

*Executive  
User's Guide*



*Executive User's Guide*

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## About This Guide

Organization .....	ix
Conventions .....	x
Related Products .....	xi

## 1 Getting Started

Introducing the Executive .....	1-1
Starting the Executive .....	1-1
How to Sign On to Your Workstation .....	1-2
Signing On to the Executive .....	1-3
Starting the Executive With Context Manager .....	1-3
Signing On Into Some Other Application .....	1-4
The Executive Screen .....	1-5
Using Command Forms .....	1-6
Mandatory Fields .....	1-7
Optional Fields .....	1-7
Query Fields .....	1-7
How to Issue a Command .....	1-8
Abbreviating Command Names .....	1-9
Using the File System .....	1-10
File Specifications .....	1-10
Using the Path Setting .....	1-12
Overriding the Path Setting .....	1-13
Using Partial File Specifications .....	1-13
Using Passwords .....	1-14
Using CT-Net Nodes .....	1-14
Learning More About Your File System .....	1-15

2	Using the Executive	
	Tasks You Can Perform .....	2-1
	Special Features .....	2-2
	More About the File System .....	2-2
	Where to Go From Here .....	2-3
	* and ? Wild Cards .....	2-4
	Practicing With Wild Cards .....	2-4
	Using the * Wild Card .....	2-4
	Using the ? Wild Card .....	2-6
	Using Combinations of Wild Cards .....	2-7
	Using Wild Cards in Volume and Directory Names .....	2-8
	Preventing Disasters .....	2-9
	Wild Card Expansion in Command Forms .....	2-10
	Backing Up Disks .....	2-11
	Theory of Backups .....	2-11
	Archive Commands .....	2-12
	How to Back Up an Entire Disk .....	2-13
	How to Perform an Incremental Backup .....	2-15
	Restoring Archive Files .....	2-17
	Cleaning Up a Disk .....	2-18
	Why Do I Need to Clean Up My Disk? .....	2-18
	How to Clean Up a Disk .....	2-18
	Copying Files .....	2-20
	How to Copy a File .....	2-20
	Using Wild Cards to Copy Files .....	2-21
	Invalid Use of Wild Cards With the Copy Command .....	2-22
	Copying Files on the Master .....	2-23
	Another Way to Copy Files .....	2-23
	Using Wild Cards With the LCopy Command .....	2-24
	More Features of the LCopy Command .....	2-25
	Creating Directories .....	2-27
	How to Create a Directory .....	2-27
	Creating a Directory on a Different Volume .....	2-29
	Deleting Files .....	2-30
	Exiting .....	2-32
	How to Log Out .....	2-32
	How to Finish the Executive .....	2-33

File System .....	2-34
File Specifications .....	2-34
Optional Parts of File Specifications .....	2-34
Using Partial File Specifications .....	2-35
Invalid File Specifications .....	2-35
Volume and Device Names .....	2-35
[Sys]<Sys> .....	2-37
Volume and Directory Naming Rules .....	2-37
File Naming Rules .....	2-38
File Prefixes and Suffixes .....	2-38
Restrictions for Volume, Directory, and File Names .....	2-39
Using Files on the Master .....	2-40
Initializing Disks .....	2-41
How to Initialize a Floppy Diskette .....	2-41
Recycling Floppy Diskettes .....	2-43
Installing Software .....	2-45
Listing Directories .....	2-47
Different Kinds of Directories .....	2-48
Disk Space Information .....	2-48
How to List Directories .....	2-49
Listing Directories on the Master .....	2-50
Listing Files .....	2-51
How to List Files .....	2-51
Creating File Lists to Use as Parameter Values .....	2-52
What Is an At-File? .....	2-53
Creating an At-File With the Files Command .....	2-53
Using an At-File .....	2-54
Macros .....	2-57
What Is a Macro? .....	2-57
Function Key Macros .....	2-57
How to Assign a Macro to a Function Key .....	2-58
Changing Function Key Macros .....	2-59
Where Function Key Macros are Stored .....	2-60
Recorded Macros .....	2-60
How to Record a Submit File .....	2-60
How to Replay a Submit File .....	2-63
Learning More About Submit Files .....	2-63

Moving Files .....	2-64
How to Move a File .....	2-64
Moving and Renaming a File Simultaneously .....	2-66
Moving Groups of Files With Wild Cards .....	2-66
Path Setting .....	2-67
How to Set Your Default Path .....	2-67
Unexpected Results .....	2-69
Entering a Nonexistent Volume, Directory, or Node Name ..	2-69
Entering a Parameter Value in the Wrong Field .....	2-69
Printing .....	2-70
Generic Print System .....	2-70
Printing With the Executive .....	2-71
The Format Command .....	2-71
The Print Command .....	2-72
The Copy Command .....	2-73
Redo .....	2-75
How to Redo the Previous Command .....	2-76
Suppressing Redo .....	2-77
Renaming Files .....	2-78
How to Rename a File .....	2-78
Using Wild Cards to Rename Files .....	2-79
Changing the Case of Letters in File Names .....	2-80
Screen Setting .....	2-81
How to Set Scrolling .....	2-81
How to Set Screen Time Out .....	2-82

### 3 Troubleshooting

Different Kinds of Problems .....	3-1
Where to Find Help .....	3-1
Common Error Messages .....	3-2
Unusual Circumstances .....	3-5
Entering a Parameter Value That Contains More Than One Word .....	3-5
Entering a Parameter Value That Does Not Fit in a Field ....	3-6
Typing Symbols That Do Not Appear on the Keyboard .....	3-6
Troubleshooting Commands .....	3-8

Glossary .....	G-1
Index .....	I-1

### List of Figures

1-1. SignOn Screen .....	1-2
1-2. Context Manager Screen .....	1-3
1-3. Executive Screen .....	1-5
1-4. Command Form .....	1-6
1-5. Organization of a Disk .....	1-11
2-1. Wild Card Matches .....	2-8
2-2. Device Names on a Workstation .....	2-36
2-3. Volume Status Screen Display .....	2-47
2-4. Using an At-File in a Command Form .....	2-55
2-5. Function Keys .....	2-58
2-6. Redo Key .....	2-75

### List of Tables

1-1. Abbreviating Command Names .....	1-9
3-1. Common Error Messages .....	3-2
3-2. Keystrokes for Common Symbols .....	3-7



This User's Guide introduces you to the most commonly used Executive utilities and features. It describes the types of tasks you can perform with the Executive and includes procedures for using Executive commands to perform these tasks.

### **Organization**

Chapter 1, "Getting Started," contains information you must be familiar with before you begin using the Executive. If you have not used the Executive or the *Getting Started With Your Workstation* training package, read this chapter first. Otherwise, it is a useful review, which goes into more detail than *Getting Started With Your Workstation*.

Chapter 2, "Using the Executive," describes many tasks you can perform with the Executive, as well as several features you can use to perform these tasks efficiently. Tasks and features are organized alphabetically; to use this chapter, simply look up the task you want to perform. Each task contains information about the commands you need to use, as well as step-by-step procedures for performing those commands. This chapter also contains detailed information about the file system.

Chapter 3, "Troubleshooting," explains some common problems you might encounter. Read this chapter to solve problems and avoid pitfalls.

## Conventions

The following conventions are used throughout this Guide:

- New terms appear in *italics* the first time they are used. Usually their meanings become apparent as they are used in context, but all italicized terms are defined in the Glossary.

- Names of forms and fields also appear in *italics*, for example,

*SignOn* form

*[Password]* field

- Characters or words for you to type are shown in boldface, for example,

**Type Files**

- Names of keys also appear in boldface, for example,

**Press Go**

- Keystroke combinations, such as holding down the **Code** key while you press another key, are separated by a hyphen, for example,

**Code-Go**

- Command names appear in boldface. Full command names are used throughout, for example, **Volume Status**. However, most command names can be abbreviated when you use them on your workstation (see “Abbreviating Command Names,” in Chapter 1).

- The hand symbol () indicates a shortcut or tip.

## Related Products

The Executive is part of Standard Software, which is installed on all CTOS workstations and Shared Resource Processors. The following products are included in the documentation set for Standard Software:

*Getting Started With Your Workstation* teaches new users the basics about using a workstation. It includes a diskette and a booklet with step-by-step lessons for booting the workstation, installing a software application, using an application, using Context Manager, performing Executive commands, using the mouse, and more.

The *Executive Manual* provides detailed information about Executive commands and features.

The *CTOS System Administrator's Guide* describes how to configure and maintain Standard Software on workstations and Shared Resource Processors.

The *Editor Manual* describes how to use the Editor application to create or modify ASCII text files. Programmers frequently use the Editor to create source code files; system administrators use the Editor to modify ASCII configuration files.



## Introducing the Executive

The Executive application is a utilities tool kit for your workstation. A *utility* is a command that carries out a specific task, such as copying files or backing up a disk. You use Executive utilities, in conjunction with your other applications, to manage the file system and to obtain information about the status of your workstation.

This chapter covers material you need to know before you begin using the Executive to perform specific tasks. It includes the following information:

- how to start the Executive
- how to use command forms
- how to issue a command
- how to use the file system

## Starting the Executive

Before you can use the Executive or any other application, you must *sign on* to your workstation. When you sign on, you enter a user name and an access password, if required. Your user name determines which application appears on the screen after you sign on, as well as which commands and applications are available for you to use. Different users, who may share the same workstation, can have varying levels of access to commands and applications, depending on how their user names are set up. (See the *CTOS System Administrator's Guide* for more information about user names.)

The *SignOn* screen is pictured in Figure 1-1. It can be customized, so the *SignOn* screen that you see may look different. The bottom three lines, however, which are the *SignOn* form, will be very similar to those shown in Figure 1-1.

SignOn 11.2 (OS pClstrLfs VM 2.0)

Wed Jun 29, 1988 12:05 PM

```
-----  
: This file is [sys]<sys>SignOn.Txt and may be edited to contain any text.  
: Press GO to get into the Executive.  
: Refer to the CTOS System Administrator's Guide for information on  
: user names and configuration files.  
: Copyright © 1980, 1987 by Convergent Technologies, Inc.  
: All Rights Reserved.  
-----
```

```
User name (e.g., Eric) _____  
Password _____  
Date/Time (e.g., Tue Sep 9, 1986 8:00 am)
```

493-001

**Figure 1-1. SignOn Screen**

## How to Sign On to Your Workstation

To sign on, fill in the *SignOn* form, shown in Figure 1-1, as described in the following steps:

1. Type your user name in the first field of the *SignOn* form.
2. Press **Return**.
3. Type the password, if required, in the second field of the *SignOn* form.
4. Press **Return**.
5. If they are not already set, enter the date and time in the third field of the *SignOn* form. (Check the top right of the screen to see if the date and time are set. If they are not, follow the example shown in the *SignOn* form when you enter the date and time.)

6. Press Go.

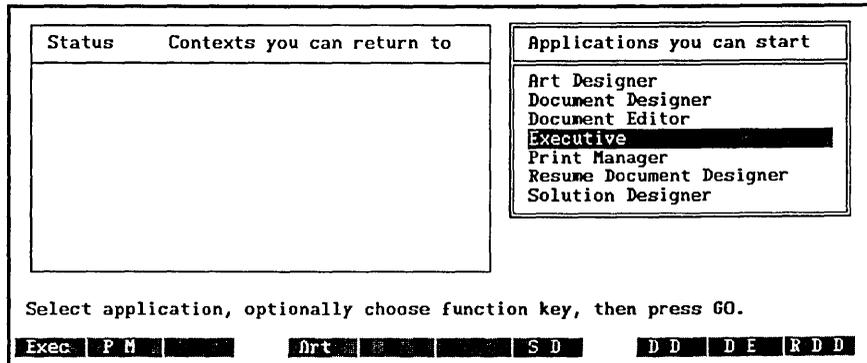
☞ On some workstations, you can sign on by simply pressing **Go**. Try this if you do not have a user name. This does not work, however, if your workstation has been customized to prevent access by unauthorized users.

### Signing On to the Executive

Some user names are set up to start the Executive directly after the *SignOn* procedure. When this is the case, the Executive screen, shown later in Figure 1-3, appears immediately after you have signed on. Any other applications you need to use are then started from the Executive.

### Starting the Executive With Context Manager

Many user names are set up to start the Context Manager, as shown in Figure 1-2. The Context Manager can be customized, depending on what applications are available on your workstation, so the Context Manager screen you use may look slightly different.



