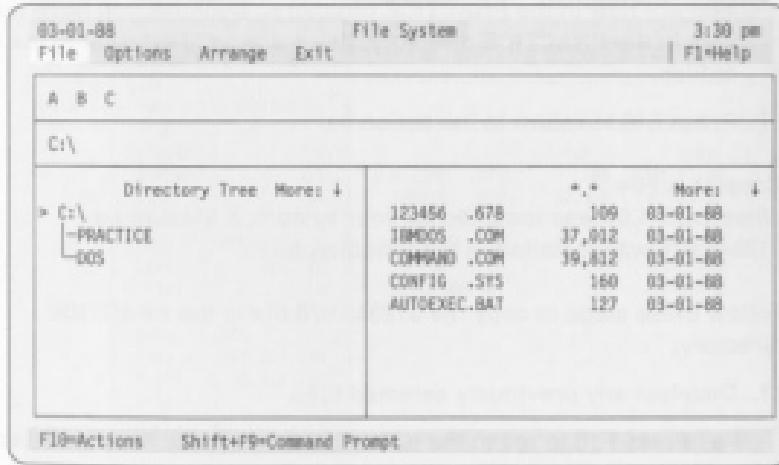
You see the following:



The cursor is at the entry field.

4. Type PRACTICE in the entry field as the name of your new directory; then press Enter.

The directory you just made now shows in your directory tree:

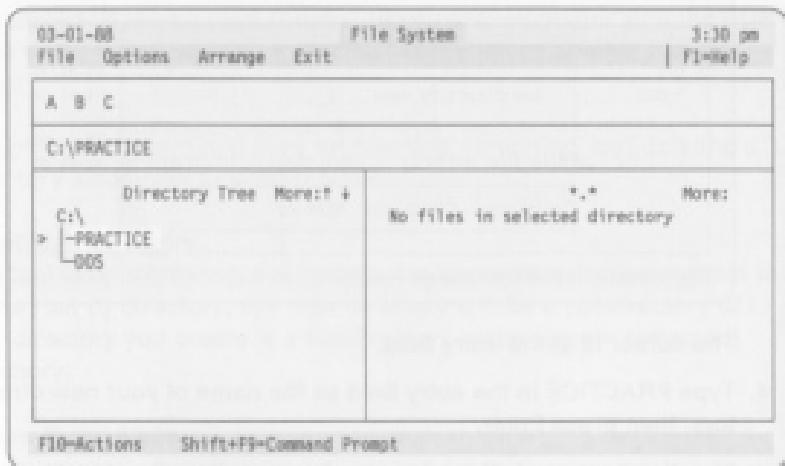


Because you were in the \ directory when you made the new directory, PRACTICE is a subdirectory of \.

5. Tab to the Directory Tree area.
6. Change the directory to the PRACTICE directory. (Move the selection cursor to PRACTICE; then press Enter.)

**Note:** To change directories, the screen must be either a single screen display, Single file list, or a multiple screen display, Multiple file list. You can change your screen display by selecting **Arrange** at the action bar.

The following is displayed:



You are now in the PRACTICE directory. Because you have no files in the PRACTICE directory, there are no files to list in the list of files.

7. Press F10 to return to the action bar.

### Copying a File

When DOS 4.00 was installed on your system, a file named 012345.678 was installed in the root directory.

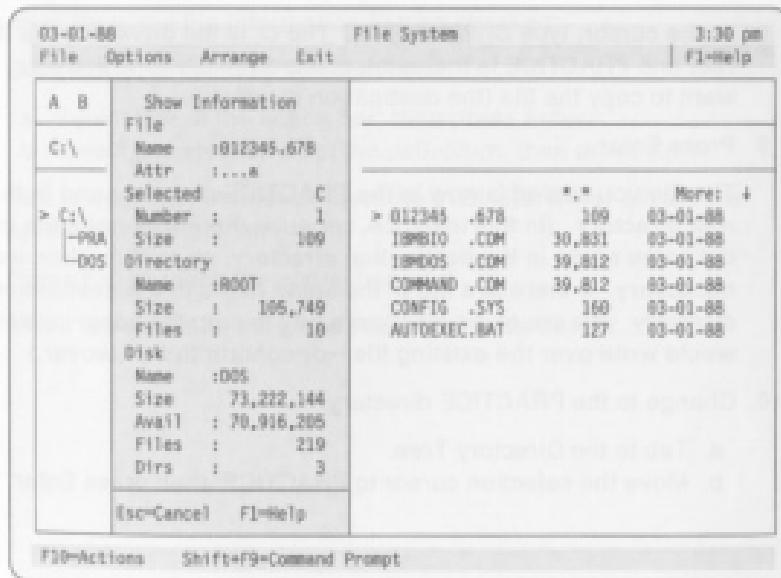
Follow these steps to copy the 012345.678 file to the PRACTICE directory:

1. Deselect any previously selected files.
  - a. Press F10 to reach the action bar; then press Enter to select File.
  - b. Move the selection cursor to Deselect all; then press Enter. (If you have no files selected, this item is unselectable. If this is the case, press Esc to exit the File pull-down.)

It is always a good idea to deselect all files before beginning a copy or delete activity.

2. Change the directory to the root (\) directory.
  - a. Tab to the Directory Tree.
  - b. If the root directory (C:\) is not the current directory (the current directory has the selection symbol in front of it), move the selection cursor to C:\; then press Enter.
  
3. Select the file you want to copy.
  - a. Tab to the file area.
  - b. Move the selection cursor to the file you want to copy; then press the spacebar to select it. Note the symbol that appears in front of the file after it is selected. (In graphics mode, the symbol becomes shaded.)
  
4. View Show Information... to check the file status.
  - a. Press F10 to reach the action bar.
  - b. Move the selection cursor to Options; then press Enter.
  - c. Move the selection cursor to Show Information...; then press Enter.

The Show Information panel is displayed:



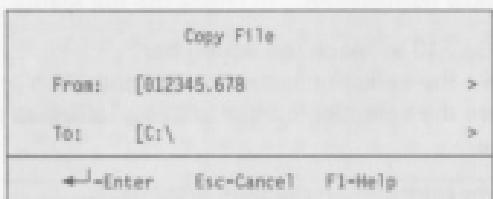
Note that the number of files shown as selected is 1. (If the number of files shown as selected in the file information on your screen is more than 1, deselect all the selected files using the

procedure you learned earlier. Then restart this task at the first step.)

The information on the Show Information panel is the same as described for the information on the System file list screen described on page 62.

5. Press Esc to exit the Show Information panel.
  6. Move the selection cursor to **File**; then press Enter.
- The File pull-down is displayed.
7. Move the selection cursor to **Copy...**; then press Enter.

The following panel is displayed:

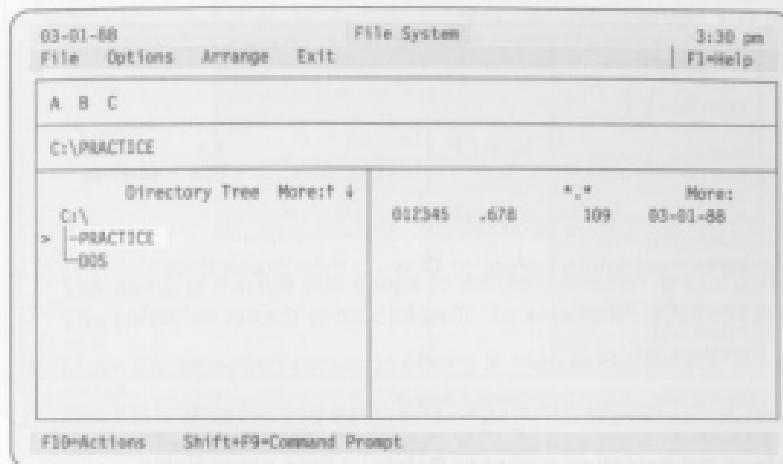


8. At the cursor, type C:\PRACTICE. The C: is the drive, the \ is the root and PRACTICE is the name of the directory to which you want to copy the file (the destination directory).
9. Press Enter.

The file you copied is now in the PRACTICE directory and in the root directory. (In this instance, because there was not a file of the same name in the destination directory, no confirmation was necessary. If there is a file of the same name in the destination directory, you are given an opportunity to stop the copy — which would write over the existing file — or confirm the writeover.)

10. Change to the PRACTICE directory.
  - a. Tab to the Directory Tree.
  - b. Move the selection cursor to PRACTICE; then press Enter.

The file list area now shows the 012345.678 file in the PRACTICE directory:

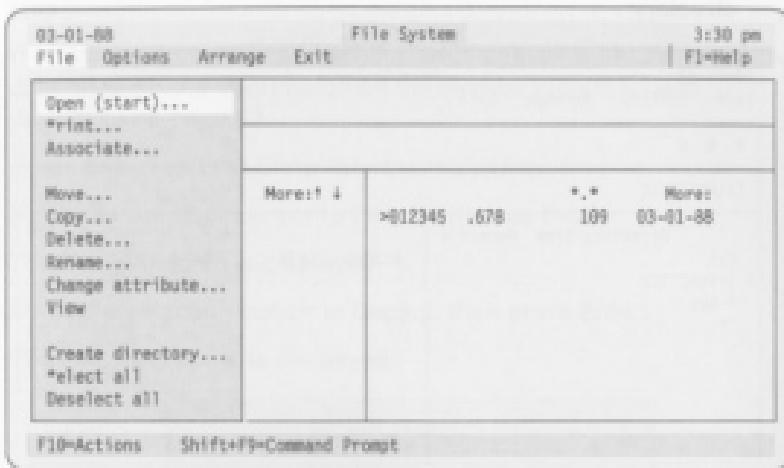


### Deleting a File

Deleting a file is much like copying a file. First, the file must be selected; then, the file information can be checked:

1. Deselect all previously selected files.
  - a. Select **File** at the action bar; then press Enter.
  - b. Select **Deselect all** from the pull-down; then press Enter.
2. Tab to the list of files and select the 012345.678 file. (Press the spacebar to select the file.)
3. Press F10 to reach the action bar.
4. Move the selection cursor to **File**; then press Enter.

The File pull-down is displayed:



5. Move the selection cursor to Delete...; then press Enter.

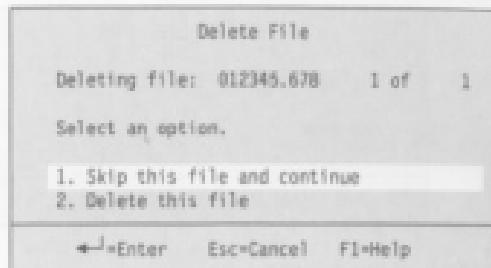
The following panel is displayed:



The name of the file you selected to delete is named in this panel.

#### **6. Press Enter.**

The following panel is displayed:



The name of the file you chose to delete is named in this panel.  
The selection cursor is on option 1. To skip this file, press Enter.

7. Move the selection cursor to option 2; then press Enter.

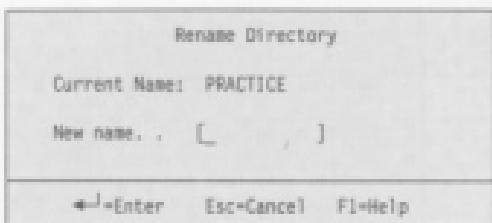
The file is deleted and the display again shows that there are no files in the PRACTICE directory.

#### **Renaming a Directory**

Follow these steps to rename the PRACTICE directory:

1. Change to the PRACTICE directory. (The PRACTICE directory should already be the current directory. If the selection symbol is not in front of the PRACTICE directory, tab to the Directory tree and move the selection cursor to the PRACTICE directory; then press the Enter key to change to the PRACTICE directory.)
2. Press F10 to reach the action bar.
3. Move the selection cursor to File; then press Enter.  
The File pull-down is displayed.
4. Move the selection cursor to Rename...; then press Enter.

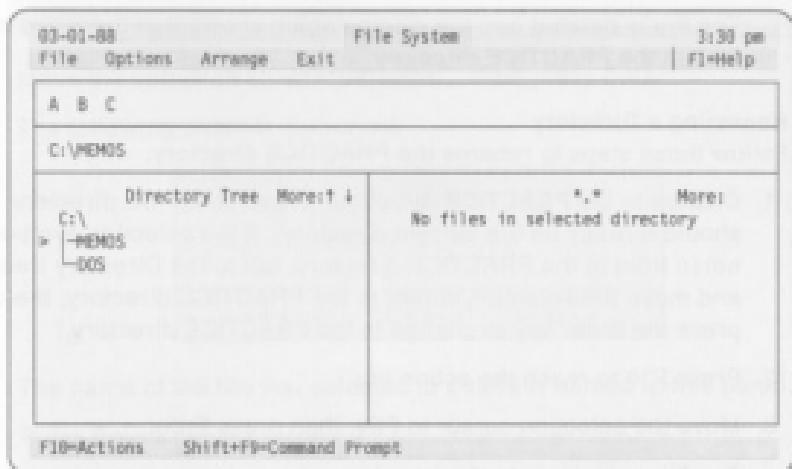
The Rename pop-up is shown and the cursor is at the entry field:



5. Type MEMOS at the cursor.

6. Press Enter.

The PRACTICE directory is now renamed MEMOS, and your screen looks like this:

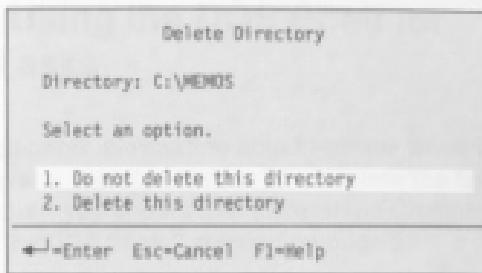


### Deleting a Directory

To delete the MEMOS directory, or any directory, follow these steps. The selection cursor is on File at the action bar.