493-002

Figure 1-2. Context Manager Screen

When using Context Manager, you start the Executive as follows:

1. Position the highlight on *Executive*, in the “Applications You Can Start” box, as shown in Figure 1-2.

Use **Return** or **Down Arrow** to move the highlight down; use **Up Arrow** to move the highlight up.

2. Press **Go**.

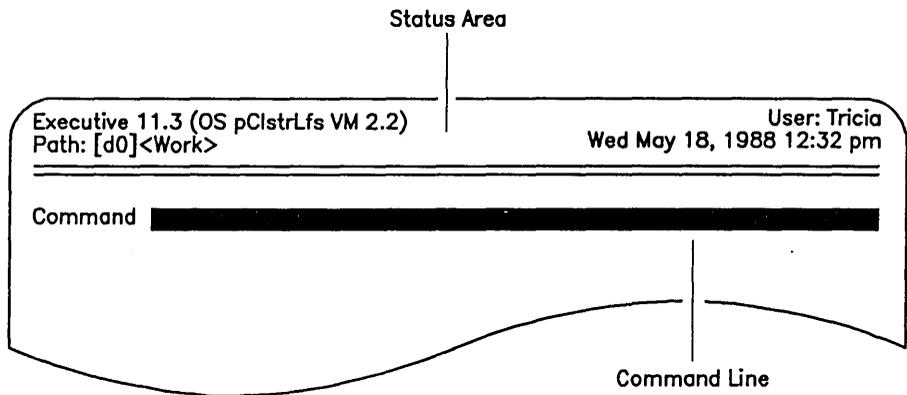
### **Signing On Into Some Other Application**

User names can be set up to start an application other than the Executive or Context Manager. This is convenient when you use one application, such as Document Designer or Solution Designer, for most of your work. If this happens, try the following steps to start the Executive on your workstation:

1. Press **Action-Go** to see if Context Manager is installed. If it is, start the Executive from the Context Manager screen, as described above.
2. If nothing happens when you press **Action-Go**, press **Finish** to exit the application. In many cases, the Executive is started when you exit an application.
3. If the *SignOn* screen appears when you exit the application, your user name has been set up to allow access to only that one application. You can not use the Executive when you are signed on with a user name of this type.

## The Executive Screen

Notice the layout of the Executive screen pictured in Figure 1-3.



493.1-3

Figure 1-3. Executive Screen

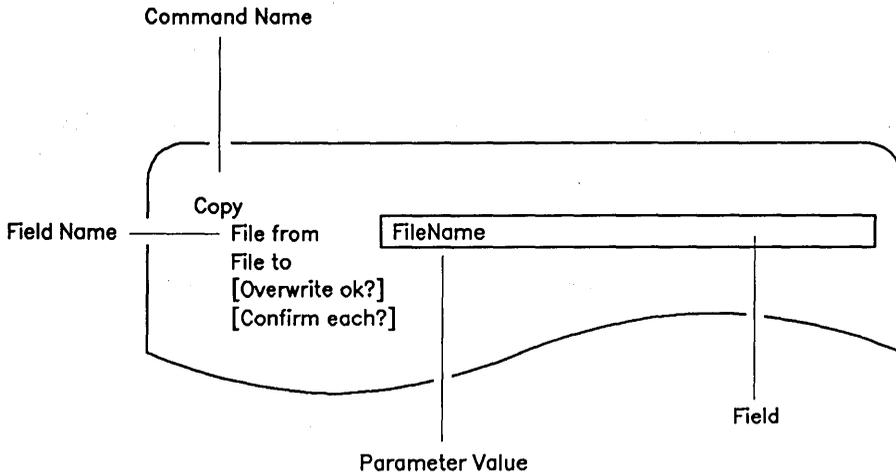
The *status area* displays the following information about your workstation:

- name and version number of the Executive
- name and version number of the operating system
- user name you signed on with
- default path (explained later in this chapter)
- date and time

The *Command line* is the Executive's "ready" prompt. When the command line appears, you can issue commands to the Executive. The procedure for issuing commands is described later in this chapter.

## Using Command Forms

When you issue a command, you use a *command form* to supply information to the Executive. Each command has its own command form. For example, if you want to copy a file, you must specify which file you want to copy. Notice the layout of the **Copy** command form in Figure 1-4.



493.1-4

**Figure 1-4. Command Form**

- A *field* is the line where you supply information about how you want the command to be carried out. All fields start out blank.
- A *field name* tells you what kind of information to supply in each field.
- A *parameter value* is the information you supply by typing characters or words into a field.

There are three different types of fields. Certain conventions are used in field names to help you determine what type of parameter value to enter. Field types and field name conventions are described below.

## Mandatory Fields

Most command forms contain *mandatory fields*, which you must fill in before you can execute the command. Field names for mandatory fields are *not* surrounded by brackets. In the **Copy** command form, the first and second fields, *File from* and *File to*, are mandatory (see Figure 1-4).

If you leave a mandatory field blank, a message similar to this appears when you attempt to execute the command:

Parameter on line 1 is invalid or missing

## Optional Fields

Most command forms also contain *optional fields*. Field names for optional fields are surrounded by square brackets ([ ]). In the **Copy** command form, *[Overwrite ok?]* and *[Confirm each?]* are optional fields (see Figure 1-4).

When you leave an optional field blank, the Executive uses a *default value*. A default is a predetermined value that allows the command to be executed in one particular way. The *Executive Manual* lists the default values for each command.

Optional fields may not always be optional on your own workstation, though. For example, the *[Password]* field, which is present in many command forms, is always optional because a password itself is an optional feature on your workstation. Depending on how your workstation is set up, however, a password may be required for you to carry out a command.

## Query Fields

Some field names appear as questions and define *query fields*. Field names for query fields end with a question mark (?). The only possible response to a query field is **Yes** or **No** (Y or N also work).

Query fields are always optional and, with very few exceptions, the default value is **No**. In the **Copy** command form, *[Overwrite ok?]* and *[Confirm each?]* are query fields (see Figure 1-4).

## How to Issue a Command

The procedure for issuing commands is always the same, as described in the following steps:

1. Type the name of the command on the Command line, as shown in the following example:

Command Copy

2. Press **Return** to display the command form.

Copy

File from

File to

[Overwrite ok?]

[Confirm each?]

Cursor

493.1-A

3. Position the cursor on the first field you want to fill in.  
To move the cursor down, press **Return** or **Down Arrow**.  
To move the cursor up, press **Up Arrow**.
4. Type the parameter value for that field; then, move on to the next field.

The command is not executing at this point, so it's all right to move the cursor, make corrections, or change parameter values. To move the cursor from side to side, use **Left Arrow** and **Right Arrow** (these keys only work when there are characters typed in a field). To delete characters to the left of the cursor, press **Backspace**. To delete the character where the cursor is positioned, press **Delete**.

 To delete all characters in a field, press **Code-Delete**.

5. Press **Go** to execute the command. (It does not matter where the cursor is positioned when you press **Go**.)

*NOTE: A few commands have no command form. When this is the case, you are prompted to press **Go** immediately after pressing **Return**.*

## Abbreviating Command Names

Many commands have long names to describe their functions. You do not need to type the entire command name when you issue most commands.

To abbreviate a command name, type as much of it as is necessary to make it different from any other command name. Most command names can be abbreviated in several different ways, as shown in Table 1-1. There are no set abbreviations because it depends on the other commands on your workstation. Table 1-1 provides suggestions for several of the longer command names.

**Table 1-1. Command Name Abbreviations**

<b>Command Name</b>	<b>Possible Abbreviation</b>
<b>Backup Volume</b>	<b>B V</b>
<b>Create Directory</b>	<b>C D or Cre Dir</b>
<b>Delete</b>	<b>Del</b>
<b>IVolume</b>	<b>IV or IVol</b>
<b>Logout</b>	<b>Logo</b>
<b>Remove Directory</b>	<b>R D or Rem Dir</b>
<b>Rename</b>	<b>Ren</b>
<b>Selective Backup</b>	<b>S B or Sel Back</b>
<b>Volume Status</b>	<b>V S or Vol</b>

If more than one command begins with the letters you type, the Executive displays a list of those commands. For example, if you type **Cre** for the **Create Directory** command, a list similar to the one below is displayed:

Commands are:

Create Configuration File  
Create Directory

Create File  
Create Message File

Compare the command names; then, type enough of the command name to make it unique, for example, **Cre D** for **Create Directory**.

When command names contain more than one word, each word can be abbreviated by separating word portions with a space. (See Table 1-1.)

## Using the File System

A *file system* is all the information contained on your workstation's disks. Whenever you use your workstation, you are using the file system.

The information on your disks is organized in *files*. Some files contain programs, others contain the documents, spreadsheets, and pictures you create with applications. Files are stored in *directories*, which are subdivisions of disk space for storing groups of similar files. Directories and the files they contain are stored on *volumes*, which are the disks located inside your workstation. Figure 1-5 gives you an idea of how files and directories are organized on a disk.

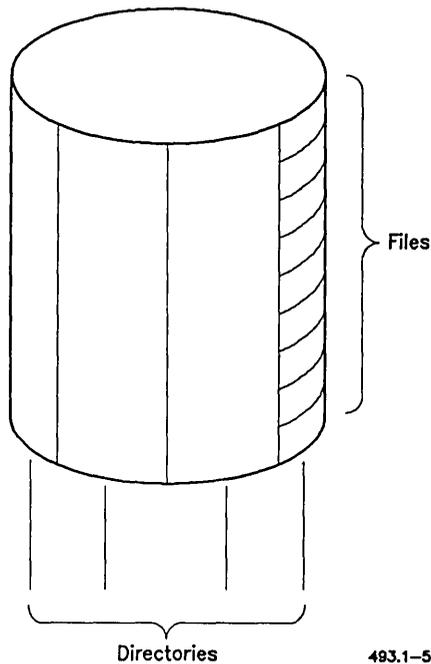
### File Specifications

Each file has a name that is unique on your workstation. This unique name is called a *file specification*. It is made up of the volume (disk) and directory where the file is stored, as well as the name of the file itself. File specifications consist of three parts and are written in the following format:

*[Volume]<Directory>FileName*

For example:

[d0]<Work>Chapter1



**Figure 1-5. Organization of a Disk**

Each part of the file specification contains information about where the file is located:

- *[Volume]*

This identifies the volume where the file is located. The volume name is surrounded by square brackets ([ ]).

- *<Directory>*

This identifies the directory in which the file is stored. The directory name is surrounded by angle brackets (< >).

- *FileName*

This identifies the individual file itself. The file name is not surrounded by brackets.

When you execute a command, such as **Copy** or **Delete**, the file specification, which you type in the command form, supplies the Executive with information about where the file is located. The Executive then conducts a progressive search to locate the file. First it searches for the volume, then the directory, and finally the file itself.

There are several shortcuts for using file specifications, which are described below.

## Using the Path Setting

You don't always need to type lengthy file specifications into command forms. Notice the *path* setting at the top left of the status area (see Figure 1-3). It contains the volume and directory portions of a file specification. For example:

Path: [d0]<Work>

The path setting is your *default* volume and directory. This means that the path setting can be substituted for the volume and directory portions of a file specification. If the file you want to use is stored in your default path, you only need to type the file name itself in the command form. For example:

```
Delete
File list      Chapter1_____
[Confirm each?] _____
```

The Executive automatically adds the default volume and directory in front of the file name to complete the file specification. For example, if your path setting is [d0]<Work>, the Executive assumes that the file specification for "Chapter1" is [d0]<Work>Chapter1. This is a great time saver for you.

## Overriding the Path Setting

To use a file that is not stored in your default path, you override the path setting by typing a file specification in the command form. For example:

```
Delete
  File list      [d0]<MoreWork>Proposal_____
  [Confirm each?] _____
```

The Executive then ignores the path setting and uses the volume and directory that you typed in the file specification. File specifications that are explicitly typed in command forms always override the default path setting.

You can change your path setting with the **Path** command; see “Path Setting,” in Chapter 2.

## Using Partial File Specifications

You can use partial file specifications in command forms. For example, if a file is located on your default volume but not in your default directory, you can abbreviate the file specification as shown below:

```
Delete
  File list      <Work>Chapter1_____
  [Confirm each?] _____
```

Remember the following guidelines as you begin to use file specifications:

- Use *FileName* alone when a file is stored in your default path.
- Use *<Directory>FileName* when a file is located on your default volume but is not in your default directory.
- Use *[Volume]<Directory>FileName* when a file is not located on your default volume (for example, if it is located on a floppy diskette or a disk at the master).

## Using Passwords

Many workstations and masters are password protected. A *password* is assigned to a disk when it is initialized to prevent unauthorized people from using it (see “Initializing Disks,” in Chapter 2).

When you sign on to your workstation, you have the option of entering a password. The password that you enter when you sign on becomes your default password. This means that the password is in effect for all commands you execute until you change it or remove it with the **Path** command (see “Path Setting,” in Chapter 2), or until you log out (see “Exiting,” in Chapter 2).

Once you have signed on with a valid password, you do not need to enter it again to execute commands. This means that although many command forms contain a *[Password]* field, you do not need to reenter the password for each command.

You may, however, need to enter a password to use a disk on the master, which probably has a different password than your own workstation. Also, if you routinely use disks at the master, you may be using a password that only allows limited access. In this case, you may not be able to execute certain commands with your SignOn password.

To find out how passwords are implemented at your work place, ask your system administrator. Refer to the *CTOS System Administrator's Guide* for more information about passwords.

## Using CT-Net Nodes

Some clusters are connected to other clusters with CT-Net. *CT-Net* is a networking product that provides master-to-master communications. From your cluster workstation, you can communicate with any master in your network.

Each master in a CT-Net network has a *node name*. You can use files that are stored at other masters in your network by using a node name in the file specification. Node names are surrounded by braces ({ }) and precede [*Volume*], as shown below:

*{Node}[Volume]<Directory>FileName*

*{Node}* can also be included in your default path setting (see “Path Setting,” in Chapter 2).

Check with your system administrator to find out if CT-Net is installed on your cluster.

### **Learning More About Your File System**

Each workstation has its own unique file system. To learn more about the volumes, directories, and files that make up your file system, see “Listing Directories” and “Listing Files,” in Chapter 2. See also “File System,” in Chapter 2, for detailed information about file system rules and conventions.



## Tasks You Can Perform

You can use Executive utilities to perform tasks such as,

Backing up disks	to store archive copies of your work for protection from damage or system failure
Cleaning up disks	to maximize disk storage space
Copying files	to make duplicate copies of your work
Creating directories	to create electronic file cabinets, in which you organize your files
Deleting files	to remove obsolete files from your disks
Exiting	to finish out of the Executive application
Initializing disks	to prepare disks for use on your workstation
Installing software	to add or update applications
Listing directories	to find out what directories are available on your disks
Listing files	to find out what files are stored in your directories
Moving files	to move files to different directories

Path setting	to change your default path
Printing	to print ASCII text files
Renaming files	to change the names of files
Screen setting	to change the characteristics of your screen

Procedures and commands for performing these tasks are included on the following pages, in alphabetical order as they are listed above.

## Special Features

The following features make the Executive a powerful tool for performing the tasks described above:

* and ? wild cards	for executing commands on more than one file
macros	for performing more than one task with one command
a Redo key	for repeating the previous command

Instructions for using these features are also contained in this chapter. These features are intermingled, in alphabetical order, with the tasks mentioned earlier.

## More About the File System

A complete guide to the file system is also included (in alphabetical order, amid the tasks and features) in this chapter. It contains a great deal more information than that which is covered in Chapter 1, including rules for naming volumes, directories, and files; disk naming conventions; information about [*Sys*] volume and the <*Sys*> directory; and how to use files on the master.

## Where to Go From Here

Begin anywhere you'd like, to look up a special feature or find out how to perform a specific task. If you'd like a suggestion, take a tour of your file system with the following sections:

1. Read "Listing Directories," and perform the procedures to find out about the directories on your disks.
2. Then, read "\* and ? Wild Cards" and "Listing Files." Perform the procedures for experimenting with wild cards, which prepare you for using many other Executive commands.
3. When you have finished the sections named above, read "File System" to become thoroughly familiar with your workstation.

You will find that this chapter contains useful theory, procedures, and tips for using the Executive efficiently. When you need information contained elsewhere in this guide or in another manual, you are referred there.

## \* and ? Wild Cards

---

Wild cards are one of the most powerful features of the Executive. A *wild card* is a special character that you use in command forms to substitute for all or part of a file or directory name. When you use a wild card, the Executive searches for every name that matches the characters you have typed, except for the wild card. You can use wild cards to locate files or directories when you can't remember exactly what you've named them, to reduce typing in command forms, and to execute a command on a group of files.

The wild card characters are asterisk (\*) and question mark (?). The \* wild card matches zero to all characters in a file or directory name; the ? wild card matches only one character. For example, "ab\*z" matches all file names beginning with "ab" and ending with "z" regardless of how many characters are in between. In contrast, "ab?d" matches only those file names containing exactly one character between "ab" and "d".

Wild cards are easy to understand once you begin to use them. The following exercises demonstrate a few techniques for using wild cards with the Executive. The **Files** command, used in the exercises, displays the names of files that are stored on your workstation. See "Listing Files," later in this chapter, for more information about the **Files** command.

### Practicing With Wild Cards

The following procedures use files that are contained in *[Sys]<Sys>* on most workstations (see "File System," later in this chapter). If your workstation has been customized, results may vary from the examples included here.

#### Using the \* Wild Card

The \* wild card matches a string of characters in a file or directory name. The following exercises, using the **Files** command, display groups of file names that the Executive locates with the \* wild card.

**Displaying All Files in a Directory**

You can use the \* wild card to specify all files in a directory.

1. On the Command line, type **Files** and press **Return** to display the command form.
2. Fill in the command form using the \* wild card, as shown below:

Files	
[File list]	[Sys]<Sys>* _____
[Details?]	_____
[Print file]	_____
[Suppress sort?]	_____
[Max columns]	_____

3. Press **Go**.

When you use the \* wild card in this manner, it matches every file name. Notice the file names that are displayed on the screen; many of them have suffixes such as “.run,” which you will use in the next procedure.

4. Press **Next Page**, as prompted, to display all the files.

**Displaying Groups of Files**

You can use the \* wild card to match a selected group of file names.

1. On the Command line, type **Files** and press **Return**.

## \* and ? Wild Cards

(continued)

2. Fill in the command form, as shown below:

Files  
[File list]                    [Sys]<Sys>\*.run \_\_\_\_\_  
[Details?]                    \_\_\_\_\_  
[Print file]                   \_\_\_\_\_  
[Suppress sort?]             \_\_\_\_\_  
[Max columns]                \_\_\_\_\_

3. Press **Go**.

When you use the \* wild card in this manner, it matches every file name ending with the characters “.run”. (By the way, “.run” files are the programs you use on your workstation.)

4. Press **Next Page**, as prompted, to display all the files.

## Using the ? Wild Card

The ? wild card matches exactly one character in a file or directory name. The following exercise demonstrates how to use the ? wild card.

1. On the Command line, type **Files** and press **Return**.
2. Fill in the command form using the ? wild card, as shown below:

Files  
[File list]                    [Sys]<Sys>Request.? .sys \_\_\_\_\_  
[Details?]                    \_\_\_\_\_  
[Print file]                   \_\_\_\_\_  
[Suppress sort?]             \_\_\_\_\_  
[Max columns]                \_\_\_\_\_

3. Press **Go**.

The ? wild card matches every file name that contains one, and only one, character between the periods.



Figure 2-1 shows you how various wild cards and character combinations would match a group of file names.

File Names ↓	Wild Card Patterns as Typed in the Command Form				
	Da*	*.ltr	*.memo	*.???	Davi?.*
.memo			X		
.ltr		X		X	
Davies.ltr	X	X		X	
Davis.ltr	X	X		X	X
Davis.memo	X		X		X
Dzinsky.memo			X		

493.2-1

Figure 2-1. Wild Card Matches

## Using Wild Cards in Volume and Directory Names

Wild cards cannot be used in volume or device names. However, both \* and ? wild cards can be used in directory names. For example, <\*88> specifies every directory name ending with the number "88."

Use <\*> to specify every directory. For example, <\*>\* specifies every file in every directory on the default volume, as shown below:

```
Files
[File list]      <*>* _____
[Details?]      _____
[Print file]     _____
[Suppress sort?] _____
[Max columns]   _____
```

## Preventing Disasters

Take special care when using wild cards to delete files. For example, specifying `<*>*` (shown above) with the **Delete** command would delete *every file on your disk*.

Such an accident can happen if you inadvertently type a space in a file specification that contains wild cards. The following example shows the *correct* way to enter a file specification containing wild cards. Notice there is no space after `<*>*`.

Delete

File list

`<*>*.memo`

---

[Confirm each?]

To prevent unexpected results when using wild cards, always double check your command form entries before pressing **Go**.

See “Cleaning Up a Disk” and “Deleting Files,” later in this chapter, for more information about the **Delete** command.

☞ If you are hesitant to delete groups of files with wild cards, first try testing your wild card entries with the **Files** command. This displays the group of files that will be deleted if you use the same wild card entry with the **Delete** command.

## Wild Card Expansion in Command Forms

When using certain commands, such as **Delete** or **LCopy**, wild cards are *expanded* in the command form. This means that the matched file names are displayed within the parameter field soon after you press **Return** or **Go**. Usually, though, the field is too small to contain the entire list. In this case, the beginning and end of the list is displayed, separated by an ellipsis (...), as shown in the following example:

```
Delete
File list      File1 File2 File3 File...ile8 File9 File10 File11
[Confirm each?] _____
```

If the list of files is long, the expansion process can take up to several seconds. If no file names are matched by the wild cards, the field becomes blank after you press **Return** or **Go**.

 Press **Return**, rather than **Go**, when you have completed a field containing wild cards. By doing so, you can determine if the wild cards match the file names you expected. This is particularly helpful when using the **Delete** command.

### Theory of Backups

Backups are performed to protect the system against disk failure, sabotage, or other disasters. It is a good idea to perform backups on a daily basis. The following method works well for many users:

1. Once a week, perform a complete backup of each disk on the system.
2. Each day between complete backups, perform an incremental backup of the files that have been added or modified since the complete backup took place.

When you perform backups, the specified files are written to an *archive file* on floppy diskettes, a hard disk, or tape. Archive files combine the contents of many files into one large file in a compressed format. Archive files are faster to create than copying each file individually and take up less space on the archive disks or tapes. (The disks or tapes that you use for backups are called *archive media*.)

Should you ever need to restore an archive file back onto your disk, you use a special command, called **Restore**, which recreates each individual file from the contents of the archive file. You restore the complete backup first; then you restore the incremental backup, which updates any files that you added or modified after the complete backup was performed.

Backups are usually stored on floppy diskettes or tapes because they can be removed from the system and securely stored. Many work places provide fireproof cabinets or off-site storage for this purpose.

Backups can also be stored on a hard disk. For example, disks on cluster workstations can be backed up to a disk on the master. Although this provides protection against individual disk failure, it is not adequate for protecting against disasters, such as fire or water damage.

### Archive Commands

The Executive provides a variety of archive commands, which are briefly described below. These commands can be used in many different ways. See the *Executive Manual* for more information about the archive commands and for alternatives to the methods described here.

- Backup Volume**      Use this command to back up the contents of an entire disk to floppy diskettes or a hard disk. A procedure for using this command is included in this section.
- Selective Backup**    Use this command to perform incremental backups, as described later in this section. This command is also used to backup individual directories or groups of files.
- Restore**              Use this command to restore an archive file back onto a disk.

Two other backup commands, **Daily Backup** and **Weekly Backup**, are also provided with the Executive application. They provide a simplified command form, keep track of the incremental date, and optionally cleanup the disk before executing the backup. Check with your system administrator to find out if these commands are implemented at your work place.

Tape backup commands are also available for systems that have tape drives. **Tape Backup Volume**, **Tape Selective Backup**, **Tape Restore**, **Tape Daily Backup**, and **Tape Weekly Backup** perform the same functions as the commands described above; however, they backup to or restore from tapes (either quarter-inch cartridge or half-inch tape) instead of disks. Tape utilities are not included when the Executive is installed; they must be installed separately, as described in the Release Notice for Standard Software. See the *CTOS System Administrator's Guide* for information about using tape drives.

## How to Back Up an Entire Disk

The following steps describe how to backup an entire disk.