1. Press Enter. You see the File pull-down.
2. Move the selection cursor to Delete...; then press Enter.

You see the following:



This pop-up gives you the option to delete or not delete the directory that you have selected. The directory to be deleted is named in the pop-up.

If the correct directory (in this case, "MEMOS") is identified in the pop-up, do the following:

3. Move the selection cursor to item 2. **Delete this directory**.
4. Press Enter.

**Note:** In order for a directory to be deleted, it cannot contain files or other directories. If you attempt to delete a directory that is not empty, you see a message that access is denied. If you see this message, press Esc to return to the action bar, delete the contents of the directory, then delete the directory.

The File System is displayed without the MEMOS directory.

This completes your tour. To return to Start Programs, move the selection cursor to **Exit** and press Enter; then press Enter again.

In this chapter, you exited the Shell to the DOS prompt and were introduced to the Shell command prompt; you had the opportunity to switch between two portions of the Shell – Start Programs and File Services – and you had an opportunity to complete several tasks.

The next chapter gives you information on doing more complex tasks, along with other general information on the DOS Shell.

As a result, we can see a clear trend of long-term growth and development in the number of publications and the number of authors per publication.

But in addition to the increase in the number of publications and the number of authors per publication, there is also an increase in the number of citations per publication.

The number of citations per publication has increased from 1.5 in 1990 to 2.5 in 2000, which is a significant increase. This indicates that the research output of the journal is becoming more cited and more influential.

Another important finding is the increase in the number of international publications. The number of international publications has increased from 10% in 1990 to 30% in 2000, which is a significant increase. This indicates that the journal is becoming more internationalized.

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## **Chapter 4. Using the DOS Shell for Advanced Tasks**

This chapter has general information about how the Shell works, plus instructions on several complex tasks. To complete the tasks presented in this chapter, you should first understand Chapter 3, "Learning to Use the DOS Shell," starting on page 37.

When DOS 4.00 was installed on your system, the DOS Shell was installed with various startup options that make it work in a certain way. Refer to Chapter 5 for information on changing these options.

---

### **Online Help Information**

Comprehensive help information is available throughout the Shell. Pressing the F1 key displays Help for entry fields, selectable items, and error messages.

An entry field is any area in which you are asked to enter information. A selectable item is an item you are asked to select from a list of options. You can press F1 for information on any entry field or on the item you have selected.

From any Help panel, you also can do the following:

- Press F1 to learn how the Help function works.
- Press F11 to obtain an index of Help available in the Shell.

There is a selectable list of instructions at the beginning of the Help Index. Included in this list is an Introduction to the Shell and instructions on Start Programs, the File System, selecting files, and using a keyboard and a mouse. The rest of the Help Index is listed alphabetically and offers help on all the entry fields and selectable items.

- Press F9 to obtain help on the keys that have special functions.

**When using a mouse, move the mouse pointer to F1 = Help; then press the selector button.**

## **Entry Field Guidelines**

An entry field is any area in which you are asked to enter information. It is defined by the characters surrounding it.

- [ ] Brackets at each end of the entry field indicate that information can be entered only inside those brackets.
- [ > In text mode, a caret (>) at the right of the entry field means that the entry field is longer than is visible on the screen. When you reach the caret, either by entering information or using the arrow key, the field scrolls to display additional information and/or space available for entering information. (When this is done, a caret also is displayed at the left of the entry field indicating that there is additional information or space to the left that is not visible.) When all the remaining entry field is visible, the ending (or right) bracket is displayed.

In graphics mode, an arrow is used in place of the caret.

## **Mouse and Keyboard Operation**

The DOS Shell is designed to be used with a mouse, a keyboard, or both. If you have a mouse attached to your system, you see a mouse pointer on your screen.

The mouse pointer in graphics mode looks like this.



The mouse pointer in text mode looks like this.



### **Selecting Items Using a Mouse**

To select items from any list using a mouse:

1. Move the mouse pointer over the item.
2. Click (press the selector button once) to select the item.

In the Main Group, to start a program or view a subgroup, place the mouse pointer over the title of the item; then double-click (press the selector button twice in quick succession).

In the File System, to start a program, place the mouse pointer over the name of the startable filename; then double-click (press the selector button twice in quick succession).

### Graphics Mode

#### Scroll Bar



Line Up  
Page Up

Slider Box

Page Down  
Line Down

If the Shell is installed on your system in graphics mode, a scroll bar appears on the screen. The scroll bar is designed to work with a mouse. It is illustrated here with the sections identified.

To see more items in a list than can be displayed at once, place the mouse pointer over the arrow symbols in the scroll bar; then press the selector button to scroll through the list. If the selector button is held, the list continues to scroll. In addition, the arrows appear shaded when no further scrolling in that direction is possible.

Or, place the mouse pointer over the slider box, press and hold the selector button, and drag the slider box up or down. When you release the selector button, the list scrolls to the position on the list that is relative to the position of the slider box.

### Text Mode

If the Shell is installed on your system in text mode, place the mouse pointer over the displayed arrow symbols ( $\uparrow$   $\downarrow$ ); then press the selector button to scroll through the list.

## Selecting Items Using a Keyboard

In Start Programs:

1. Press F10 to move between the action bar and the rest of the screen.
2. Press  $\uparrow$ ,  $\downarrow$ ,  $\rightarrow$ , or  $\leftarrow$  to move the selection cursor to an item; then:
  - Either press Enter to start the program or view the subgroup you selected, or press F10 to return to the action bar.
  - On the action bar, press Enter.

In the File System:

1. Press F10 to move between the action bar and the rest of the screen.
2. Use the tab key to move to the different areas.
3. Use the arrow keys ( $\uparrow$ ,  $\downarrow$ ,  $\rightarrow$ , or  $\leftarrow$ ) to move the selection cursor to an item; then:
  - To select a drive or directory, press Enter.
  - To select a file, press the spacebar.
  - To start a program, press Enter.

Note that if there is an underlined or highlighted letter (mnemonic) in a selectable item in the Shell, pressing that letter is another way to select the item. If an asterisk (\*) appears in an item, that item is not selectable. In graphics mode, an unselectable item is shaded, or "blurred."

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## Changing Directories

To change directories, tab to the Directory Tree and use the arrow key ( $\uparrow$  or  $\downarrow$ ) to move the selection cursor to the directory you want; then press Enter. Note that the symbol moves to the beginning of the current directory.

To change directories using a mouse, place the mouse pointer over the directory you want and click once. Note that the symbol is placed at the beginning of the current directory.

## Selecting and Deselecting Files

In the Shell, before you can perform any task with files, the file or files affected must be selected.

### Using a Keyboard

To select a file, tab to the file list and use the arrow key ( $\uparrow$  or  $\downarrow$ ) to move the selection cursor to the file you want; then press the spacebar. In text mode, when a file is selected, a symbol is placed at the beginning of the file. In graphics mode, the symbol at the beginning of the file is shaded when the file is selected.

To select all the files listed in the file list:

1. Select **File** at the File System action bar.
2. Select **Select all** from the pull-down; then press Enter.

To deselect a file, press the spacebar.

To deselect all the files you have selected:

1. Select **File** at the File System action bar.
2. Select **Deselect all** from the pull-down; then press Enter.

### Using a Mouse

To select a file, place the mouse pointer over the file; then click once.

To select all the files listed in the file list:

1. Place the mouse pointer over **File** at the action bar; then click once. The pull-down is displayed.
2. Place the mouse pointer over **Select all**; then click once.

To deselect a file, place the mouse pointer over the selected file; then click once.

To deselect all the files you have selected:

1. Place the mouse pointer over the **File** item at the action bar; then click once. The pull-down is displayed.
2. Place the mouse pointer over **Deselect all**; then click once.

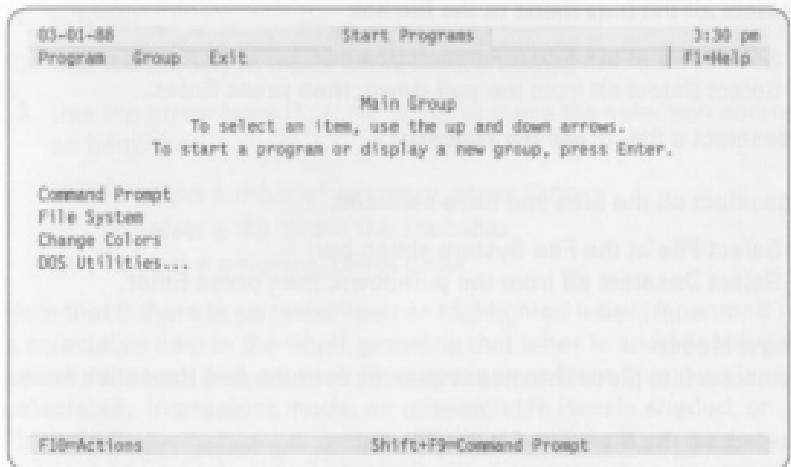
**Note:** Before beginning a task such as copying, deleting, or moving files, it is always a good idea to check the file information to make sure that all files are deselected. To check the file infor-

mation, select Options at the action bar; then select Show Information... from the pull-down.

For information on selecting files across directories, refer to page 106.

## Adding Items in the Main Group

While in Start Programs, you can start a program and add, change, copy, delete, or reorder group items. The Main Group is the first level of the group structure. That group, which is the first screen when you start the Shell, is shown here:



The DOS Shell has two levels of groups and each group can have as many as 16 items. The Main Group now lists four items:

**Command Prompt**, when chosen, takes you to the Shell command prompt where you can use all the DOS commands.

**File System** works like a program title in that, when you select it, the Shell presents an area of activity. In the File System, you can manage your directories and files.

**Change Colors**, when chosen, allows you to change the colors of the Shell.

**DOS Utilities...** is the title of a group that comes with the Shell. The ellipsis (...) indicates that this is the title of a group. How to use the DOS Utilities group, and the utilities in that group, is discussed in Chapter 3.

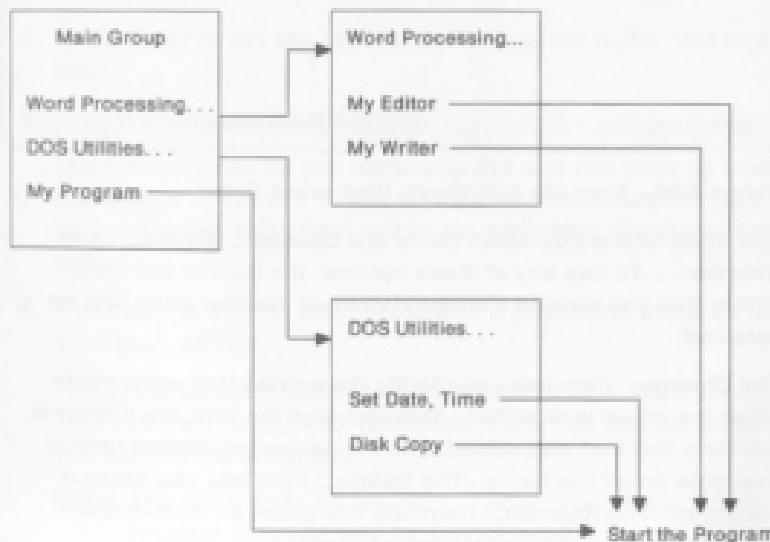
## A Word About Groups

The Main Group is the first level of the Shell's two-level group structure. The Main Group can contain both groups and programs; sub-groups (the second level of the group structure) can contain only programs.

For example, a word processing group might contain a word processor, a spell-checking utility, and an editor. You could title such a group "Word Processing" and add that title to the Main Group. Then when you select Word Processing from the Main Group (by pressing Enter or double-clicking with the mouse), you see a subgroup titled "Word Processing" to which you can add programs.

The following figure is an example of a group structure. Note that when **Word Processing...** is selected from the Main Group, the **Word Processing...** subgroup is displayed. You can then start the **My Editor** program or the **My Writer** program from the **Word Processing...** subgroup.

A program can be started (by pressing Enter or double-clicking with the mouse) either in the Main Group or in a subgroup.