Before you begin:

- You will need several initialized floppy diskettes (see “Initializing Disks,” later in this chapter). The quantity you need depends on how much disk space has been used on the disk you intend to back up (see “Listing Directories,” later in this chapter.) In general, allow one floppy per 1,000 sectors.
- Be prepared with labels and a felt-tip pen so that you can label each diskette. The first time you use the diskette set, label each diskette with the volume or device name, the date, and the type of backup (for example, “Complete Backup”), and a sequential number (beginning with 1) to signify the order in which the diskettes are used. Then, each time you reuse the backup set, change the date accordingly.
- Delete any extraneous files from the disk (see “Cleaning Up a Disk,” later in this chapter).
- If you are backing up a master, you might want to disable the cluster to prevent any files from being changed during the backup. (See the **Disable Cluster** command in the *Executive Manual*.)

The following steps describe the backup procedure.

1. On the Command line, type **Backup Volume** and press **Return** to display the command form.
2. Fill in the fields described below:

*Volume or device name.* Enter the volume or device name of the disk you want to back up.

*[Volume or device password].* If your disk is password protected, enter the volume password in this field.

*[Archive file].* Enter {f0}<Sys> in this field.

For example:

Backup Volume	
Volume or device name	d1
[Volume or device password]	####
[Incremental from]	
[Suppress backup?]	
[Suppress verification?]	
[Archive file]	[f0]<Sys>
[Delete existing archive file?]	
[Log file]	
[Display structures?]	

3. *Optional step.* Fill in additional fields according to your needs.

The **Backup Volume** command form contains many optional fields; however, you do not need to fill in all the optional fields to execute this command. Two commonly used options, which you may find useful, are described below. (See the *Executive Manual* for a detailed description of all the optional fields.)

- *[Suppress verification?]*. Volume file structures are automatically verified after the backup is performed. If there is something wrong with the file system, such as unreadable files or corrupted file headers, you will be informed. If you do not want the file structures verified, specify **Yes** in this field. This saves time when performing a backup but does not check the integrity of the disk.
- *[Delete existing archive file?]*. If you are reusing the backup diskette set, specify **Yes** in this field. The new backup will then overwrite the old backup that is stored on the diskettes. Use the diskettes in sequential order, as they are numbered.

4. Press **Go** to begin the command.

You are prompted as follows:

```
Please mount archive file [f0]<sys>.01
```

Insert the first diskette into floppy drive [f0]; then press **Go** to begin the backup.

☞ The following prompt appears when your screen becomes full:

Press **NEXT PAGE** or **SCROLL UP** to continue

The backup then stops until you respond to the prompt. To eliminate this pause, press **Code-Next Page** after the backup begins (see “Screen Setting,” later in this chapter).

5. When prompted, change the diskette and press **Go** to continue the backup.

As each diskette becomes full, you are prompted to mount another diskette, for example:

Please mount archive file [f0]<Sys>.02

Continue changing diskettes and pressing **Go** until the backup is complete.

You are informed when the backup is complete.

### How to Perform an Incremental Backup

The following steps describe how to perform an incremental backup.

Before you begin:

- You will need several initialized floppy diskettes (see “Initializing Disks,” later in this chapter). *Do not* use the same set that you used for the complete backup. The quantity you need depends on how many files have been added or modified since the last complete backup. Try starting with about a third of the number you used for the complete backup. You will probably need additional diskettes as the week progresses.

- Label the diskettes as described earlier in the procedure for performing a complete backup.
- Delete any extraneous files from the disk (see “Cleaning Up a Disk,” later in this chapter).

The following steps describe the incremental backup procedure.

1. On the Command line, type **Selective Backup** and press **Return** to display the command form.
2. Fill in the fields described below:

*File list.* Enter the volume or device name, followed by `<*>*` (shown below). If your disk is password protected, append the volume password preceded by a circumflex (`^`), as shown in the example below (see “File System,” later in this chapter).

*[Incremental from].* Enter the date of the last complete volume backup.

*[Archive file].* Enter `[f0]<Sys>` in this field.

For example:

Selective Backup	
File list	<code>[d1]&lt;*&gt;^#####</code>
[Incremental from]	<code>4/4/88</code>
[Confirm each?]	
[Archive file]	<code>[f0]&lt;Sys&gt;</code>
[Delete existing archive file?]	
[Log file]	

3. *Optional step.* Fill in additional fields according to your needs.

The **Selective Backup** command form contains many optional fields; however, you do not need to fill in all the optional fields to perform this command. A commonly used option, which you may find useful, is described below. (See the *Executive Manual* for a detailed description of the all the optional fields.)

[Delete existing archive file?]. If you are reusing the backup diskette set, specify **Yes** in this field. The new backup will then overwrite the old backup that is stored on the diskettes. Use the diskettes in sequential order, as they are numbered.

4. Press **Go** to begin the command.

You are prompted as follows:

```
Please mount archive file [f0]<sys>.01
```

Insert the first diskette into floppy drive [f0]; then press **Go** to begin the backup.

5. When prompted, change the diskette and press **Go** to continue the backup.

As each diskette becomes full, you are prompted to mount another diskette, for example

```
Please mount archive file [f0]<Sys>.02
```

Continue changing diskettes and pressing **Go** until the backup is complete.

You are informed when the backup is complete.

### Restoring Archive Files

The **Restore** command restores the contents of an archive file back onto a disk. It is most commonly used to restore the contents of an entire disk; however, you can also restore individual directories and files. The **Restore** command also provides an option for listing the contents of an archive file; by using this option, you can easily locate the files you need to restore.

Parameter values for the **Restore** command depend on the name of the archive file you are restoring and the particular files you want to restore. See the *Executive Manual* for detailed information about the **Restore** command.

## Cleaning Up a Disk

---

### Why Do I Need to Clean Up My Disk?

Many applications create temporary files that are no longer needed once you have saved your work and finished the application. To keep them separate from your own files, temporary files are stored in special purpose *dollar sign* directories. Dollar sign directories have names such as `<$000>`, `<$001>`, `<$002>`, and so on, which do not appear when you execute **Volume Status** unless you specifically ask to see them (see the *Executive Manual*.) To maximize disk storage space for your own work, you can delete files in the dollar sign directories on a regular basis.

### How to Clean Up a Disk

The following steps describe how to delete temporary files from the dollar sign directories. You do not need to be concerned about removing files that are still needed; if a file is in use, it will not be deleted.

1. On the Command line, type **Delete** and press **Return** to display the command form.
2. Fill in the *File list* field, as shown below:

```
Delete
File list      <$*>*
[Confirm each?] _____
```

3. Double check the command form to make sure it is filled in *exactly* as shown.

**Caution:** Notice there is no space within the file specification. If you enter the file specification incorrectly, you could delete many files that you do not intend to delete. See “\* and ? Wild Cards,” earlier in this chapter.

4. Press **Return**; this expands the wild cards and displays a partial list of the files that will be deleted. Check the command form to make sure only dollar sign directory files are displayed, for example:

```
Delete
File list      <$000>00007>DdBIn...007>Submit0.tmp
[Confirm each?] _____
```

At this point, you can optionally enter **Yes** in the *[Confirm each?]* field. By doing so, you will be prompted for confirmation before each file is deleted. Although this makes the disk cleanup procedure take longer, it is an additional safeguard against deleting unexpected files.

4. Press **Go** to execute the command.

Watch carefully as the command begins deleting files. If you notice that unexpected files are being deleted, press **Action-Finish** immediately to terminate the command.

 You can quickly create a macro for the disk cleanup procedure. Macros can save time and reduce errors for frequently used procedures. To learn how to create a macro, see “Macros,” later in this chapter.

See “Deleting Files,” later in this chapter, for more information about the **Delete** command. See the documentation for your other applications to find out about additional files that can be deleted regularly.

## Copying Files

---

You can copy files on your own workstation, to and from the master, and to and from remote CT-Net nodes. You use file specifications to designate what file you want to copy and where you want it copied. (See “Using the File System,” in Chapter 1, for information about file specifications.)

### How to Copy a File

The following procedure describes how to copy files.

1. On the Command line, type **Copy** and press **Return** to display the command form.
2. Fill in the fields described below, using file specifications that pertain to your own workstation.

*File from* is for the file you want to copy.

*File to* is for the duplicate copy you will be making.

For example:

```
Copy
File from      [f0]<Work>FirstDraft _____
File to       [d0]<MyDir>FirstDraft _____
[Overwrite ok?] _____
[Confirm each?] _____
```

 You can give the copy a different name from the original file by specifying a different name in the *File to* field.

3. *Optional step.* Fill in the remaining fields according to your needs.

The **Copy** command form contains two optional fields, which are described below:

- *[Overwrite ok?]*. *Overwrite* means to replace the contents of an existing file, which destroys what was originally there. The Executive does not automatically overwrite existing files.

If, however, you know in advance that you do want to overwrite a file, you can specify **Yes** in *[Overwrite ok?]*. If you leave this field blank, you will be prompted to confirm or deny overwriting the file. To prevent any overwriting, specify **No** in this field.

- *[Confirm each?]*. If you are using wild cards and are not sure you want to copy all matched files, specify **Yes** in this field. The Executive then prompts you for confirmation before copying each file that matches the wild cards.

4. Press **Go** to execute the command.

If the Executive requires confirmation before copying a file, a prompt (similar to the one below) is displayed. If you used wild cards, this can happen several times during the command:

File *FileName* already exists. Overwrite?  
(Press **GO** to continue, **CANCEL** to deny, **FINISH** to exit)

Press **Go** to copy the file, **Cancel** to go on to the next file, or **Finish** to terminate the command.

### Using Wild Cards to Copy Files

The **Copy** command is especially well suited to wild cards (see “Wild Cards,” earlier in this chapter). By using wild cards, you can copy many files while only executing the command once. The following examples show you a few ways to use wild cards with the **Copy** command.

You can copy all the files in one directory to another directory. The following example copies all files in the *<Memos>* directory on a floppy diskette to your default path.

```
Copy
File from      [f0]<Memos>*
File to       *
```

## Copying Files

(continued)

You can use file suffixes (or prefixes) to copy groups of files with wild cards. The following example copies all files ending with “.boss” from your default path to a the <Memos> directory on a floppy diskette.

```
Copy
File from      *.boss
File to        [f0]<Memos>*.boss
```

You can also add or change a file suffix (or prefix) when you copy with wild cards. The following example adds a suffix to every file name that is copied, while the portion matched by the wild cards remains the same.

```
Copy
File from      Chapter*
File to        [f0]<Memos>Chapter*.done
```

### Invalid Use of Wild Cards With the Copy Command

Keep in mind the following rule when using wild cards with the **Copy** command: the number and placement of wild cards in the *File from* and *File to* fields must match.

The following example *does not* adhere to this rule; two wild cards are used in the *File from* field, while only one wild card is used in the *File to* field.

```
Copy
File from      [f0]<*>*
File to        *
```

You might think that the above example would copy everything on a floppy to your default path, but it doesn't work that way. To copy all files in all directories, you must match the directory specification in both the *File from* and *File to* fields, as shown below:

```
Copy
File from      [f0]<*>*
File to        <*>*
```

When you do this, however, directories with the same names must exist both on the disk you are copying from and the disk you are copying to. Remember this rule if wild cards don't seem to work as you expect them to.

## Copying Files on the Master

To copy a file to or from the master, type an exclamation point (!) in front of the master's volume or device name, as shown in the following example.

```
Copy
File from      [!d1]<Templates>FormLetter_____
File to        [d0]<Work>FormLetter_____
```

See "File System," later in this chapter, for more information about using disks on the master.

## Another Way to Copy Files

You can also copy files with the **LCopy** command. Some users prefer **LCopy** because it requires less typing in the command form for certain operations.

Notice the difference between the **Copy** and **LCopy** commands:

- With the **Copy** command, you need to type the file name separately in both the *File from* and *File to* fields, as shown below.

```
Copy
File from      [d0]<MyDir>Outline_____
File to        [!d2]<HisDir>Outline_____
[Overwrite ok?] _____
[Confirm each?] _____
```

- With the **LCopy** command, you only need to type the file name once. You specify the *from* volume and directory and the *to* volume and directory in separate fields, as shown below.

LCopy	Outline
File list	_____
[File prefix(s) from]	[d0]<MyDir>_____
[File prefix(s) to]	[!d2]<HisDir>_____
[File suffix(s)]	_____
[Overwrite ok?]	_____
[Confirm each?]	_____
[Continue on error?]	_____
[Verify copy?]	_____

The following pages show several ways in which you can use the **LCopy** command. See the *Executive Manual* for more detailed information.