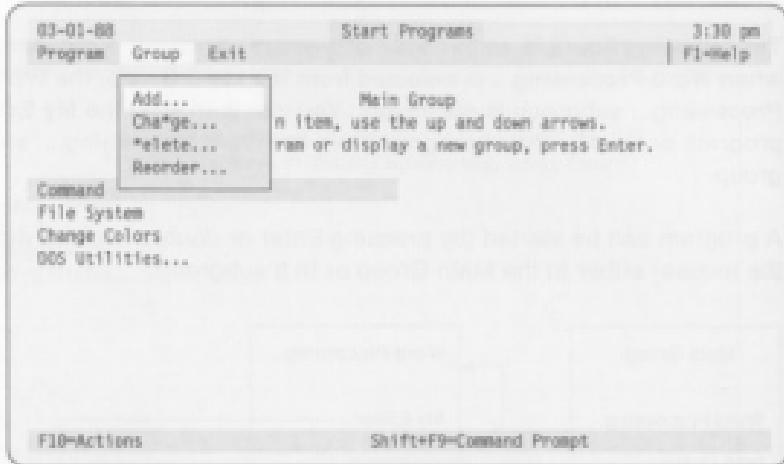


## Adding Groups to the Main Group

You can organize your programs so that related programs are together in a subgroup. To do this, add a group to the Main Group. Then you can add programs right to the new subgroup, or you can copy programs to the new subgroup from the Main Group or other subgroups. (Refer to "Copying Programs from One Group to Another Group" on page 87.)

Follow these steps to add a group to the Main Group.

1. Select Group from the Start Programs action bar; then press Enter. You see the following screen:



2. Select Add... from the pull-down; then press Enter.

The other Group pull-down items are Change..., Delete..., and Reorder.... To use any of these options, the item in the Main Group that you want to change, delete, or reorder must first be selected.

The Change... item lets you modify the entries that were made when the group was added. This includes the title, the filename, any help text that was added, and the password. Online help is available on all the items. The Delete... item lets you erase a subgroup. The Reorder... item lets you place an item in a different location in the group contents area.

The following is displayed:

Add Group	
Required	
Title . . . .	[ ] >
Filename . . .	[ ]
Optional	
Help text . . .	[ ] >
Password . . .	[ ]
Esc=Cancel F1=Help F2=Save	

The first two entry fields are required entries; the next two, for help text and a password, are optional.

- At the cursor, type the group title you want to appear in the Main Group contents area. A group title can have a maximum of 37 characters, including blank spaces.

For example, if you want this group to contain all your word processing programs, you might enter "Word Processing."

- Press Enter or the tab key to move the cursor to the next entry field.
- Type the filename for the group.

The filename can be any name you like and can have up to eight characters. (Press F1 to see a list of the characters that cannot be used in this entry field and to get additional information on this entry.)

- If you do not want to add help text or a password, press F2 to save your entries.

The group title you entered now appears in your Main Group. When you are ready, you can select it and can add the programs you want in the subgroup.

**Note:** The Shell adds an ellipsis (...) after group titles to help distinguish between groups and programs.

- If you want to add help text, press Enter or the tab key to move the cursor to the Help text entry field

Enter here any help that you want to have available when pressing the F1 key for help on this group. You can enter up to 478 characters in this field.

8. If you do not want to add a password, press F2 to save your entries.

The group title you entered now appears in your Main Group. When selected, the help text you entered is available by pressing the F1 key.

9. If you want to add a password, press Enter or the tab key to move the cursor to the Password entry field.
10. Enter a password.

A password can be up to eight characters long. You might enter a password if you want only certain people to access this group, or if you want to be the only one who can access this group.

**Entering a password is optional.** If you associate a password with a group item, you cannot access that item without first entering the password. If you choose to use a password with a group item, be sure to record it for later reference. If you enter a password for more than one item, it may be helpful to use the same password for each item. Each time an attempt is made to access this group, a prompt appears and asks for the password. Access is denied until you enter the password.

11. Press F2 to save your entries.

The group title you entered now appears on the Main Group and when selected, shows you a subgroup by that title. You can now add programs to this subgroup using the method described in "Adding Programs to the Main Group."

If you want to copy programs from the Main Group to the group you just added, use the method described in "Copying Programs from One Group to Another Group" on page 87.

### **Adding Programs to the Main Group**

You can add the titles of programs you have on your system to the Main Group or a subgroup of the Shell and start them from there.

Follow these steps to add a program to the Main Group:

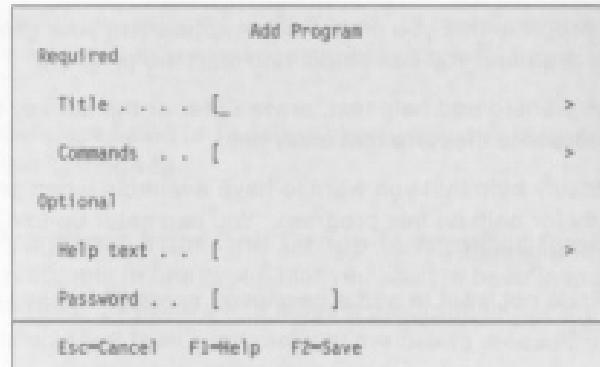
1. Select Program from the Start Programs action bar; then press Enter.

2. Select Add... from the pull-down; then press Enter.

The other Program pull-down items are Start, Change..., Delete..., and Copy.... To use any of these options, the program in the Main Group that you want to start, change, delete, or copy must first be selected.

The **Start** item lets you run a program. It performs the same function as a double-click with the mouse or pressing the Enter key on a selected program. The **Delete...** item lets you erase a program. The **Change...** item lets you modify the entries that were made when the program was added. This includes the title, the startup commands, any help text that was added, and the password. The **Copy...** item lets you copy a program from one group to another. Online help is available on all the items.

You see the following:



The first two entry fields in this pop-up are required entries; the next two, for help text and a password, are optional.

3. The cursor is at the **Title...** entry field. Type the title you want to appear in the group to identify this program. A program title can have a maximum of 40 characters, including blank spaces.

For example, if you have a program installed on your system called My Editor that you want to be able to start from this group, you can type "My Editor" for a title.

4. Press Enter or the tab key to move to the next entry field.
5. At the **Commands...** entry field, type the program startup commands (PSCs) for this program.

The documentation that comes with an application program tells you how to install the program and the characters to use to start the program after you have installed it. These characters make up the simplest program startup command (PSC). For example, the documentation for a program called My Editor might tell you to type ME to start the program. ME is then the program startup command.

There are other program startup commands to further define the way your program works. When entering more than one command, press the F4 key to mark the end of each command. For information on additional program startup commands offered in the Shell, and for detailed instructions on entering PSCs, refer to "Program Startup Commands" starting on page 89.

6. If you do not want to add help text or a password, press F2 to save your entries.

The program title you entered now appears in your group contents area and you can select it to start the program.

7. If you want to add help text, press Enter or the tab key to move the cursor to the Help text entry field.

Enter any help that you want to have available when pressing the F1 key for help on this program. You can enter up to 478 characters in this field.

8. If you do not want to add a password, press F2 to save your entries.

The program title you entered now appears in your group contents area. When it is selected, the help text you entered is available by pressing the F1 key.

9. If you want to add a password, press Enter or the tab key to move the cursor to the Password entry field.

10. Enter a password.

A password can be up to eight characters long. You might enter a password if you want only certain people to access this program, or if you want to be the only one who can access the program.

**Entering a password is optional.** If you associate a password with a program, you cannot access that program without first entering the password. If you choose to use a password with a program, be sure to record it for later reference. If you enter a

password for more than one item, it may be helpful to use the same password for each item. Each time an attempt is made to access this program, a prompt appears and asks for the password. Access is denied until you enter the password.

11. Press F2 to save your entries.

The program title you entered now appears in the group and, when selected, starts after the password is entered.

### **Adding Programs to a Subgroup**

To add a program to a subgroup, you must be in that subgroup:

1. In the content area of the Main Group, move the selection cursor to the subgroup to which you want to add a program.
2. Press Enter.

The subgroup you selected is displayed. (If there are no programs in a subgroup, a message appears saying "Group is empty.")

3. Follow the steps listed in "Adding Programs to the Main Group," which start on page 84.

### **Copying Programs from One Group to Another Group**

If there are programs in one group that you want to have in another, follow this method. (If you want to move a program, follow the copy procedure listed here; then continue with the delete procedure, which follows.)

1. If the program to be copied is in a subgroup, move the selection cursor to the subgroup title within the Main Group; then press Enter.
2. Move the selection cursor to the program you want to copy.
3. Press the F10 key to move the selection cursor to Program at the action bar; then press Enter.
4. In the Program pull-down, move the selection cursor to **Copy...**; then press Enter.

The selection cursor is at the program that you previously selected.

5. If you are in a subgroup, press Esc to reach the Main Group.

6. Move the selection cursor to the subgroup to which you want to copy the program; then press Enter.

The subgroup you chose is displayed on the screen.

7. Press the F2 key to complete the copy. (You can press the F3 key to cancel the copy.)
8. Press Esc to return to the Main Group. The selection cursor is at the title of the subgroup you just left.

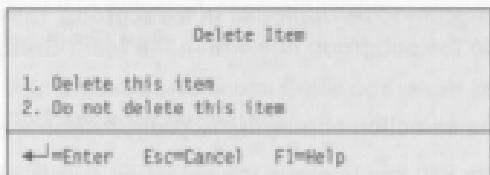
The program is now listed in the "destination" group, the group to which it was copied, and in the "source" group, the group from which it was copied. If you want to delete this program from the source group, follow the procedure in "Deleting a Program from a Group."

### **Deleting a Program from a Group**

To delete a program from a group, follow these steps.

1. If the program to be deleted is in a subgroup, move the selection cursor to the subgroup title within the Main Group; then press Enter.
2. Move the selection cursor to the program title that you want to delete.
3. Press F10 to move the selection cursor to Program at the action bar; then press Enter.
4. Move the selection cursor to Delete...; then press Enter.

The following panel is displayed:



If you do not want to delete the program, select item 2; then press Enter.

5. To delete the program, press Enter.

## **Adding Predefined Subgroups to the Main Group**

The Shell makes it possible for you to install subgroups that are supplied by someone else. These subgroups are contained in a */filename.MEU* file.

1. Copy the */filename.MEU* file to the directory containing the DOS Shell. (This is usually the DOS directory.)
2. Select **Group** from the Start Programs action bar; then press Enter.
3. Select **Add...** from the Group pull-down; then press Enter.
4. At the **Title** entry field, type the title that you want to appear in the Main Group.
5. Press the tab key to reach the **Filename** entry field.
6. Type the name of the supplied file (*/filename.MEU*), leaving off the .MEU.

If you want to add help information or a password, follow the directions listed on page 82 under "Adding Groups to the Main Group."

7. Press F2 to save the information.

The title you entered appears on the Main Group. When you select it from there, the subgroup is displayed with the list of selectable programs.

## **Program Startup Commands**

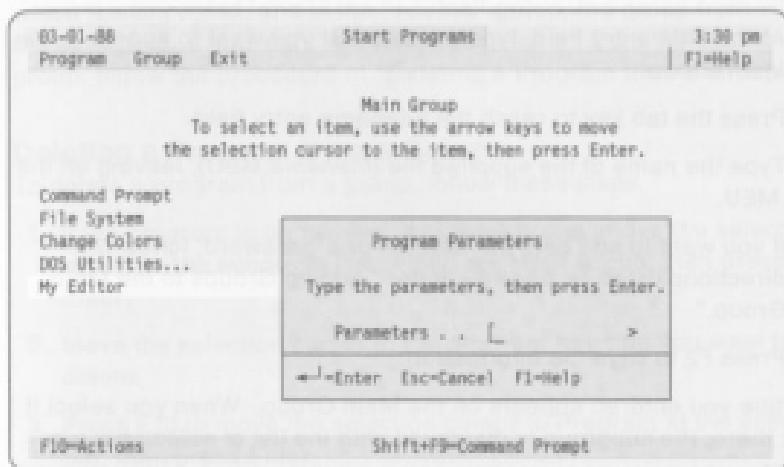
When you add a program to one of your Shell groups, you are asked for program startup commands (PSCs). The simplest program startup command consists of the characters you enter to start the program. These are identified in the documentation that came with the program. When adding a program to the Shell, if you enter this command in the **Commands** entry field, your program starts when it is selected.

There are other, optional PSCs that you can use in the **Commands** entry field to further define the way your program works.

## Optional Program Startup Commands

The Shell offers additional options for your program startup commands that you can use when you add a program to a group. For example, you can request one or more prompts for information each time the program is started.

Each prompt panel consists of a title, an instruction line, and an entry field, and is displayed when you start the program. The default prompt looks like this:



By using program startup commands offered in the Shell, the title, instruction line, and entry field prompt lines can have information that is specific to your needs. (The information entered in response to the prompt is passed as a parameter to the program you are starting.) In addition, you can tailor the activities of the program in other ways.

Following is a list of PSC options that the Shell offers. The options shown in brackets control the information in the prompt panel. These must be entered between the brackets. Options shown between brackets can be combined inside one set of brackets. The options shown without brackets must be entered outside the brackets.

- [ ] To perform the default prompt each time the program is started.
- [T"..." ] To define a title for the prompt panel. The maximum length for the title is 40 characters.

- [/I" .."] To define an instruction for the prompt panel. The maximum length for the instruction is 40 characters.
- [/P" .."] To define a prompt for the entry field in the prompt panel. The maximum length for the prompt is 20 characters.
- [%n] To save what you have entered (the value) in the Parameters... area (entry field) for future use. The "n" can be any number from 1 through 10. When used, %n must be the first character or characters inside the brackets.
- %n To use the value entered at run time. For example, if the value is a file that has been edited, print %1 causes the identified file to print each time this program is started. When used, this option must be entered outside the brackets.
- [/D" .."] To have a default value appear in the entry field each time a program's prompt is displayed. You can change this default value at run time by typing over it and clearing any remaining characters. This entry can be up to 40 characters long.
- [/D"%n"] To have a default value appear in the entry field each time a program's prompt is displayed. This default is a previously entered value saved with the [%n] option. You can change this default value at run time by typing over it and clearing any remaining characters. This entry can be up to 40 characters long.
- [/R] To clear the default value in the entry field when the first key pressed is any key other than an edit key.
- [/L"n"] To set the maximum length of the entry field to fewer than 127 characters. The maximum length is 127 characters. If the length is not specified or is invalid, the maximum length is used.
- [/M"e"] To allow the use of only existing filenames. The existence of the value entered will be verified before the PSC is executed.
- [/C"%n"] To save the %n value entered in the preceding task as the value for this parameter for the current task; otherwise, %n has no value.

- [/P" . . ] To check for the existence of the file specified. This entry can be up to 76 characters long and can be used more than once. For example, /F'd:\path\filename." This check takes place after the Enter key has been pressed on the prompt panel and is used to ensure that the proper diskette is in the drive before the Shell is suspended to execute the program startup commands. If the file exists, the PSC continues. If the file does not exist, a beep sounds and the panel is redisplayed. This parameter has no effect on the format of the prompt and is not included in the program startup commands which are executed.
- /# To substitute the drive letter (which designates the drive from which the Shell was started) and a colon into the PSC. These characters must be entered outside the brackets.
- 
@ To substitute the path from the ROOT from which the Shell was started, including the current directory, into the PSC. The path is not preceded by a back slash. These characters must be entered outside the brackets.

**Note:** Any batch file command, with the exception of GOTO statements, can be used as a program startup command. (When using the FOR command, the "n" in %n must be alphabetic.) Any characters in the PSC, other than the optional commands, are passed to the DOS batch file processor exactly as written. A direct substitution is made by the Shell for any PSC option used outside of the brackets. The information entered in response to the prompt is substituted for each set of brackets and its enclosed options.

Press F4 at the end of each command when entering more than one program startup command in the **Commands** entry field.

#### **Batch Files**

To start a batch file using a PSC, the batch file name must be preceded by CALL. If the batch filename is not preceded by CALL, the program will not return properly on completion. For example, to start a batch file named BATCH.BAT, you would enter the following PSC at the **Commands** entry field.

Commands . . .[CALL BATCH.BAT]

If you want to use some of the options offered for program startup commands, you must include the contents of the batch file in the PSC. Use the bracketed options to prompt for any required parameters.

### **PAUSE and ECHO Commands**

It is useful to insert a PAUSE command at the end of each PSC list so that, before returning to the Shell from your program, you can view any DOS messages that may appear.

If you add an ECHO command with a message statement to your PSC list, that message appears on your screen. The ECHO message can be whatever remark is correct for the program you are starting.

In the following example, the remark "Insert diskette with ME in drive A" is used:

```
Commands. . . [ECHO Insert diskette with ME in >
drive A]||PAUSE||ME
```

Note that the || is the symbol that appears when you press F4 to separate commands. By entering the ECHO command with this remark, the following is displayed when the My Editor program is selected:

Insert diskette with ME in drive A  
Press any key to continue . . .

At the ECHO command, you have the opportunity to insert the needed diskette; at the PAUSE command, the system pauses to display any DOS messages, and the system again displays the message "Press any key to continue..." before returning to the Shell. (Note that, in this example, the PSC list is shown on two lines. This is done here to show it in its entirety. On the screen, this is a scrollable field, and the commands are entered in a continuous string.)

### **Using Additional Program Startup Commands**

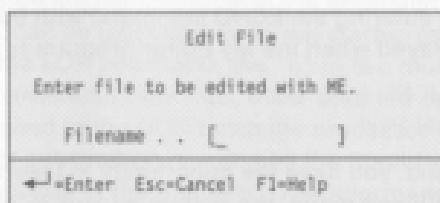
If you add a program (for example My Editor) to one of your groups, you can enter the following in the Command entry field:

```
ME [/T>Edit File"/I"Enter file to be
edited by ME."/P"Filename . . . "/L"12"]||
```

Following is a definition of the program startup commands in this example:

ME	Is the PSC for the program.
/T"Edit File"	Defines the title you have chosen for the prompt.
/I"Enter file to be edited by ME."	Is the instruction line.
/P"Filename . . "	Defines the prompt for the value field.
/L"12"	Says that 12 characters is the maximum number of characters that can be entered in the value field.
	Is the symbol that appears when you separate commands by pressing the F4 key.

By entering these program startup commands for the My Editor program, when you choose My Editor from the group, you see the following prompt:



1. Type the name of the file you want to edit in the entry field. This can be the filename of an existing file or a file you want to create. For example, if you enter MYFILE.DOC at the prompt, the ME editor is started using that filename as a parameter.
2. Press Enter.

Any DOS command, except a GOTO command, can be entered as a PSC. For example, to add a PRINT command to the command list shown previously, the commands are entered as follows:

```
ME [%1/T"Edit File"/I"Enter file to be edited by ME."
/P"Filename . . "/L"12"]||PRINT %1
```

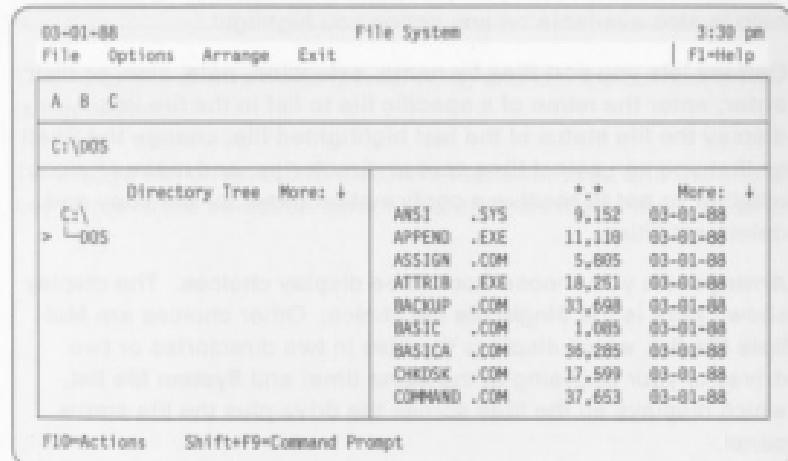
The %1 causes the parameter entered in response to the prompt panel to be passed to the PRINT program also. The PSC list entered in this way still gives you the prompt when the program is selected, and it sends the document to print before returning to the Shell.

## Exploring Details in the File System

In Chapter 3, the File System portion of the Shell was explored. Following is a more detailed description of the File System.

Note that the files shown on your screen may be different from those used in these examples.

### Action Bar



The action bar in the File System has four activity items and F1 = Help. The items offer the following activities:

- \* *File* lets you start a program; print, move, copy, delete, or rename a file; change a file's attributes; view a file in ASCII (readable text) or hexadecimal (base 16 numbering system used by programmers); or associate a file with a program. In addition you can create, rename, and delete directories and subdirectories, select all the files listed in the file list at one time, and deselect all the files at one time.

The Rename... and Delete... options apply to both files and directories. If no files are selected, a directory operation is assumed.

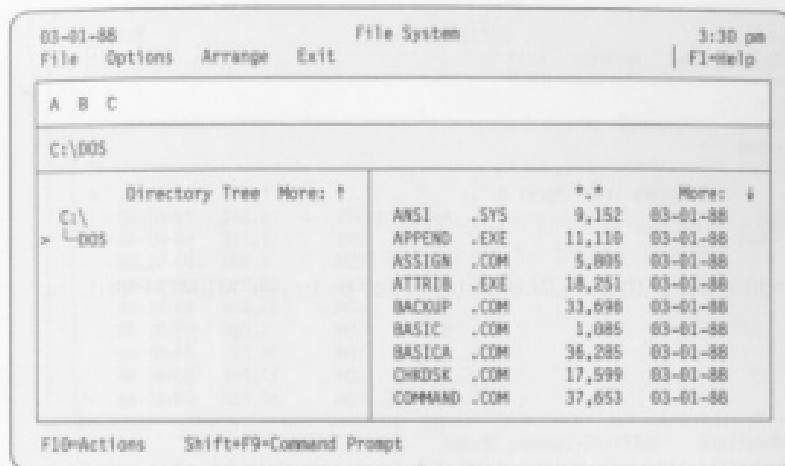
The **Open (start)...** item lets you start the executable (startable) file you previously selected in the file list. Other ways to start a program in the File System are: (1) select the startable file in the file list and press Enter, and (2) place the mouse pointer over the startable file and double-click.

The **Associate...** item lets you associate a file extension with a program on your system. When a file is associated with a program, the Shell starts the program each time you select a file with that extension. For example, the program My Editor (ME) could be associated with the .RUN extension. Then, if you want to edit a file with a .RUN extension (for example, MEMO.RUN), the ME program starts when you press Enter on the selected file or double-click with the mouse on the filename.

An example of copying a file is given on page 101. The other options available when you choose **File** work similarly. Online help is also available on any option you highlight.

- **Options** lets you sort files by name, extension, date, size, or disk order; enter the name of a specific file to list in the file list; display the file status of the last highlighted file; change the Shell so that you can select files across directories; and make choices whether or not to receive a confirmation panel for the copy and delete activities.
- **Arrange** lets you choose from three display choices. The display shown here is the **Single file list** choice. Other choices are **Multiple file list**, which displays the files in two directories or two drives of your choosing at the same time, and **System file list**, which displays all the files across the drive plus the file status panel.
- **Exit** lets you exit File System to Start Programs or resume File System.

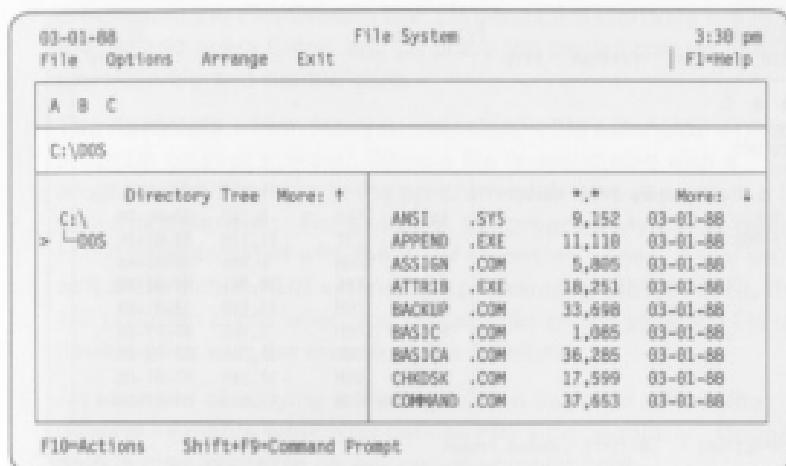
## Drive Identifier Area



This example shows three drives: A, B, and C. The current drive, C, is highlighted.

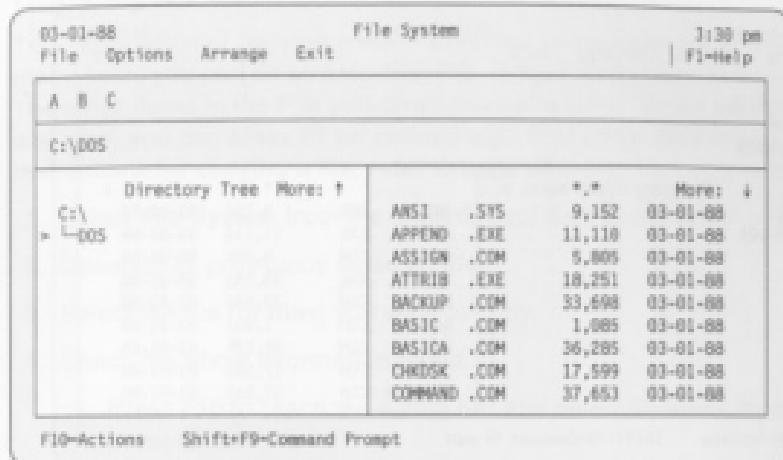
To change the drive, tab to the Drive Identifier area and use the arrow key to move the selection cursor to a different drive; then press Enter.