## Using Wild Cards With the LCopy Command

When using wild cards with the **LCopy** command, sometimes it is necessary to use a full file specification in the *File list* field. For example, if the files you want to copy are not stored in your default path, you must enter the volume and directory in the *File list* field, rather than the *[File prefix(s) from]* field, as shown in the following example:

LCopy	
File list	[f0]<Dir>*_____
[File prefix(s) from]	_____
[File prefix(s) to]	[d0]<MyDir>_____
[File suffix(s)]	_____
[Overwrite ok?]	_____
[Confirm each?]	_____
[Continue on error?]	_____
[Verify copy?]	_____

This is because wild cards are expanded in the LCopy command form (see “\* and ? Wild Cards,” earlier in this chapter). Expansion takes place in your default path if you do not use a file specification in the *File list* field.

You can also use LCopy to copy all the files on a floppy diskette into a single directory on another disk, as shown in the following example. You cannot do this with the Copy command, as explained earlier in this chapter.

```

LCopy
File list           [f0]<*>*
[File prefix(s) from] _____
[File prefix(s) to] [d0]<MyDir>
[File suffix(s)]   _____
[Overwrite ok?]   _____
[Confirm each?]   _____
[Continue on error?] _____
[Verify copy?]    _____

```

### More Features of the LCopy Command

If the files you are copying are in your default path, you can leave the *[File prefix(s) from]* field blank. The path setting is the default value for this field. For example:

```

LCopy
File list           Outline
[File prefix(s) from] _____
[File prefix(s) to] [!d2]<HisDir>
[File suffix(s)]   _____
[Overwrite ok?]   _____
[Confirm each?]   _____
[Continue on error?] _____
[Verify copy?]    _____

```

## Copying Files

(continued)

Similarly, if you are copying a file from a different directory to your default path, you can leave the *[File prefix(s) to]* blank. For example:

```
LCopy
File list          Outline
[File prefix(s) from] [f0]<HomeWork>
[File prefix(s) to]
[File suffix(s)]
[Overwrite ok?]
[Confirm each?]
[Continue on error?]
[Verify copy?]
```

You can use either full or partial file specifications in the **LCopy** command form, as shown in the following example:

```
LCopy
File list          Outline
[File prefix(s) from] <MyDir>
[File prefix(s) to] [!d2]<HisDir>
[File suffix(s)]
[Overwrite ok?]
[Confirm each?]
[Continue on error?]
[Verify copy?]
```

The *[File prefix(s) from]* and *[File prefix(s) to]* fields are not limited to volume and directory specifications. You can use these fields to add or remove a file prefix (see “File System,” later in this chapter). The example below adds a file prefix; the original file is named “Outline”; the copy will be named “ManualOutline.”

```
LCopy
File list          Outline
[File prefix(s) from] <MyDir>
[File prefix(s) to] [!d2]<HisDir>Manual
[File suffix(s)]
[Overwrite ok?]
[Confirm each?]
[Continue on error?]
[Verify copy?]
```

When a volume (disk) is initialized, a directory named <Sys> is automatically created. <Sys> contains information about the disk and, if located on the [Sys] volume, many other files that are required for your workstation to function properly (see “File System” and “Initializing Disks,” later in this chapter).

When you install applications, other special purpose directories are sometimes created. Such directories should not be used for storing your working files. See the Release Notices for your applications to find out about directory restrictions.

To create new directories for your personal use, you use the **Create Directory** command. Some users keep all their files in one large directory, while others prefer several smaller directories. Most disks can accommodate many directories, so you can organize your directories and files in a manner that suits your needs. See “File System,” later in this chapter, for some suggestions about organizing your work. If you are using a disk on the master, check with your system administrator for any conventions or restrictions that apply to your work place.

The Executive is the only application you can use to create new directories. The directories you create with the Executive are used to store the files you create and work on with your other applications.

### How to Create a Directory

The following steps describe the procedure for creating a new directory on your default volume.

1. On the Command line, type **Create Directory** and press **Return** to display the command form.
2. Fill in the *New directory name(s)* field, as shown in the example, using a name that you choose for the new directory.

Directory names can be up to 12 characters long and can contain any combination of letters, numbers, periods (.), and hyphens (-). Do not use spaces in directory names. See “File System,” later in this chapter, for more information about restrictions that apply to directory names.

For example:

Create Directory	
New directory name(s)	<u>NewDir</u>
[Default protection level (default 15)]	_____
[Maximum number of files (default 75)]	_____
[Password for new directory]	_____
[Volume password]	_____

☞ Notice that you do not need to type angle brackets (< >) around the directory name. When used as individual entries in command forms, directory names do not require brackets, as they do when used in file specifications.

3. *Optional step.* Fill in the remaining fields according to your needs.

The **Create Directory** command contains several optional fields, which are described in detail in the *Executive Manual*. Two commonly used options are described below.

- *[Maximum number of files]*. Use this field to specify the size of your new directory (notice that the default value is 75 files). Once a directory is created, its size cannot be changed. If you want the directory to hold more (or less) than 75 files, enter a specific number, such as 200, in this field. This number is only an approximation, however; the actual number of files the directory will hold depends on the length of your file names. The Executive estimates 15 characters per file name. If most of your file names are shorter or longer than 15 characters, the directory will hold more or less, respectively, than the specified number of files.

- *[Volume password]*. In many cases, no password is required to create a directory. A password requirement, however, is a configurable option, which may be implemented on some workstations or masters.

4. Press **Go** to execute the command.

If a volume password is required, the following message appears:

Access denied (Error 219)

Check with your system administrator if you are not able to create a directory without the volume password.

After you create a new directory, you can verify its presence with the **Volume Status** command (see “Listing Directories,” later in this chapter).

To use a new directory, you can change your default path (see “Path Setting,” later in this chapter) or use the new directory name as part of a file specification.

### Creating a Directory on a Different Volume

You can create a directory that is not located on your default volume, for example, on a floppy diskette. To do so, you enter the volume or device name and a name for the new directory, as shown in the following example. Notice that the volume name is surrounded by square brackets.

Create Directory

New directory name(s)	[f0]NewDir _____
[Default protection level (default 15)]	_____
[Maximum number of files (default 75)]	_____
[Password for new directory]	_____
[Volume password]	_____

## Deleting Files

---

You can delete files that you no longer need with the **Delete** command. The **Delete** command is frequently used to minimize duplication on your disks and to reduce the “clutter” that occurs as you use applications.

In some situations, older files are archived (either backed up or copied) to floppy diskettes for permanent storage. They can then be deleted from the hard disk so that disk space can be reclaimed for future work. (You can identify the latest date that a file was worked on with the **Files** command; see “Listing Files,” later in this chapter.)

Many applications create temporary files, which can be deleted on a regular basis. See “Cleaning Up a Disk,” earlier in this chapter, to find out how to remove such files.

**Caution:** *Although Delete is an important and frequently used command, it must be used with care because deleted files are gone forever. Be particularly careful when you use wild cards with the Delete command (see “\* and ? Wild Cards,” earlier in this chapter).*

*Many applications provide functions or commands for deleting files, which make it easier to view the contents of each file on your screen before you delete it. Check the documentation for the applications you use to learn about alternatives to the Executive Delete command.*

The following procedure describes the steps for deleting a file.

1. On the Command line, type **Delete** and press **Return** to display the command form.
2. Fill in the *File list* field, as shown in the example, using the name of a file you want to delete.

You can use full or partial file specifications, including wild cards, in this field (see “\* and ? Wild Cards,” earlier in this chapter).

For example:

```
Delete
File list      [f0]<OldDir>ObsoleteFile_____
[Confirm each?] _____
```

3. *Optional step.* Fill in the optional field according to your needs.

The **Delete** command form contains only one optional field, which is described below:

*[Confirm each?]*. If you are using wild cards and are not sure you want to delete all matched files, specify **Yes** in this field. The Executive then prompts you for confirmation before deleting any file that matches the wild cards.

4. Press **Go** to execute the command.

If you specified **Yes** in the *[Confirm each?]* field, the following prompt appears for every file, before the delete operation is carried out:

```
Delete FileName?
(Press GO to continue, CANCEL to deny, FINISH to exit)
```

Press **Go** to delete the file, **Cancel** to proceed to the next file (the currently displayed file name will not be deleted), or **Finish** to terminate the command.

## Exiting

---

You can exit the Executive by *logging out*, which is the opposite of signing on. After logging out, you must sign on again before you can use your workstation.

If you log out while using Context Manager, you are informed if other applications are still running on your workstation. At that point, you can choose to cancel or proceed ahead with the logout operation. Logging out while applications are still running can cause you to lose some of your work. See *Getting Started with Your Workstation* or your Context Manager manual for more information about Context Manager.

If you are using Context Manager, you can exit the Executive without logging out. A special command, called **Finish Executive**, terminates the Executive application and returns you to the Context Manager screen. If you want to use the Executive again later, simply restart it with Context Manager.

### How to Log Out

Follow these steps to log out:

1. On the command line, type **Logout** (there is no command form).
2. Press **Go** to execute the command.

If applications are still running with Context Manager, the following prompt appears:

Warning: There are active contexts. Press GO to logout or CANCEL to deny.

At this point, you can press **Cancel** to terminate the logout operation or **Go** to log out. Remember that your work is not automatically saved when you log out.

## **How to Finish the Executive**

If you are using Context Manager, follow these steps to finish the Executive and return to the Context Manager screen.

1. On the command line, type **Finish Executive** (there is no command form).
2. Press **Go** to execute the command.

# File System

---

## File Specifications

File specifications contain the volume where the file is located, the directory where the file is located, and the name of the file itself.

In command forms, file specifications are written like this:

*[Volume]<Directory>FileName*

where

- *[Volume]* is the volume or device name surrounded by square brackets ([ ]). It identifies the disk where the file is located.
- *<Directory>* is the directory name surrounded by angle brackets (< >). It identifies the directory in which the file is stored.
- *FileName* is the name of an individual file. It is not surrounded by any type of brackets.

## Optional Parts of File Specifications

There are two optional parts to a file specification:

- *{Node}* is the name of a CT-Net node surrounded by braces ({ }). A *CT-Net node* is another master to which your cluster's master is connected. *{Node}* precedes *[Volume]* in a file specification.
- *^Password* is a volume, directory, or file password, preceded by a circumflex (^), which can be appended to the end of a file specification. When used in command forms, passwords appear as #####. Using passwords in file specifications is often necessary when using disks on the master or a CT-Net node.

A file specification that contains all five parts is written like this:

*{Node}[Volume]<Directory>FileName^Password*

## Using Partial File Specifications

Partial file specifications can take the following forms:

*<Directory>FileName*, if the file is located on the default volume, but is not in the default directory

*FileName* only, if the file is located in the default volume and directory

## Invalid File Specifications

If you start a file specification with a volume name, you must follow it with a directory and file name. For example, the following file specification is not valid:

*[Volume]FileName*

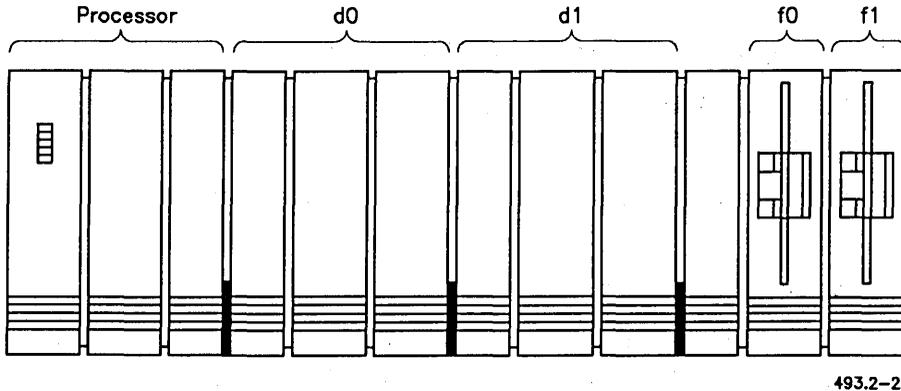
## Volume and Device Names

The storage devices on your workstation or Shared Resource Processor (SRP) can be called disks, devices, drives, or volumes. Sometimes the use of these terms can be confusing.

To understand them better, think of a floppy diskette. The magnetic material inside the covering of the floppy is the *disk*. The slot on your workstation into which you insert the floppy is the *drive*. Disks contain information; drives are mechanical devices that store and retrieve information to and from the disks. Hard disks and hard disk drives are similar, except they are permanently installed inside your workstation.