## Path Area



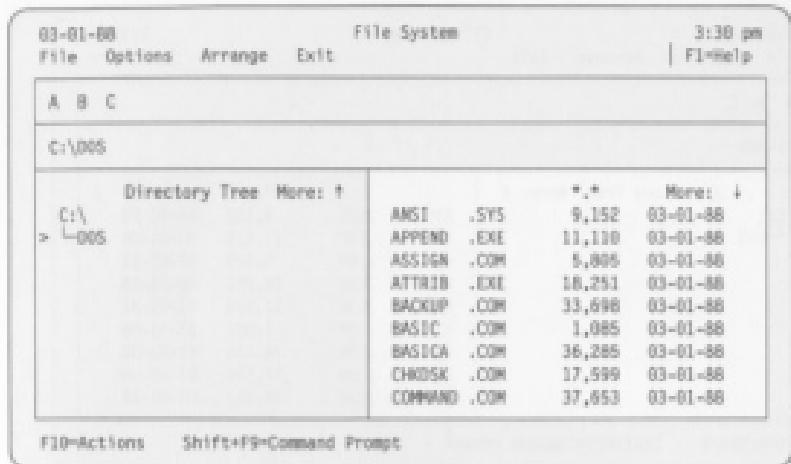
The path area on the File System shows the path of your current, or active, drive and directory. In the example above, the path (C:\DOS) shows C as the current drive and DOS as the current directory. If you have a multiple screen display, the path reflects the path of the drive and directory that is active (the one in which you are working).

## Directory Tree



This example shows the directory structure in drive C. It shows one subdirectory named DOS. The symbol in front of the DOS directory indicates DOS is the current directory.

## File List



The files in the current directory (in this case the DOS directory) are shown in the file list area. All the files in the current directory are shown when “\*.\*” is used in the filename field of the Display options... pop-up. The Display options... pop-up is reached by selecting Options at the action bar.

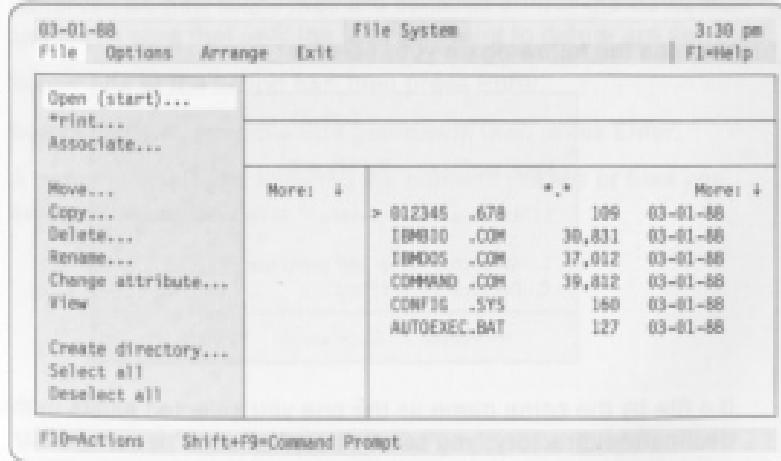
You can start a program in the file list by selecting the file and pressing Enter. With a mouse, place the mouse pointer over the name of the startable file and double-click to start the program.

**Note:** Starting programs that end but stay resident in memory (Terminate and Stay Resident or TSR programs such as networks, PC-to-host communications, and other programs that run in a different session but remain in memory) from the Shell command prompt results in an inefficient use of memory. A TSR program can be used efficiently by starting it either from a group in “Start Programs” or by starting the TSR program before starting the Shell. (Refer to the documentation that came with the program for the program startup command.)

## Copying a File

This description of copying a file is provided as an example of the many tasks you can do by selecting **File** at the File System action bar. The other items in the File pull-down work similarly. When selecting any item, you can press F1 for online help. (For more detailed instructions for copying a file, refer to page 66.)

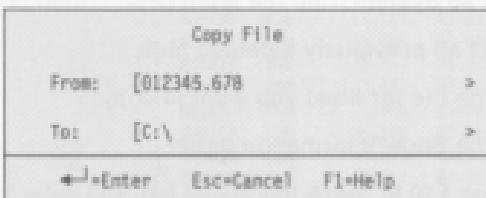
1. Select **File System** from the Main Group; then press Enter.
2. Deselect all previously selected files.
3. Select the file (or files) you want to copy.
4. Check the Show Information panel.
  - a. Press F10 to reach the action bar and select **Options**; then press Enter.
  - b. To see the file status, select **Show Information...** from the pull-down; then press Enter. (The Show Information panel shows how many files are selected across the drive. In this way, you can make certain that the only files selected are those you want to copy. A complete explanation of this panel is on page 62.)
  - c. Press Esc to exit the Show Information panel.
5. Select **File** at the action bar; then press Enter. You see the following:



Note that some of the items in the pull-down are followed by an ellipsis (...). In the Shell, when you see an ellipsis, it means that a pop-up follows when you select that item. An asterisk (\*) within an item means the item is not selectable. (In graphics mode, the unselectable item is shaded or "blurred.")

6. Select **Copy...** from the pull-down; then press Enter.

You see the following on your screen:



The **From:** field shows the files which will be copied, to a maximum of 256 characters.

Type in the name of the destination directory, including the drive and path. Also, if you want to change the name of the file, you can do that here. For example:

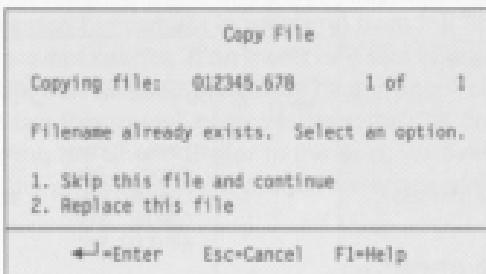
C:\direct1\filename.ext

(Enter the name of the destination directory in place of "direct1".)

The filename and extension are needed only if you want to change the name of the file.)

Press Enter

You see the following on your screen:



If a file by the same name as the one you selected exists in the destination directory, you see this confirmation panel and can choose to continue the copy activity or cancel it.

To skip this file and not copy it, press Enter. If you want to write over the file that exists in the destination directory, go to step 7.

7. Select option 2; then press Enter.

The file you selected is now in the destination directory (the directory you copied the file to) and in its original directory.

---

## Deleting a File

This description of deleting a file is provided as an example of the many tasks you can do by selecting **File** at the File System action bar. The other items in the File pull-down work similarly. When selecting any item, you can press F1 for online help. (For more detailed instructions for deleting a file, refer to page 69.)

1. Select **File System** from the Main Group; then press Enter.

2. Deselect all previously selected files.

When deleting a file, it is especially important that you deselect any files you may previously have selected.

3. Select the file (or files) that you want to delete.

4. Check the Show Information panel, using the procedure you learned previously.

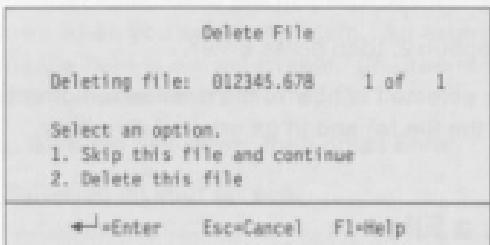
When deleting a file, always check the file information to verify how many files are selected. Because the Show Information panel shows how many files are selected across the drive, you can make sure that only the files you want to delete are selected.

5. Select **File** at the action bar; then press Enter.

6. Select **Delete...** from the File pull-down; then press Enter.

A panel is displayed showing the name of the file or files you selected to delete.

7. Press Enter. The Delete File confirmation panel is displayed:



The name of the first file you chose to delete is named (in this example, 012345.678) in this panel. The "1 of 1" means that only one file is selected for deletion. If there were, for example, three files selected, this would show "1 of 3." Option 1 is highlighted. If you decide not to delete the file, press Enter to skip the file delete. If you decide to delete the file, continue the delete process.

8. Move the selection cursor to option 2; then press Enter to delete the file.

If you selected more than one file to delete, the confirmation panel again is displayed and you can choose whether to delete the next file. If the file named is a file you want to delete, continue the delete process as shown in the previous step.

The file is deleted and no longer is listed in the file list.

---

## Eliminating Confirmation Panels

Each time you delete, copy, or move a file in the Shell, a confirmation panel is displayed so that you can verify the activity. By selecting Options at the action bar, you can deactivate this panel. When you restart the Shell, these panels are again activated.

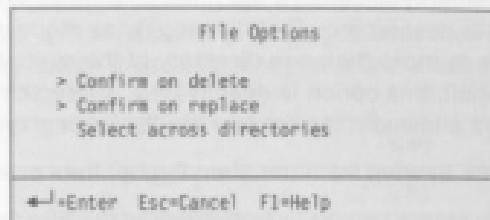
### Eliminating Delete Confirmation Panel

1. Select File System from the Main Group; then press Enter.
2. Move the selection cursor to Options at the File System action bar; then press Enter.

The Options pull-down lists three items, and the selection cursor is on Display options.... This option is discussed in the tour in Chapter 3.

3. Move the selection cursor to **File options...**; then press Enter.

The following pop-up is displayed:



Note that the selection symbol is displayed in front of **Confirm on delete** and **Confirm on replace**.

4. Press the spacebar to remove the selection symbol on **Confirm on delete**.
5. Press Enter. This saves your entries and returns the selection cursor to the action bar.

**Warning:** With the selection symbol removed, this item is deselected and the confirmation panel for the delete function is no longer displayed.

#### **Eliminating Move and Copy Confirmation Panels**

1. Move the selection cursor to **Options** at the File System action bar; then press Enter.
2. Select **File options...** from the pull-down; then press Enter.
3. Move the selection cursor to **Confirm on replace**.
4. Press the spacebar to remove the selection symbol on **Confirm on replace**.
5. Press Enter. This saves your entries and returns the selection cursor to the action bar.

**Warning:** With the selection symbol removed, this item is deselected and the confirmation panels for replacing files using the move and copy functions are no longer displayed.

## Selecting Files Across Directories

In the Shell, when you select a file, then change directories, the selected file is deselected. By following these steps, you will be able to select files in more than one directory at the same time. When you restart the Shell, this option is deactivated. (Selection across directories is always allowed if the System file list is displayed.)

1. Select **File System** from the Main Group; then press Enter.
2. Move the selection cursor to **Options** at the File System action bar; then press Enter.
3. Select **File options...** from the pull-down; then press Enter.
4. Move the selection cursor to **Select across directories**.

Note that there is no selection symbol displayed in front of **Select across directories**. Because this item is not selected, you cannot select files in more than one directory at a time.

5. Press the spacebar to be able to select files across directories.
6. Press Enter. This saves your entries and returns the selection cursor to the action bar.

## Shell Special Key Assignments

Some keys perform special tasks in the DOS Shell. Figure 4 lists these assignments. (When a panel is displayed over the File System or Start Programs, not all these key assignments are active.)

Task	Key
Cancel	Esc
Enter	↵
Move the cursor	↑ or ↓ or → or ←
Switch panel area in File System	Tab
Single file select and deselect	Spacebar
Scroll Information	PgUp or PgDn
Help	F1
In Start Programs, save information and complete copy	F2
Exit the Shell from Start Programs	F3
Exit the Shell from File System if there is no Start Programs	F3
Return to Start Programs from File System	F3
Cancel copy in Start Programs	F3
Create separator mark in PSC list	F4
View files in ASCII or Hex	F9
Keys when in Help	F9
Switch to and from action bar	F10
Index when in Help	F11 (Alt+F1)
Switch to Shell command prompt	Shift+F9

Figure 4. Shell Key Assignments

the 1990s, the number of Internet users increased exponentially, from 10 million in 1990 to over 1 billion in 2000. This growth has been driven by the development of new technologies, such as the World Wide Web, which made it easier for people to access and share information online. The Internet has also become a powerful tool for business, allowing companies to reach a global market and manage their operations more efficiently. In addition, the Internet has transformed the way we communicate, with the rise of social media platforms like Facebook and Twitter. Overall, the impact of the Internet on society has been profound, changing the way we live, work, and interact with each other.

## **Chapter 5. Additional Installation Information**

This chapter provides information on special installation and configuration procedures for DOS 4.00 and the DOS Shell.

### **Installing Keyboard Password**

If you have a Personal System/2 with a partition greater than 32MB and you want to install a keyboard password using the Quick Reference and Reference Diskette package that came with your system, use the following procedure:

1. Start your system.
2. Insert the *Reference Diskette* in drive A.
3. Press the F3 key at the Shell screen to reach the DOS prompt.
4. Type A: at the DOS prompt; then press Enter. This changes the default drive from drive C to drive A. For example:

C:\DOS>	(original DOS prompt)
C:\DOS>A:	(new drive designation)
Press Enter.	
A:>	(new prompt)

5. At the new prompt, type COMMAND; then press Enter.

The first screen of the Reference Diskette is shown on your monitor. To install a keyboard password, follow the instructions in your Quick Reference manual.

The prompt for a keyboard password on a PS/2 normally occurs after the system reads the AUTOEXEC.BAT file. It is necessary to prompt for the keyboard password, however, before the system starts the Shell. To get the prompt for the keyboard password before the Shell starts, insert a PAUSE statement in the AUTOEXEC.BAT file just preceding the DOSSHELL entry. (DOSSHELL is the last entry.) You are then prompted for your keyboard password before the Shell starts.

## Installing Additional Devices

If you acquire additional devices (printers, a mouse, and so on) that you want to install after you have installed DOS 4.00 using SELECT, refer to the DEVICE command in *Using DOS 4.00*.

## Customizing the DOS Shell with Startup Options

During the SELECT program, you see a screen in which you can review or change installation choices. One of these review screens, titled DOS Shell Parameters, shows you the startup options that SELECT installs with the DOS Shell. At this screen, you can choose the startup options (parameters) to configure the Shell.

Figure 5 shows a list of the startup options that SELECT installs if your system has at least 360KB of memory. You can change or eliminate any of these options. (These are the options listed in the DOS Shell Parameters screen.)

**Note:** On some systems, although color is available, the Shell is installed with startup option /C02 (without color) by default to achieve better resolution. You can change to color by adding one of the following startup options: /TEXT, /C01, or /C03. Refer to the section "Additional Startup Options" for an explanation of these startup options and instructions for adding them.

Startup Option	Meaning
/MOS:PCIBMDRV.MOS	Identifies the mouse driver. This option identifies the IBM PS/2 mouse driver.
/MENU	Activates Start Programs in the Shell.
/DOS	Activates File System in the Shell.
/PROMPT	Allows access to the Shell command prompt.

Figure 5 (Part 1 of 2). Installed Startup Options in the DOS Shell

Startup Option	Meaning
/EXIT	Activates the Exit Shell option.
/MAINT	Activates the ability to do maintenance in Start Programs.
/COLOR	Activates the Change Colors option.
/TRAN	Allows operation of the DOS Shell in transient mode (except the base driver).
/MEU:SHELL.MEU	Identifies the filename of the Main Group structure for Start Programs. This option allows network environments to concurrently identify unique menu structures for each node while locating a single copy of the DOS Shell on the server.
/CLR:SHELL.CLR	Identifies the filename of the color setup to use. SHELL.CLR is the default.
/MUL	Provides multiple File System directory and file buffers.
/SND	Activates sound while running the Shell.
/SWAP	Activates saving (swapping) File System directory and file information to a disk file while performing tasks at the Shell command prompt or activating a program. (If the computer is turned off without exiting the Shell, or if there is a power failure, a temporary file is left on the disk. These files need to be deleted on occasion so as not to clutter up the fixed disk.) The /SWAP option increases Shell performance and is most effective on a fixed disk system.
/DATE	Displays the date and time.

Figure 5 (Part 2 of 2). Installed Startup Options in the DOS Shell

By selecting startup options, you can tailor the DOS Shell to fit your needs and the size of your system. Listed here are three suggested

configurations of startup options. (For all these configurations, a maximum DOS 4.00 configuration size of 60KB without the Shell is assumed.)

## Suggested Startup Options with at Least 256KB of Memory

### For Start Programs

/PROMPT	Activates the Shell command prompt.
/MENU	Activates Start Programs in the Shell.
/MAINT	Activates the Program and Group options.
/TRAN	Operates Shell in transient mode.
/MOS:PCIBMDRV.MOS	Identifies the mouse driver.
/COLOR	Activates the Change Colors option.
/EXIT	Activates the Exit Shell option.
Display mode	See "Text or Graphics Mode."

### For File System

/PROMPT	Activates the Shell command prompt.
/SWAP	Activates saving directory and file information (assumes fixed disk).
/TRAN	Operates Shell in transient mode.
/MOS:PCIBMDRV.MOS	Identifies the mouse driver.
/EXIT	Activates the Exit Shell option.
/DOS	Activates File System.
Display mode	See "Text or Graphics Mode."

## Suggested Shell Startup Options with at Least 360KB of Memory

If you have a system with at least 360KB of memory, the Shell can be installed using all the startup options listed in the DOS Shell Parameters screen.

## **Text or Graphics Mode**

The DOS Shell can be displayed in either text or graphics mode. The startup options are /TEXT, /C01, /C02, and /C03. If none of these options is specified, SELECT uses the highest available video mode that your system can support.

**Note:** Some Terminate and Stay Resident (TSR) programs (such as networks, PC-to-host communications, 3270 emulators, and other programs that run in a different session but remain in memory) can be accessed successfully from the Shell only when the Shell is operating in text mode. For instructions on how to add the text mode parameter (/TEXT), refer to the section "Changing Startup Options," which follows.

If you want to operate the Shell in graphics mode, you can switch to a TSR program that operates in text mode by pressing Shift+F9 within the Shell. This brings you to the Shell command prompt. At the Shell command prompt, which operates in text mode, you can press the key combination that is defined by the application and continue using the TSR program.

## **Resident or Transient Mode**

Installing the DOS Shell in resident mode means that, each time you start the Shell, it resides in temporary memory on your system (as opposed to the permanent memory of the Shell diskette or your fixed disk). If you install DOS 4.00 to diskette, choosing resident mode for the Shell makes it possible to start the DOS Shell and remove the Shell diskette from your computer. The Shell remains resident in temporary memory for you to use. You can then insert a different diskette and still use the Shell.

Installing the DOS Shell in transient mode means that when you start up the Shell, it does not remain in temporary memory on your system. If you install DOS 4.00 to fixed disk, choosing transient mode for the Shell allows you to use the Shell (because it can be accessed from your fixed disk) and frees temporary memory for other use.

SELECT installs the DOS Shell in transient mode. If you want to run the Shell in resident mode, remove the transient mode startup command (/TRAN) from the DOSSHELL.BAT file.

## **Additional Startup Options**

There are additional startup options available for the DOS Shell that can be added either during or after installation. You can change, add, or delete the startup options in the Shell at any time. Figure 6 shows these additional options:

<b>Startup Option</b>	<b>Meaning</b>
/LF	Sets the mouse for left-hand use.
/TEXT	Displays the Shell in text mode.
/C01	Displays the Shell in 16-color, high-resolution 640 x 350 graphics (mode 10). (This option is possible only if the appropriate hardware is available.)
/C02	Displays the Shell in two-color, high-resolution 640 x 480 graphics (mode 11). (This option is possible only if the appropriate hardware is available.)
/C03	Displays the Shell in 16-color, high-resolution 640 x 480 graphics (mode 12). (This option is possible only if the appropriate hardware is available.)
/MOS:PCMSDRV.MOS	Activates the Microsoft serial mouse driver, part number 039-099.
/MOS:PCMSPDRV.MOS	Activates the Microsoft parallel mouse driver, part number 037-099.
/B:nKB	Specifies the amount of memory in KB to be used for the File System file buffer. For example, an entry of /B:3KB specifies a 3KB buffer. With this option, you can restrict the Shell's use of memory. This is particularly significant when operating the Shell in resident mode.

Figure 6 (Part 1 of 2). Additional Startup Options Available in the DOS Shell

Startup Option	Meaning
/COM2	Allows serial mouse to be used on the second serial port (installation default is COM1).

Figure 6 (Part 2 of 2). Additional Startup Options Available in the DOS Shell

#### Mouse Driver Alternatives

The Shell comes with the three mouse drivers described in Figures 5 and 6. A different mouse can be used with these drivers for the Shell if its interface specifications match those of one of the three mice supported. If you use a mouse outside the Shell, a device driver must be provided for that mouse and identified with a DEVICE = statement in the CONFIG.SYS file.

The Shell also supports any mouse if its interface specifications match Microsoft's specifications. (To use this method requires 5KB to 12KB, whereas the three drivers described in the tables require 1KB.)

1. Install the mouse driver that came with the mouse. Use the instructions that you received with the mouse.
2. Remove all /MOS startup options from the DOSSHELL.BAT file.
3. Start DOS 4.00.

Some Terminate and Stay Resident (TSR) programs do not recognize mouse support. If you use a mouse with the Shell and access a TSR program, you may see a shadow of the mouse pointer in the TSR program. This does not affect the way your TSR program works and can be ignored.

#### Changing Startup Options

To view the DOS Shell startup options presently on your system, from either Start Programs or the File System, do the following:

1. Press F3 to reach the command prompt.
2. At the prompt, type:

TYPE DOSSHELL.BAT

3. Press Enter. Your DOSSHELL.BAT file will look similar to this example:

```
@C:  
@CD C:\DOS  
@PRINT  
@PROMPT When ready to return to the DOS Shell, type EXIT, then  
press enter.$_$_$  
@SHELLB DOSSHELL  
@IF ERRORLEVEL 255 GOTO END  
:COMMON  
@SHELLC /MOS:PCIBMDRV.MOS/MENU/DOS/PROMPT/EXIT/MAINT/COLOR  
/TRAN/MEU:SHELL.MEU/CLR:SHELL.CLR/MUL/SND/SWAP/DATE  
:END  
@BREAK=ON  
@PROMPT $P$G
```

The entries after "SHELLC" indicate the installed startup options. You can delete any of them or add to the list. You do this by using a text editor such as EDLIN, the text editor that comes with DOS 4.00. Instructions on using EDLIN are in Appendix A of *Using DOS 4.00*.

For example, if you want to set your computer for use with a left-hand mouse, you can add /LF to the list of options. You can add /LF anywhere in the string; it is shown here added at the beginning:

```
@SHELLC /LF/MOS:PCIBMDRV.MOS/MENU/DOS/PROMPT/EXIT/MAINT/COLOR  
/TRAN/MEU:SHELL.MEU/CLR:SHELL.CLR/MUL/SND/SWAP/DATE
```

When you complete any changes or additions that you want to make, save the file and restart the Shell by typing DOSSHELL at the command prompt and pressing Enter.

**Note:** If conflicting options are present, an invalid option is entered, or an option is misspelled, an error message is displayed.

## **Using the DOS Shell in a Network**

---

There are two ways you can use the DOS Shell in a network. You can install it to use a single set of files which are shared by all the nodes, or you can install it to use a different set of unique files for each node.

For the instructions and examples that follow, it is assumed that the Shell is being installed on a server machine and that it will be shared by a number of nodes.

**Warning:** The contents of some of the Shell files (those with .MEU, .CLR, and .ASC extensions) can be changed during a Shell session, thereby interfering with work being done by someone on another node. The two install procedures that follow eliminate this exposure.

### **Sharing One Set of Files**

To use a single set of DOS Shell files to be shared by all nodes, do the following:

1. Install DOS 4.00 on the server.
2. If you want to make changes to the Shell (such as adding programs, changing colors, or adding an associate file), start the Shell and make the desired changes.
3. Change the attributes of SHELL.MEU, SHELL.CLR, and any other .MEU, .CLR, and .ASC files to read-only. (The .ASC files are created only after the associate function has been carried out.)
4. For each node, provide a Shell batch file that does not contain the /MAINT and /COLOR startup options.

These batch files must also reside on the Shell server.

When creating a new Shell batch file, the name of the batch file must appear on the same line with SHELLB.COM. In the following examples, this is shown as SHELLB SHELLN1, SHELLB SHELLN2, SHELLBN1, and SHELLBN2.

Explanations of the Shell startup options (/TRAN, /TEXT, /MAINT and so on) begin on page 110 of this chapter.

If the Shell is installed on the server machine in the SHELL directory and the nodes are using it by accessing drive E, a batch file for node N1 might look like this:

```
SHELLN1.BAT
E:
CD \SHELL
SHELLB SHELLN1
IF ERRORLEVEL 255 GOTO END
:COMMON
SHELLC /TRAN/TEXT/DOS/MENU/EXIT/MEU:SHELL.MEU
:END
```

A batch file for node N2 might look like this:

```
SHELLN2.BAT
E:
CD \SHELL
SHELLB SHELLN2
IF ERRORLEVEL 255 GOTO END
:COMMON
SHELLC /TEXT/DOS/MUL/PROMPT/EXIT/MEU:SHELL.MEU
:END
```

## Using a Unique Set of Files for Each Node

To use a separate set of files for each node, do the following:

1. Install DOS 4.00 on the server.
2. For each node, make copies on the server of all the .MEU, .CLR, and .ASC files, assigning names to them that are unique to each node.

For example, the files for node N1 could be named N1.MEU, N1.CLR, and N1.ASC. The files for node N2 could be named N2.MEU, N2.CLR, and N2.ASC, and so on.

3. For each node, provide a Shell batch file that contains the .CLR, .MEU, and .ASC filenames that you have assigned to it.

For example, if DOS 4.00 is installed on the server machine in the SHELL directory and the nodes are using it by accessing drive E, a batch file for node N1 might look like this:

```
N1.BAT
E:
CD \SHELL
SHELLB N1
IF ERRORLEVEL 255 GOTO END
:COMMON
SHELLC /MAINT/COLOR/TRAN/DOS/EXIT/SWAP/MEU:N1.MEU
:END
```

A batch file for node N2 might look like this:

```
N2.BAT
E:
CD \SHELL
SHELLB N2
IF ERRORLEVEL 255 GOTO END
:COMMON
SHELLC /MAINT/COLOR/DOS/MUL/PROMPT/EXIT/MEU:N2.MEU
:END
```

## Receiving Messages

If the Shell is installed on your system in text mode, any messages that you receive are displayed directly on your screen. You can refresh the screen by reselecting the displayed option. To avoid this inconvenience, save your messages in a file or direct them to a printer.