To function as a *volume*, a disk must be initialized, which makes it usable on your workstation (see "Initializing Disks," later in this chapter). When you initialize a disk, you give it a name, which becomes the volume name.

A *device* name indicates the position of each disk drive on your workstation. For example, if you have one floppy drive, its device name is *f0*; if you have a second floppy drive, its device name is *f1*. Hard disk drives are named *d0*, *d1*, and so on, as pictured in Figure 2-2.



**Figure 2-2. Device Names on a Workstation**

When you fill in command forms, you can use either the volume or device name to designate which disk you want to use. Many users prefer device names because they are shorter.

*NOTE: The device names shown in Figure 2-2 apply to prebuilt released versions of the CTOS and CTOS/VM operating systems. On customized operating system versions, device names may be different.*

## **[Sys]<Sys>**

Every workstation and SRP has a *[Sys]* disk. *[Sys]* is a pseudonym for the disk that contains the operating system and other files that are used when the system boots. (*[Sys]* also has an ordinary volume and device name; see “Volume and Device Names,” above).

The operating system is stored in the *<Sys>* directory on the *[Sys]* disk. Usually the *<Sys>* directory also contains application programs and configuration files. The following suffixes identify some of the files that reside in *[Sys]<Sys>*. Changing or removing any of these files will alter the way a workstations is set up or operates.

- *.bin* files are binary message files.
- *.config* or *.cnfg* files are configuration files, which contain information used by your applications. Configuration file-naming conventions can vary, but anything similar to “config” or “cnfg” is probably a configuration file.
- *.lib* files are libraries used by applications programs.
- *.run* files contain executable programs.
- *.sub* files are submit files.
- *.sys* files are operating systems, request files, or configuration files.
- *.user* files are user-name files.

## **Volume and Directory Naming Rules**

Volume and directory names can contain letters, numbers, periods (.), and hyphens (-) and be up to 12 characters long. *Do not use spaces in volume or directory names.* See “Restrictions in Volume, Directory, and File Names,” below, for a complete list of restrictions that apply to volume and directory names.

### File Naming Rules

File names can contain letters, numbers, periods (.), and hyphens (-) and be up to 50 characters long. For example:

Staff.memo

Book-Chap1

6-88.status

Do not, however, use a single period (.) or double periods (..) as a file name. *Do not use spaces in file names.*

See “Restrictions in Volume, Directory, and File Names,” below, for a complete list of restrictions that apply to file names.

### File Prefixes and Suffixes

File prefixes and suffixes are just what their names imply: the beginning and ending portions of a file name. Frequently a prefix or suffix is separated from the body of the file name by a period (.) or a hyphen (-).

The following file name is divided into three portions: a prefix, *Pubs*, defining a department; a body, *StaffMtg*, defining the contents of the file; and a suffix, *Renee*, defining the individual who created the file.

*Pubs.StaffMtg.Renee*

File suffixes and prefixes make it easy for you to locate groups of files with the **Files** command and to perform other commands, such as **Copy**, on groups of files. See “\* and ? Wild Cards,” earlier in this chapter, for information about performing commands on groups of files.

## Restrictions for Volume, Directory, and File Names

The following characters are used for special purposes by the operating system. *Do not* use them in volume, directory, or file names.

- asterisk (\*), which is a wild card character (see “\* and ? Wild Cards,” earlier in this chapter).
- at-symbol (@), which designates the contents of a file as a parameter value (see “Listing Files,” later in this chapter).
- backslash (\), which designates keyboard literals (see Chapter 3, “Troubleshooting”).
- circumflex (^), which is used to append a password to a file specification (see “File Specifications,” above).
- question mark (?), which is a wild card character (see “\* and ? Wild Cards,” earlier in this chapter).
- square brackets ([ or ]), angle brackets (< or >), and braces ({ or }), which are used in file specifications (see “File Specifications,” above).
- single quotation mark (’), which is used to identify parameter values containing spaces (see Chapter 3, “Troubleshooting”).
- slash (/), which is reserved for use with a new hierarchical file system.
- tilde (~), which is an exclusionary wild card (see the *Executive Manual*).

The following suffixes have special meanings in certain applications. *Do not* use them when naming your own files:

*-old*

When you save a file in Document Designer, the previous version (as it existed before your most recent editing session) is stored in a *-old* file.

---

<code>-new</code>	When you begin to edit a file with Document Designer, a temporary <code>-new</code> file is created.
<code>.ts</code>	Document Designer and the Editor create and use typescript ( <code>.ts</code> ) files to recover your work in case of power failure or other system problem.
<code>.tmp</code>	Many commands and applications create temporary ( <code>.tmp</code> ) files while they are executing.

See *Document Designer: System Administration* for more information about `-old`, `-new`, and `.ts` files; see “Disk Cleanup,” earlier in this chapter, for more information about `.tmp` files.

## Using Files on the Master

From your workstation, you have access to disks located on the master, so that you can use the directories and files that are stored there. To use a disk on the master, type an exclamation point (!) in front of the volume or device name, as shown in the following example:

```
[!d0]<Dir>FileName
```

This convention is frequently called a *bang*. For example, saying “bang Sys” means `[!Sys]`, which refers to the `[Sys]` disk on the master.

You only need to use the exclamation point if your own workstation and the master both have a volume or device with the same name. For example, if your workstation has a `[d0]` and the master also has a `[d0]`, you need to specify `[!d0]` to use that disk on the master. However, if you do not have a `[d1]` but the master does, simply typing `[d1]` gives you access to that disk on the master.

Similarly, if your workstation does not have any disks, you don’t need to type the exclamation point. Diskless workstations automatically use a disk on the master.

When disks are sold, they are completely blank and can potentially be used on many different computer systems. Before you can use a blank disk, it must be *initialized*, which prepares it for use on your workstation. You use the **IVolume** command to initialize disks. After disks are initialized, they become *valid volumes*, which means they can be recognized by the operating system.

Many users never need to initialize a hard disk, but initializing floppies is a common procedure. A procedure for initializing floppy diskettes is included in this section. For details about initializing hard disks, see the *Executive Manual* and the *CTOS System Administrator's Guide*.

### How to Initialize a Floppy Diskette

You use floppy diskettes to store backups of your work (see “Backing Up a Disk,” earlier in this chapter) or to copy files to and from your hard disks.

The following steps describe the procedure for initializing floppies.

1. On the Command line, type **IVolume** and press **Return** to display the command form.
2. Fill in the fields described below:

*Device name.* Enter the name of the floppy drive you will use to initialize the diskette. (If you have only one floppy drive, enter *f0*; if you have more than one floppy drive, see “File System,” earlier in this chapter, for a description of device names.)

*Volume name.* Choose a name for the volume and enter it here. Use any combination of letters, numbers, periods (.), and hyphens (-) up to twelve characters in length. (See “File System,” earlier in this chapter, for a complete list of volume name restrictions.)

For example:

Volume	
Device name	f0
[Device password]	
Volume name	Whatever
[Volume password]	
[System image (0)]	
[Log file (0)]	
[Crash file (0)]	
[Max. dirs.]	
[Max. files on vol]	
[Primary file headers only?]	
[Max. files in Sys Dir]	
[Sys Directory password]	
[Write protect Sys Dir?]	
[Suppress format of medium?]	
[Surface tests]	
[Debug=d, Password Encrypt=p]	
[Log file]	
[Extended floppy tracks?]	
[NGen hard disk type code]	
[Bad spots]	
[Bad spots]	
[Bad spots]	

Although this command form contains many fields, you do not need to fill them in to initialize a floppy. See the *Executive Manual* for a complete description of each field.

3. Press **Go** to begin the command.

You are prompted to insert a diskette as follows:

Please insert disk to be initialized.

(Press Go to confirm, Cancel to deny, or Finish to finish the utility)

Insert a blank diskette into the floppy drive you specified in the command form.

4. Press **Go** to execute the command.

It takes about three minutes to initialize a floppy. You are informed when initialization is complete.

- ☞ To initialize another diskette, press **F1**, which is the Redo key. The command form is redisplayed; simply press **Go** to reexecute the command. See “Redo,” later in this chapter, for more information.

### Recycling Floppy Diskettes

Old floppies that you no longer need can be completely erased and reused by reinitializing them with the **IVolume** command.

**Caution:** *Reinitializing a disk, as described below, destroys all data that is stored on the disk. So, although it is cost-effective to recycle obsolete diskettes, be careful to make sure the diskette does not contain important files before you reinitialize it.*

To reinitialize a floppy diskette, use the same procedure that you used to initialize a blank diskette (see “How to Initialize a Floppy Diskette,” above). However, to reduce the amount of time it takes to reinitialize, fill in two of the optional fields, as described below:

*[Suppress format of medium?]*. Enter **Yes**.

*[Surface tests]*. Enter **0** (zero).

The following example shows you how to make these entries in the **IVolume** command form.

IVolume	
Device name	f0
[Device password]	
Volume name	Whatever
[Volume password]	
[System image (0)]	
[Log file (0)]	
[Crash file (0)]	
[Max. dirs.]	
[Max. files on vol]	
[Primary file headers only?]	
[Max. files in Sys Dir]	
[Sys Directory password]	
[Write protect Sys Dir?]	
[Suppress format of medium?]	yes
[Surface tests]	0
[Debug=d, Password Encrypt=p]	
[Log file]	
[Extended floppy tracks?]	
[NGen hard disk type code]	
[Bad spots]	
[Bad spots]	
[Bad spots]	

After you press **Go** to begin reinitialization, a message is displayed:

```
Medium is a valid volume.
Volume Name:
Creation Date/Time:
Last Modification Date/Time:
Number of Free Sectors:
Number of Free File Headers:
Do you wish to ERASE this volume?
(Press GO to confirm, CANCEL to deny, or FINISH to finish the utility)
```

This message describes the diskette and gives you a chance to change your mind. (Remember, reinitialization destroys all data on the diskette).

Press **Go** to continue reinitialization, **Cancel** to use a different diskette, or **Finish** to terminate the command.

Software applications are supplied on floppy diskettes. Before you can use applications on your workstation, they must be installed with the **Install** command. This command copies files from the distribution diskettes, creates new commands, and performs other necessary functions.

The following procedure describes how to install an application.

Before you begin, you will need the following items for the application you plan to install:

- the *distribution media* (a diskette or set of diskettes that contains the software product)
- the *Release Notice* (a document that contains installation instructions and information about the product)

Follow these steps to install the application:

1. Read the Release Notice to determine if you are using the proper hardware and operating system software for the application, and to check for any special installation instructions.
2. Insert “Diskette 1 of *n*” (where *n* is the total number of diskettes) into floppy drive [*f0*].
3. On the Command line, type **Install** (you do not need to display the command form).
4. Press **Go** to begin the installation.

From this point on, the installation steps will vary. Many installations pause to prompt you for the following types of input:

- Do you want to change the path? The default path for installations is [*Sys*]*<Sys>*; you seldom need to change it.
- Do you want to start the application from Context Manager? Follow the onscreen instructions when such a message appears.

Whenever the installation pauses, input from you is required. In most cases, you only need to press **Go** to continue the installation. However, always read the screen and follow the instructions carefully before pressing **Go**. If the installation uses more than one diskette, you are prompted to insert each subsequent diskette.

You are informed when the installation is complete. Check the Release Notice to see if you must reboot the workstation before using the application. (In some cases, this information is provided on the screen at the end of the installation.)

## Listing Directories

---

To find out what directories are available on your disks, you use the **Volume Status** command. It displays the volume and device name of a disk, and a list of all the directories, along with their sizes and protection levels. You can also use **Volume Status** to find out how much storage space you have used on a disk.

Figure 2-3 shows you how information is displayed by the **Volume Status** command.

---

Status of volume	SampleDisk	Device	d0
Initialized	Mar 24, 1987	3:00 PM	
Last modified	July 25, 1988	10:38 AM	
	Unused	Total	Used
Sectors	15865	65536	75%
File headers	1034	2999	65%
Directory	Protection	Max Files	
DailyWork	15	350	
dd	15	75	
gps	15	100	
OldStuff	15	500	
Pictures	15	75	
Project-1	15	200	
Project-2	15	100	
Project-3	15	150	
spl	15	75	
Sys	5	750	
wp	15	75	

---

**Figure 2-3. Volume Status Screen Display**

## Different Kinds of Directories

All initialized disks contain a directory named `<Sys>`, as shown in Figure 2-3. See “File System,” earlier in this chapter, for a description of the `<Sys>` directory.

The directories named `<dd>`, `<gps>`, `<spl>`, and `<wp>`, shown in Figure 2-3, are examples of special purpose directories, which are created when you install applications. See “Creating Directories,” earlier in this chapter, for more information about special purpose directories.

Notice the other directory names listed in Figure 2-3. These are examples of directories that a user would create. You can create your own directories with the **Create Directory** command (see “Creating Directories,” earlier in this chapter).

## Disk Space Information

To find out how much storage space remains on your disk, check the *Sectors* and *File headers* entries, directly above the list of directory names.

*Sectors* displays how many unused sectors remain on the disk, the total number of sectors the disk contains, and the percentage of disk space being used. (To roughly translate sectors into megabytes, divide by 2,000. For example, in Figure 2-3, approximately 7 megabytes of storage space remain on a 32-megabyte disk.)

*File headers* displays the number of unused file headers remaining on the disk, the total number of file headers the disk contains, and the percentage of file headers being used.

See the *Executive Manual* for more detailed information about the **Volume Status** screen display.

## How to List Directories

The following procedure shows you how to execute the **Volume Status** command on your *[Sys]* volume (see “File System,” earlier in this chapter, for information about the *[Sys]* disk).

1. On the Command line, type **Volume Status** and press **Return** to display the command form.
2. Fill in the *[Volume or Device name]* field as shown below:

```
Volume Status
[Volume or Device name]   Sys _____
[Details?]                _____
[Print file]              _____
[Directory spec (default = '*')] _____
[Include temporary directories?] _____
```

Notice that you do not need to type square brackets ([ ]) around the volume or device name. When used as individual entries in command forms, volume and device names do not require brackets, as they do when used in file specifications.

Wild cards cannot be used in this field; the **Volume Status** command can only be executed on one disk at a time.

 Notice that this first field, along with all the others, is optional. The default for this field is your default volume. So, to execute **Volume Status** on your default volume, you do not need to fill in the command form. Simply type **Volume Status** on the Command line and press **Go**.

3. *Optional step.* Fill in the remaining fields according to your needs.

The remaining fields are seldom used when listing directories; however, one that you might find useful is described below. See the *Executive Manual* for details about the other fields.

[*Directory spec (default = '\*')*]. If you want to display a partial list of directories, you can type a directory specification in this field. You can use wild cards in this field, for example, *\*Project\**, to display information about all directories that match that wild card pattern (see “\* and ? Wild Cards,” earlier in this chapter.)

### 3. Press Go.

The **Volume Status** screen display appears (described in Figure 2-3).

## Listing Directories on the Master

You can display information about disks on the master by adding and exclamation point (!) in front of the volume or device name, as shown in the following example:

```

Volume Status
[Volume or Device name]      !d1
[Details?]                   _____
[Print file?]                 _____
[Directory spec (default = '*')] _____
[Include temporary directories?] _____
    
```

The disks on your workstation have the capacity for storing a large number of files. Many system and program files are already stored on your disks, and as you use applications, you quickly accumulate many more. (See “File System,” earlier in this chapter, for information about system and program files).

The **Files** command helps you keep track of your files when you can't remember exactly what you have named them or which directories they are stored in.

You can use the **Files** command to list all files in your default path, all files on a disk, a single file, or groups of files with wild cards. See “\* and ? Wild Cards,” earlier in this chapter, which covers several ways to use wild cards with the **Files** command.

### How to List Files

Before you begin, read “\* and ? Wild Cards,” earlier in this chapter, to learn how wild cards are used to identify groups of files.

The following procedure shows you how to list a group of files, using a wild card, and explains some command options.

1. On the Command line, type **Files** and press **Return** to display the command form.
2. Fill in the *[File list]* field as shown below:

```
Files
[File list]      [Sys]<Sys>*.txt
[Details?]      _____
[Print file]     _____
[Suppress sort?] _____
[Max columns]   _____
```

 Notice that the *[File list]* field, along with all the others, is optional. The default for this field is all files in your default directory. So, to list all files in your default directory, you do not need to fill in the command form. Simply type **Files** on the Command line and press **Go**.

3. *Optional step.* Fill in the remaining fields, according to your needs.

When using the **Files** command to locate groups of files, the remaining fields are seldom used. *[Details?]* and *[Suppress sort?]*, which you might use on occasion, are described below. The other fields are described later in this section.

- *[Details?]*. To display detailed information about a file (or group of files), enter **Yes** in this field. Detailed information includes the length of the file in characters and sectors, the date it was last modified, and the protection level. See the *Executive Manual* for more information.
- *[Suppress sort?]*. File names are displayed in alphabetical order, unless you enter **Yes** in this field. The command executes much faster if you suppress sorting when searching through a large number of files. You might want to suppress sorting when you are sure of the file name, but do not remember what directory it is in, for example, `<*>FileName`.

4. **Press Go.**

The Executive searches the `<Sys>` directory on your *[Sys]* volume for every file that ends with “.txt” and displays the list on the screen. If your default path is not *[Sys]<Sys>*, the volume and/or directory for each file is also displayed. When you are searching for files in your default path, the volume and directory specifications are not displayed.

## Creating File Lists to Use as Parameter Values

You can use the **Files** command to create a file that contains a list of file names. Such a file can be used as a parameter value by programmers when compiling and linking source files, or by system administrators for software installations or selective backups. When you use a file list as a parameter value, it is called an *at-file*.

### What Is an At-File?

An at-file is an ASCII text file (meaning it contains no special formatting characters) that contains a parameter value. At-files are frequently used when a parameter value is too long to be typed into a field. An at-file can contain a single item or a group of items, such as a list of file names.

The material that follows describes how to create a file list (that can later be used as an at-file) using the **Files** command. However, at-files can also be created with a text editor and can contain any valid parameter value, not just a file list. See the *Executive Manual* for more detailed information.

### Creating an At-File With the Files Command

To create a file list with the **Files** command, you fill in the command form in a particular way. The following command form is an example:

```
Files
[File list]      *.PLM
[Details?]      _____
[Print file]     PLM.fl$
[Suppress sort?] _____
[Max columns]   1
```

- In the *[File list]* field, enter the file specification for the group of file names you want in your file list. The example shown above would list all PLM source files (\*.PLM) in your default path.
- In the *[Print file]* field, enter a name for the new file that will be created by the **Files** command. This file will contain your file list. The suffix “.fl\$,” shown in the example above, is a common convention for identifying files that contain file lists.

- In the *[Max columns]* field, enter the numeral 1, as shown above. To be usable as a parameter value, file lists must be created in a one-column format. (If you leave this field blank, the default is as many columns as fit on the screen.)

When you execute the command, the file list is displayed on the screen, as well as written to the file that you specified in the *[Print file]* field of the command form (for example, PLM.fl5, as shown above).

### Using an At-File

The file you create, as described above, is a text file containing the file list you specified in the **Files** command form.

To use it as an at-file, you put an at symbol (@) in front of the file specification when you type it in a command form, as shown in the following example:

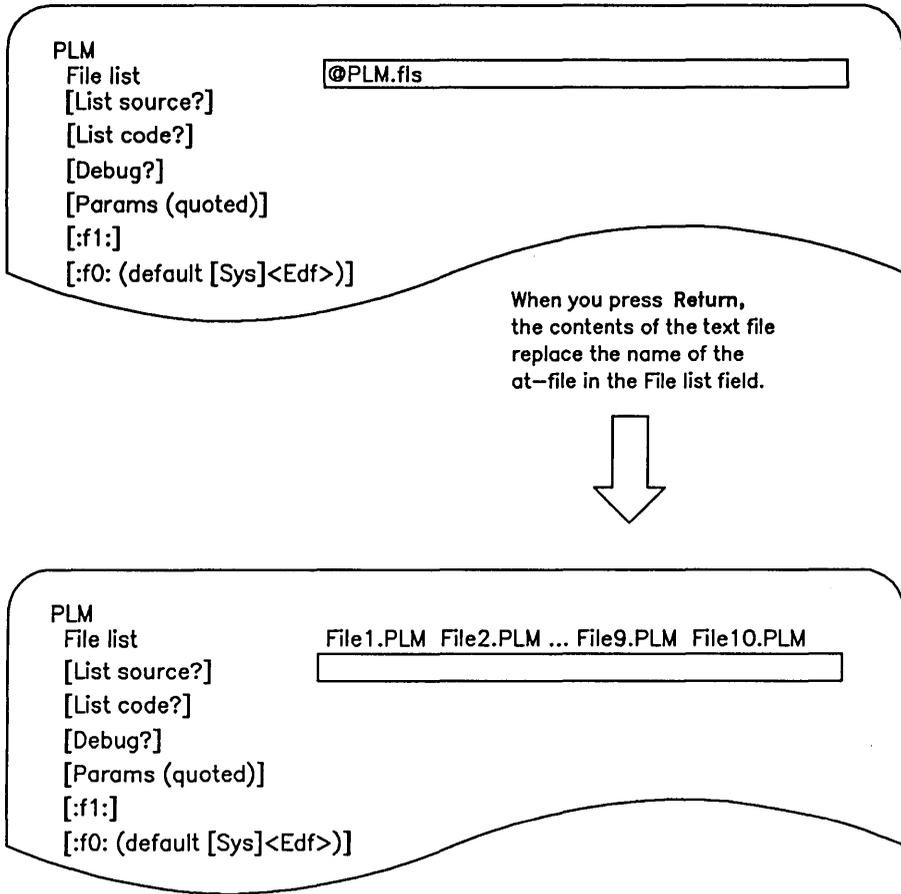
```

PLM
File list           @[d0]<Programs>PLM.fl5
[List source?]     _____
[List code?]       _____
[Debug?]           _____
[Params (quoted)] _____
[:f1:]             _____
[:f0: (default [Sys]<Sys>)] _____

```

Remember that you did not use the @ symbol in the **Files** command form when you created the file list. The @ symbol is not part of the file name, but a special symbol that instructs the Executive to replace the file name with the contents of the file itself.

When you press **Return**, the file name of the at-file (in this case, PLM.fl5) is replaced with the contents of the file. The beginning and end of the text file appear in the command form, separated by an ellipsis (...). This signifies that the entire contents of the file is too large for the field. The entire contents of the file is used by the command, however. Figure 2-4 demonstrates how an at-file is expanded in a command form.



493.2-4

Figure 2-4. Using an At-File in a Command Form

You can use the @ symbol with full or partial file specifications, as shown in the following examples:

*@[d0]<Programs>PLM.fl*

*@<Programs>PLM.fl*

*@PLM.fl*

See the *Executive Manual* for more information about at-files.

## What Is a Macro?

In computer terminology, *macro* is defined as “a single computer instruction that stands for a sequence of operations.” This is an accurate description of Executive macros.

Macros are user-defined, meaning that you, the user, create them. The following types of macros are easy to create and use on your workstation:

- Function key macros for single commands
- Recorded macros for groups of commands

Macros are performed by the Executive’s *submit* facility, which reads command input from a text file. By combining commands, escape sequences, and variables, it is possible to design submit files that function as programs on your workstation. After learning the basics about macros, which is covered in this guide, you can find more information in the *Executive Manual*.

## Function Key Macros

The function keys are labeled **F1** through **F10** across the top of the keyboard, as shown in Figure 2-5. In the Executive, only the **F1** key has a preassigned function (see “Redo,” later in this chapter). It is quick and easy to assign your own macros to the other function keys. A procedure for a sample macro is included later in this chapter.

Function key macros are stored by user name. This means that several users who share the same workstation can all create different macros on the same function keys. This also means, however, that macros you create while signed on as “Sam,” for example, will not be available when you sign on as “Jones.”