If the Shell is installed in graphics mode, messages are not displayed. You must therefore log your messages.

Refer to your network manual for instructions on saving your messages in a log.



## **Chapter 6. Partitioning Your Fixed Disk**

---

During installation, if you are installing to a system that does not have a partitioned fixed disk, you can either let SELECT partition your fixed disk for you or make the partitioning decisions yourself. If you choose to make your own decisions about partitioning your fixed disk, you see a screen titled FDISK Options. How to make these decisions is explained in this chapter.

### **About Your Fixed Disk**

---

The fixed disk can be logically divided into as many as four partitions. One reason to divide your fixed disk is to be able to share it among operating systems. A partition defines the area of the fixed disk that belongs to a particular operating system. In this way, you can have more than one operating system on a fixed disk at the same time, each residing in its own partition. However, only one operating system can be used at a time. To create partitions for an operating system other than DOS 4.00, refer to the installation procedure for that operating system.

DOS has two partition types. The first partition, and the only one that is required to use DOS on a fixed disk, is called a primary DOS partition. This partition must exist to start DOS from the fixed disk. It can be any size up to the size of your entire fixed disk (100%).

The other type of partition used by DOS is called an extended DOS partition. This partition also can be any size within your fixed disk space limitations, and it can be subdivided into multiple areas called logical drives. A logical drive can be any size you choose within the size limitations of the extended partition. When you start DOS, each logical drive is assigned a drive letter that you can use to access that drive, just as if it were a separate fixed disk. For example, if you have one fixed disk and you create a primary DOS partition, an extended DOS partition, and one logical drive in the extended DOS partition, DOS assigns the drive letter C to the area of the disk defined as the primary DOS partition and D to the area defined as the logical drive. You can create logical drives up through drive letter Z.

FDISK allows you to create both a primary DOS partition and an extended DOS partition on each fixed disk. It also allows you to divide the extended DOS partition into logical drives.

### **Adding a Fixed Disk**

When you add a second fixed disk to your system, FDISK assigns the drive letter D to the primary partition of the second fixed disk. If your first fixed disk has an extended partition containing logical drives, the logical drive letters change.

FDISK assigns drive letters sequentially to the primary partition of each fixed disk before assigning drive letters to the logical drives. It also assigns drive letters to all the logical drives on the first fixed disk before assigning drive letters to the logical drives on the second fixed disk.

This results in your logical drive letters being reassigned if you run FDISK on a second fixed disk after logical drive letters have been assigned on your first fixed disk.

Now that you are now familiar with FDISK, except partitions over one 1024 megabyte boundary or smaller, there should be no FDISK errors because FDISK will check for more than one major or minor sector partitioning error (FERR) and then it will move to the next sector. If you make your

DOS partitions on individual disks and leave maximum to every sector and each track every cylinder until you do this you will receive many, many errors on the first few cylinders. The sectors themselves will be fine, but the tracks and cylinders will be bad. This is because the first few cylinders are the ones that contain the boot sector. A boot sector is a sector that contains the first few bytes of code that are executed when the computer boots up. These first few bytes of code are used to load the operating system into memory. If you have a bad boot sector, the operating system will not load correctly and you will not be able to boot up. This is why it is important to have a good boot sector. If you have a good boot sector, you will be able to boot up even if you have a bad hard drive. This is because the boot sector is located on the first cylinder of the hard drive, which is the cylinder that contains the boot sector. So, if you have a bad hard drive, you will still be able to boot up, as long as you have a good boot sector.

## Using FDISK

FDISK displays menus that guide you through the tasks. This is the menu you see if you choose to make your own decisions in partitioning your fixed disk:

```
IBM DOS Version 4.00
Fixed Disk Setup Program
(C)Copyright IBM Corp. 1983, 1988
```

### FDISK Options

Current fixed disk drive: 1

Choose one of the following:

1. Create DOS Partition or Logical DOS Drive
2. Set active partition
3. Delete DOS Partition or Logical DOS Drive
4. Display partition information
5. Select next fixed disk drive

Enter choice: [1]

Press Esc to exit FDISK

Item 5 appears only if you have more than one fixed disk.

Select your option from this menu. After making a selection, you see additional menus.

Some menus display a default value in the Enter choice area. (On this menu, it's a 1.) If you want the default value as your choice, press Enter. If you want a value other than the default, type the value you want, then press Enter.

**Warning:** A warning message appears if at least one defined partition exists, but the partition is not marked active. This warning indicates that the disk will not start up (boot). If you get this warning and you want to start from your fixed disk, select option 2. Set active partition.

## **Creating a DOS Partition or Logical DOS Drive (Option 1)**

If you choose option 1, **Create DOS Partition or Logical DOS Drive** from the FDISK Options menu, you see the following:

### **Create DOS Partition or Logical DOS Drive**

Current fixed disk drives: 1

Choose one of the following:

1. Create Primary DOS Partition
2. Create Extended DOS Partition
3. Create Logical DOS Drive(s) in the Extended DOS Partition

Enter choice: [1]

Press Esc to return to FDISK Options

If you want to create a primary DOS partition, press Enter.

## **Creating a Primary DOS Partition**

If you choose option 1 on the Create DOS Partition or Logical DOS Drive menu, the following is displayed:

### Create Primary DOS Partition

Current fixed disk drive: 1

Do you wish to use the maximum available size for a Primary DOS Partition  
and make the partition active (Y/N) .....? [Y]

Press Esc to return to FDISK Options

Do one of the following:

- Press Enter (Y is the default) if you want to use the largest available space for your primary DOS partition and you want DOS to start from the fixed disk. Your DOS partition is made active. If you have more than one fixed disk, the FDISK Options menu is displayed again.

If you are done partitioning your fixed disk, you see the following:

You must restart your computer to continue.

Press Ctrl+Alt+Del to continue with DOS installation.

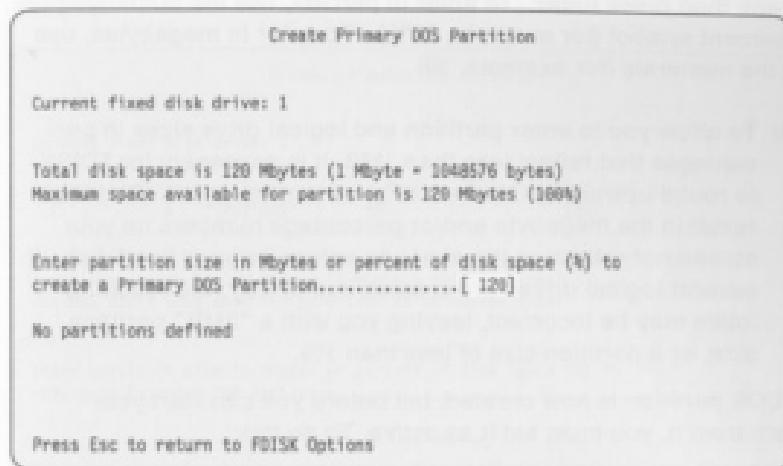
This message is displayed any time you finish using FDISK while installing using SELECT.

Follow the instructions on the screen by pressing Ctrl + Alt + Del to restart your system. Screens follow to inform you that the fixed disk is formatting and when you must insert the required diskette.

- Type N (no) if you want to use part of the fixed disk for an extended DOS partition or another operating system. (Refer to "Using Part of a Fixed Disk for DOS.")

## **Using Part of a Fixed Disk for DOS**

If you want to use only part of the fixed disk for DOS, type N (no); then press Enter. The following screen is an example of what you see:



"Total disk space" indicates how many megabytes (MB) are on your entire fixed disk. The "Maximum space available for partition" value is the maximum amount of contiguous space that is available on your fixed disk. (There may be space in several locations on your fixed disk. Contiguous space is space in an unbroken sequence.)

If you want your DOS partition to be as large as possible, press Enter. The default value is the maximum space available. If you want to enter a different size, type the value you want in either megabytes or percent; then press Enter. To enter in percent, use the numerals plus the percent symbol (for example, 25%). To enter in megabytes, use only the numerals (for example, 30).

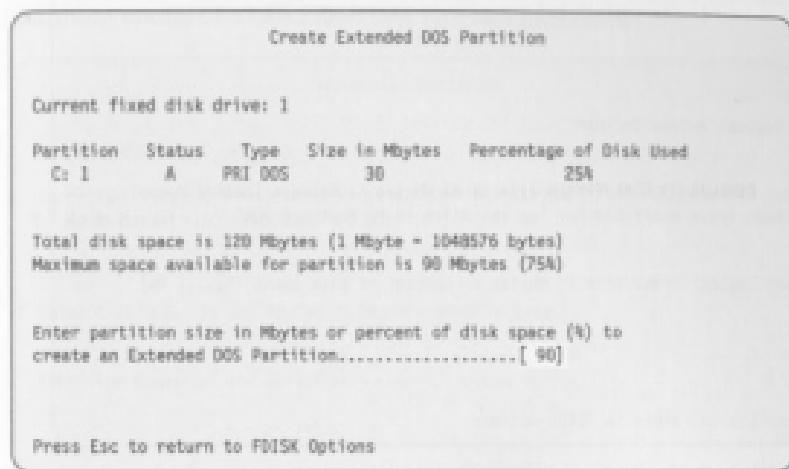
**Note:** To allow you to enter partition and logical drive sizes in percentages that reflect less than 1MB, it is necessary for FDISK to round upward the space assigned in megabytes. This can result in the megabyte and/or percentage numbers on your screen not reflecting the absolute values on your fixed disk. If several logical drives are created in this way, the resulting totals may be incorrect, leaving you with a "0MB" partition size, or a partition size of less than 1%.

The DOS partition is now created, but before you can start your system from it, you must set it as active. To do this:

1. Press Esc to return to the FDISK Options menu.
2. Choose option 2. Set Active Partition.
3. Set the partition as active. Refer to "Setting the Active Partition (Option 2)" on page 131.
4. Press Esc at the Set Active Partition menu to return to the FDISK Options menu.

## **Creating an Extended DOS Partition**

If you choose option 2, **Create Extended DOS Partition** from the **Create DOS Partition or Logical DOS Drive** menu, you see a screen like this:



**Partition** Is the drive letter and number assigned to a DOS partition.

**Status** Is the status of the partition—A for active.

**Type** Is the kind of partition—PRI DOS (primary DOS) or EXT DOS (extended DOS).

**Size in Mbytes** Is the size of the partition in megabytes.

**Percentage of Disk Used** Is the size of the partition in percentage of total disk capacity.

If you want your extended DOS partition to be as large as possible, press Enter. The default value is shown in megabytes and is the maximum amount of contiguous space available on your fixed disk. If you want to enter a different size, type the value you want in either megabytes or percent; then press Enter.

If you create an extended DOS partition, you see a screen for creating logical drives.

## Creating Logical DOS Drives in the Extended DOS Partition

If you create an extended DOS partition, you see a screen like this:

Create Logical DOS Drive(s) in the Extended DOS Partition

No logical drives defined

Total Extended DOS Partition size is 90 Mbytes (1 Mbyte = 1048576 bytes)  
Maximum space available for logical drive is 90 Mbytes (100%)

Enter logical drive size in Mbytes or percent of disk space (%)...[ 90]

Press Esc to return to FDISK Options

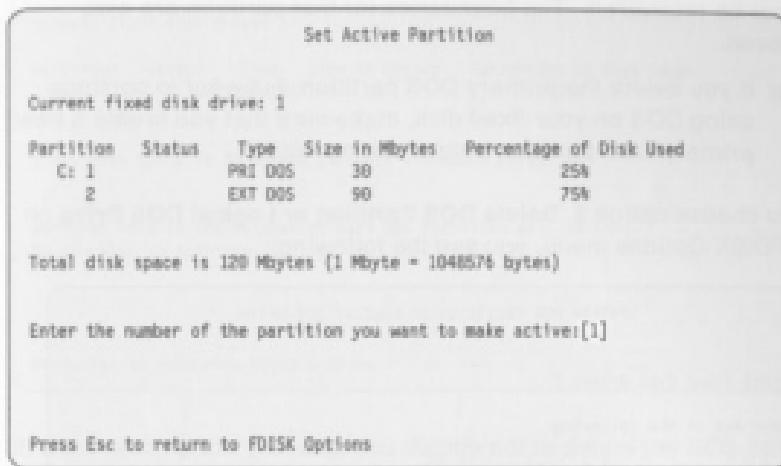
To create a logical drive using the maximum space available, press Enter. The default value is the maximum space available in megabytes.

To create a logical drive in a different size, enter the size you want in megabytes or percent; then press Enter.

Creating logical drives in the extended DOS partition  
Press Esc to return to FDISK Options

## Setting the Active Partition (Option 2)

If you choose option 2, Set active partition from the FDISK Options menu, a screen similar to this one appears. This example shows the partition status of a fixed disk that has two partitions:



Your fixed disk can have four partitions, but only one partition can be active (startable) at a time. To start drive C, you need an active partition on the first fixed disk. (Although you may have an additional fixed disk attached to your system, the partition you set as active must be on the first fixed disk.) The active partition has control of your system when started from the fixed disk.

To set an active partition:

1. Type the number of the partition that you want to be active.

If you want your DOS partition to be active, type the number for the primary DOS partition. (An extended DOS partition cannot be set as active.)

2. Press Enter.

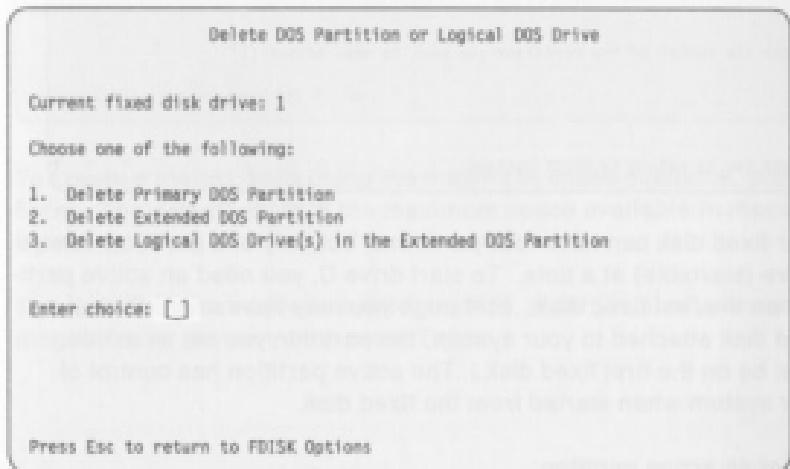
The partition you select becomes the active partition.

## **Deleting a DOS Partition or Logical DOS Drive (Option 3)**

You can delete the fixed disk partition you use for DOS. When you do, remember that any data in that partition is also deleted and cannot be recovered. The boundaries for that partition are also removed.

**Note:** If you delete the primary DOS partition, but want to continue using DOS on your fixed disk, make sure that you create a new primary DOS partition before exiting FDISK.

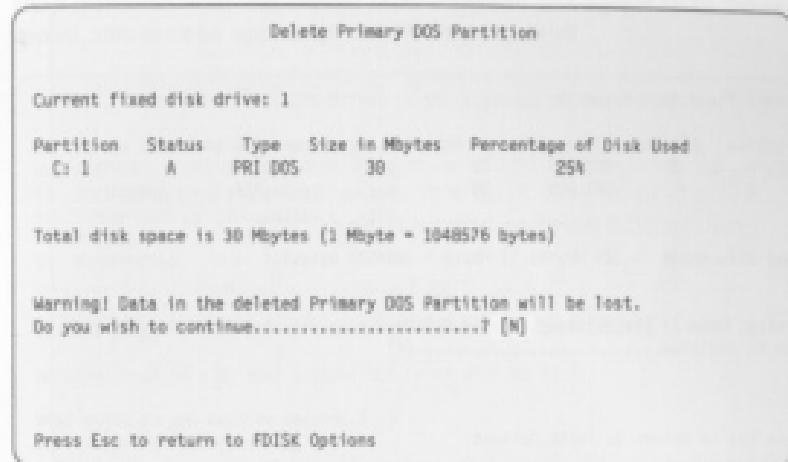
If you choose option 3, Delete DOS Partition or Logical DOS Drive on the FDISK Options menu, you see the following:



Select the option you want by typing in the number; then press Enter.

## **Deleting the Primary DOS partition**

If you choose option 1. Delete Primary DOS Partition from the Delete DOS Partition or Logical DOS Drive menu, you see this screen:

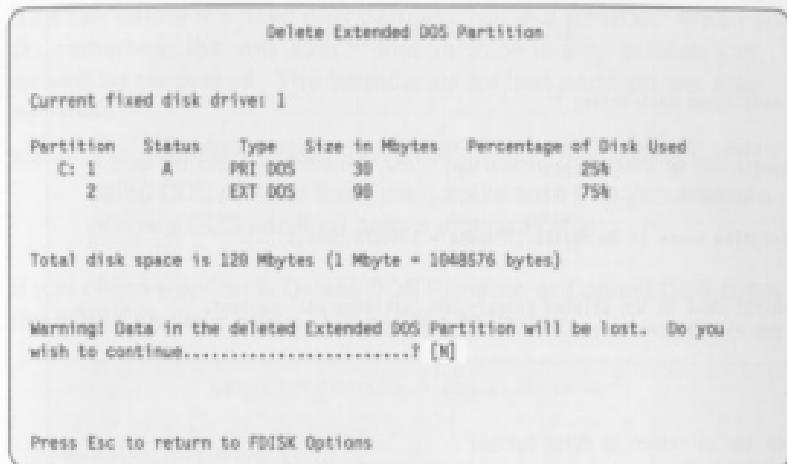


If, after reading the warning, you decide not to delete the DOS partition, press Enter or Esc to return to the FDISK Options menu. If you want to delete the DOS partition, type Y (yes); then press Enter.

If you have an extended DOS partition, a displayed message informs you that you cannot delete the primary DOS partition while an extended partition exists. If you get this message, press Esc to return to the FDISK Options menu and follow the steps to delete the extended DOS partition, after which you can delete the primary DOS partition.

## **Deleting the Extended DOS Partition**

If you choose option 2. Delete Extended DOS Partition from the Delete DOS Partition or Logical DOS Drive menu, you see a screen like this:



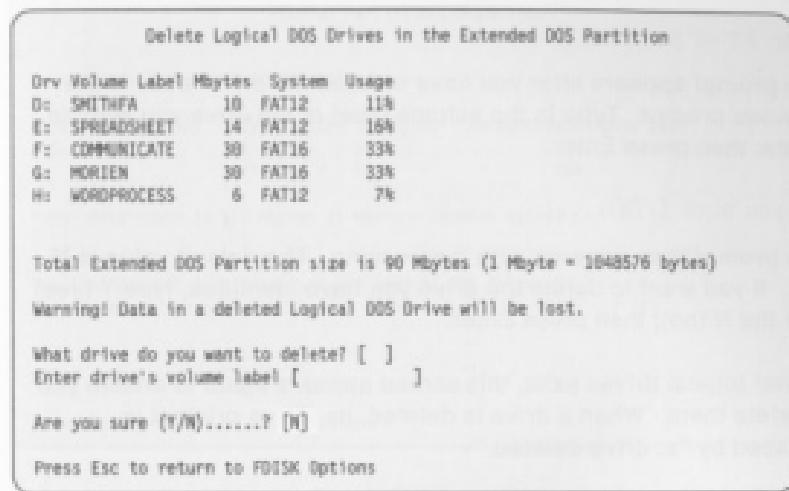
If, after reading the warning, you decide not to delete the extended DOS partition, press Enter or Esc to return to the FDISK Options menu.

If you want to delete the extended DOS partition, type Y (yes); then press Enter.

If you have logical drives in the extended DOS partition, a displayed message informs you that you cannot delete the extended DOS partition while logical drives exist. If you get this message, press Esc to return to the FDISK Options menu. Follow the steps to delete the logical drives in the extended DOS partition, after which you can delete the extended DOS partition.

## **Deleting the Logical DOS Drives in the Extended DOS Partition**

If you choose option 3. Delete Logical DOS Drives in the Extended DOS Partition from the Delete DOS Partition or Logical DOS Drive menu, this screen appears:



<b>Drv</b>	Indicates the drive letter that is assigned when the system is restarted following exit from FDISK.
<b>Volume Label</b>	Is the label given to the drive when it was formatted.
<b>Mbytes</b>	Is the size of the drive in megabytes.
<b>System</b>	Is the file system used to format the drive. FAT12 (file allocation table 12) is used for drives 16MB or smaller; FAT16 is used for drives over 16MB. "Unknown" is displayed if the partition has not been formatted.
<b>Usage</b>	Is the percentage of the extended partition used by this drive.

The prompts appear in this order:

What drive do you want to delete?

This is the first prompt that appears. Type in the letter of the drive you want to delete; then press Enter.

Enter drive's volume label

This prompt appears after you have entered the drive letter in the previous prompt. Type in the volume label of the drive you want to delete; then press Enter.

Are you sure (Y/N)....?

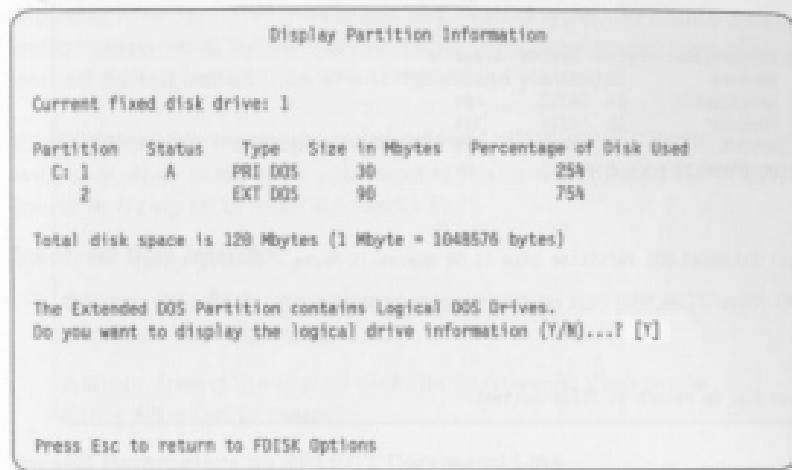
This prompt then appears with the warning. The default value is N (no). If you want to delete the drive you have identified, type Y (yes) over the N (no); then press Enter.

If other logical drives exist, this screen appears again to enable you to delete them. When a drive is deleted, its status printout is replaced by "x: drive deleted."

If FDISK assigns new drive letters to the remaining logical drives, the new drive letters are displayed when Esc is pressed. The drive letters that appear are the drive letters that are assigned the next time you start your computer.

## Displaying Partition Information (Option 4)

If you chose option 4, Display partition information from the FDISK Options menu, you see a screen like this:



This screen shows how a fixed disk is partitioned.

If you do not want to display the logical drive information, type N (no); then press Enter. FDISK returns to the FDISK Options menu.

If you want to display the logical drive information, press Enter. The following is displayed:

Display Logical DOS Drive Information

Drv	Volume Label	Mbytes	System	Usage
B:	SMITHFA	18	FAT12	11%
E:	SPREADSHEET	14	FAT12	16%
F:	"Remote"	30	FAT16	33%
G:	MORLEN	30	FAT16	33%
H:	WORDPROCESS	6	FAT12	7%

Total Extended DOS Partition size is 90 Mbytes (1 Mbyte = 1048576 bytes)

Press Esc to return to FDISK Options

### **"Remote" Indicator**

If you see the "Remote" indicator over a volume label, it means that you have reused that drive letter to connect to a network drive.

If you want to disconnect this network drive from your system, perform the following steps:

1. Exit FDISK.
2. Disconnect the network drive from your system. Refer to your network documentation for the correct procedure.
3. Restart FDISK.

---

### **Selecting the Next Fixed Disk Drive (Option 5)**

If you have another fixed disk to prepare, choose option 5. Select **Next Fixed Disk Drive** from the FDISK Options menu. Note that the "Current fixed disk drive" value changes to "2." Proceed with these same steps to partition your second fixed disk drive.

## **Appendix A. Messages**

This appendix contains messages associated with SELECT, listed in alphabetic order. The messages are in **bold** type; the cause and action statements follow the message. Any other messages displayed during installation are complete as viewed.

Explanations for messages encountered while using FDISK, along with any other messages you receive that are not listed here, can be found in *Using DOS 4.00, Appendix D*.

### **Incorrect DOS Version**

**Cause:** SELECT. An attempt was made to run SELECT with DOS version other than DOS 4.00.

**Action:** Insert the */install* diskette in drive A; then press Ctrl + Alt + Del to restart.

### **Invalid Parameters on SELECT Command Line**

**Make sure the INSTALL diskette is in drive A; then press Ctrl + Alt + Del to restart.**

**Cause:** SELECT. SELECT was typed on the command line. The SELECT installation program cannot be started from the command line.

**Action:** Insert the */install* diskette in drive A; then press Ctrl + Alt + Del to restart.

### **Invalid SELECT Boot Media**

**Insert the INSTALL diskette in drive A; then retry**

**Cause:** SELECT. An attempt was made to start SELECT from other than drive A.

**Action:** Insert the */install* diskette in drive A; then press Ctrl + Alt + Del to retry.

### **Invalid Disk/Diskette Media**

**Insert the INSTALL diskette in drive A; then retry**

**Cause:** SELECT. An attempt was made to start SELECT from media other than 360KB or 720KB.

**Action:** Insert the */install* diskette in drive A; then press Ctrl + Alt + Del to retry.

An error occurred while installing DOS.  
Press Enter to continue, or F3 to exit SELECT.

Cause: SELECT. DOS has detected an error of undetermined origin.

Action: Press Enter to ignore the error or F3 to end installation. Retry installation. If message persists, installation should be terminated and the error source determined. If there is enough space on your fixed disk for SELECT to install all the files and DOS appears correct, run the diagnostics for your system. If the cause of the error cannot be determined, contact your service representative.

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