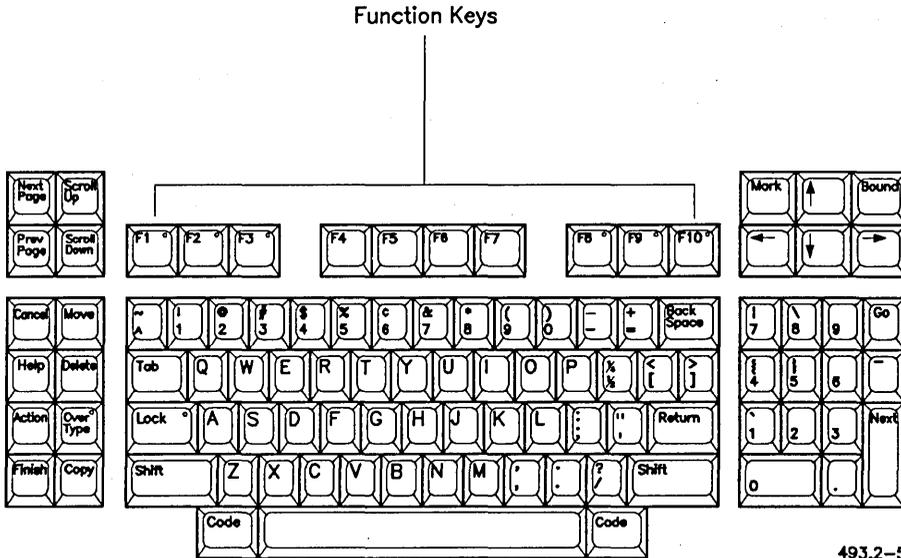


Figure 2-5. Function Keys

### How to Assign a Macro to a Function Key

The following procedure creates a macro for the Files command to display all files on a floppy diskette. You can create similar macros for any other commands you use frequently.

Before you begin, insert a floppy diskette that contains files into drive [f0]. You do not need the diskette to create a macro, but you will need it later to use the macro you are going to create with this procedure.

1. On the Command line, type Files and press Return to display to the command form.

2. Fill in the command form as shown below:

Files	
[File list]	[f0]<*>_____
[Details?]	_____
[Print file]	_____
[Suppress sort?]	_____
[Maximum columns]	_____

3. To create the macro, hold down the **Code** key; then press **F2**.

This assigns the command and the parameter value to function key **F2**. You can assign commands to the other function keys, except **F1**, in the same manner. (**F1** is the Redo key, so you cannot assign a macro to it. See “Redo,” later in this chapter.)

4. After creating the macro, press **Go** to execute the command or **Cancel** to clear the command. Either way, the macro is stored on **F2**.
5. To use the macro, press **F2**. The command form, as you previously filled it in, is displayed.
6. Press **Go** to execute the command.

*NOTE: The macro that you just created was assigned to the current user name, which appears in the status area of the screen. If you sign on with a different user name, you must recreate the macro before you can use it.*

### Changing Function Key Macros

You can change the macros you assign to your function keys. For example, you do not have to keep the macro you created in the previous procedure. To assign a different macro, simply repeat the procedure with a different command. When you press **Code-F2** again, the old macro is overwritten, and the new macro is assigned.

## Where Function Key Macros are Stored

Function key macros are stored in text files. These files are named *[Sys]<Exec>UserNameFx.sub* (where *UserName* is the SignOn user name and *x* is the function key number). You can copy these files, changing *UserName* and *x*, to assign the macro to another user name or function key (see “Copying Files,” earlier in this chapter.)

Macros are submit files that can be modified with a text editor. For example, you could add a Go symbol (●) to the macro, so that it is automatically executed when you press the function key. You cannot, however, add an escape sequence to a function key macro. See the *Executive Manual* for more information.

## Recorded Macros

You can use the Executive **Record** command to record a sequence of commands. *Record* means to store command names, parameter values, and other keystrokes in a submit file. You can then use the **Playback** command to *replay* the file, which reexecutes the commands that you recorded.

### How to Record a Submit File

The following procedure shows you how to combine the steps for backing up a disk into a recorded submit file. You do not need to actually perform a backup to create this macro.

Before you begin, become familiar with the following commands, which you are going to record:

- **Video** (see “Screen Setting,” later in this chapter).
- **Delete** (see “Cleaning Up a Disk,” earlier in this chapter).
- **Backup Volume** (see “Backing Up Disks,” earlier in this chapter).

Follow these steps to record the macro:

1. On the Command line, type **Record** and press **Return** to display the command form.
2. Fill in the command form as shown below:

```
Record
File to record on  Sample.sub
```

 Submit files do not have to end with “.sub,” but it is a common convention that makes them easy to identify.

3. Press **Go** to begin recording.

Notice that the message “Recording” appears in the status area on your screen. When the Executive is recording, everything you type is stored in the file you named in the command form.

4. Execute the commands you want to record.

Perform steps a through d below to record each command.

- a. Use the **Video** command to eliminate the pause that occurs before information is scrolled off the screen, as shown below:

```
Video
[Suppress pause between pages?]  yes
[Screen time out (in minutes)]   _____
[Color (e.g., Green)]           _____
[Narrow characters?]             _____
[Background color]               _____
```

After filling in the command form, press **Go**. The command is executed and recorded in the file *Sample.sub*.

- b. Use the **Delete** command to remove temporary files from the disk, as shown below:

```

Delete
File list      <$*>* _____
[Confirm each?] _____
    
```

After filling in the command form, press **Go**. Once again, the command is executed and recorded.

- c. Fill in the **Backup Volume** command form, as shown below, using the volume or device name of the disk you want to back up:

```

Backup Volume
Volume or device name      d0 _____
[Volume or device password] ##### _____
[Incremental from]        _____
[Suppress backup?]        _____
[Suppress verification?]  _____
[Archive file]            [f0]<Sys> _____
[Delete existing archive file?] yes _____
[Log file]                _____
[Display structures?]     _____
    
```

Press **Go**. You will be prompted to insert a diskette for the backup. At this point, you can proceed ahead with the backup, or you can press **Finish** if you do not want to perform the backup; either way, the **Backup Volume** command is recorded in the submit file.

- d. Execute the **Video** command again, with no parameter values, to turn the screen pause back on.
5. On the Command line, type **Stop Record** and press **Go** (there is no command form).

The "Recording" message is removed from the screen.

### How to Replay a Submit File

The following procedure shows you how to replay the submit file you created with the exercise above. Commands, parameter values, and other keystrokes, such as **Go**, will be played back as you typed them when you recorded the submit file.

1. On the Command line, type **Playback** and press **Return** to display the command form.
2. Fill in the *File* field as shown below. (The submit file is stored in the volume and directory where your path was set when you recorded it.)

Playback

File [Vol]<Dir>Sample.sub \_\_\_\_\_

3. Press **Go**.

The commands you recorded in the submit file are replayed. Notice the message “Replaying,” which appears in the status area of the screen while the submit file is executing.

### Learning More About Submit Files

When you replay a recorded submit file, the commands are executed with the same parameter values you used when you recorded it. As you can imagine, it would be even more useful if you had a choice about the parameter values, so that you could enter different volume names or incremental dates. You can do these things and more. See the *Executive Manual* to learn about the following submit facility features:

- displaying messages on the screen
- pausing to wait for operator input
- entering variable parameter values
- creating commands to execute submit files

## Moving Files

---

At times, you may want to rearrange the way your files are stored in directories. For example, if one of your directories becomes full, you may need to create a larger directory and then move your files.

You can move a file or group of files from one directory to another on the same disk. You cannot, however, move a file from one disk to another. (To accomplish this result, though, see the “Tip” at the end of “How to Move a File.”)

To move a file to a different directory, you use the **Rename** command to change the *<Directory>* portion of the file specification. (See “Using the File System,” in Chapter 1, for information about file specifications.)

You can also use the **Rename** command to change the names of files. See “Renaming Files,” later in this chapter.

### How to Move a File

The following procedure describes how to move a file from one directory to another directory on the same disk.

1. On the Command line, type **Rename** and press **Return** to display the command form.
2. Fill in the fields described below:

*File from.* Enter the directory and file name (in the form of a file specification) of the file you want to move.

*File to.* Enter the file specification to which you want to move the file.

For example:

```
Rename
File from      <ThisDir>FileName
File to        <OtherDir>FileName
[Overwrite ok?]
[Confirm each?]
```

3. *Optional step.* Fill in the remaining fields, according to your needs.

The **Rename** command form contains two optional fields, which are described below:

- *[Overwrite ok?]*. This option only applies if a file with the same name already exists in the directory where you want to move the file. If it does, and you enter **Yes** in this field, the file you are moving overwrites the existing file, which is destroyed in the process. Use this option when you are not sure if you are duplicating file names. If you enter **No** in this field, existing files will not be overwritten. If you leave this field blank, you are prompted to confirm overwriting if the file already exists.
- *[Confirm each?]*. If you are using wild cards and are not sure you want to move all matched files, specify **Yes** in this field. The Executive then prompts you for confirmation before moving each file that matches your wild cards.

4. Press **Go** to start the command.

If the Executive requires confirmation before moving a file, a prompt (similar to the one below) is displayed. If you used wild cards, this can happen several times during the command:

File *FileName* already exists. Overwrite?  
(Press GO to continue, CANCEL to deny, FINISH to exit)

Press **Go** to move the file, **Cancel** to go on to the next file, or **Finish** to terminate the command.

-  You can, in essence, “move” a file to a different disk by using both the **Copy** and **Delete** commands. To do so, make a copy of the file on the other disk; then, delete the original file.

## Moving and Renaming a File Simultaneously

You can move a file and change its name in one step, as shown in the following example:

```
Rename
File from      <Drafts>Chapter1
File to        <Final>PN-333.1
[Overwrite ok?]
[Confirm each?]
```

## Moving Groups of Files With Wild Cards

You can move groups of files by using wild cards in the command form, as shown in the following example:

```
Rename
File from      <Work>*.ltr
File to        <OldWork>*.ltr
[Overwrite ok?]
[Confirm each?]
```

The path setting is displayed in the status area of the screen, for example:

```
Path: [d0]<Work>
```

This is the default volume and directory used by the Executive when you execute commands. (See “Using the File System,” in Chapter 1, for detailed information about the default path and how to use it with the Executive.)

The path setting always includes a volume (or device) and a directory; it can optionally include a node, a file prefix, and a password. The path setting follows the same sequence and conventions as a file specification: the node name is enclosed in braces ( { } ), the volume or device name in square brackets ( [ ] ), and the directory name in angle brackets ( < > ). A file prefix is placed after the directory name; a password does not appear on the screen. You can change all or any part of the path setting with the **Path** command.

### How to Set Your Default Path

The following procedure explains how to change your default path and describes the command options.

1. On the Command line, type **Path** and press **Return** to display the command form.
2. Fill in the fields described below, using parameter values that pertain to your own workstation.

*[Volume]*. Enter the volume or device name that you want to use in your default path setting. If you do not want to change the volume (frequently you'll only want to change the directory), you can leave this field blank and press **Return**, which moves the cursor to the next field.

*[Directory]*. Enter the directory name that you want to use in your default path setting.

For example:

Path	
[Volume]	d1
[Directory]	Products
[Default file prefix]	
[Password]	
[Node]	

3. *Optional step.* Fill in the remaining fields, as described below, according to your needs. See the *Executive Manual* for more information about these fields.

- *[Default file prefix].* You can assign a file prefix (your initials or a date, for example) to the default path, which is automatically added to the beginning of *FileName* parameter values. The default file prefix appears as part of your path setting, as shown in the following example:

Path: [d0]<Work>7-88.

The default file prefix is not used, however, when you override the path setting with a file specification (see “Using the Default Path,” in Chapter 1).

- *[Password].* Use this field to change the password that you entered when you signed on (see “Using Passwords,” in Chapter 1). You might need to change your password to use a disk on the master or a CT-Net node. Passwords do not appear in the path setting on your screen.
- *[Node].* To change your path to a CT-Net node, enter the node name in this field (see “Using CT-Net Nodes,” in Chapter 1). Node names appear as part of the path setting, as shown in the following example:

Path: {Sales}[d0]<Work>

4. Press **Go** to execute the command.

## Unexpected Results

Two common errors can cause unexpected results when executing the **Path** command.

### Entering a Nonexistent Volume, Directory, or Node Name

If you specify a volume or directory that does not exist or a node that you do not have access to, a message similar to the following appears:

Warning: Current logged in volume does not exist.

Double check your parameter values, and try it again.

### Entering a Parameter Value in the Wrong Field

Entering a parameter value in the wrong field can also set a nonexistent path. For example, if you accidentally enter "Mstrword" (a password for the master) in the *[Node]* field, a node specification appears in your path setting, as shown below:

```
{Mstrword}[d1]<Work>
```

To remove a node, default file prefix, or password from your path setting, execute the **Path** command again, typing a pair of single quotation marks (') in the field you want to clear.

For example:

Path	
[Volume]	_____
[Directory]	_____
[Default file prefix]	_____
[Password]	_____
[Node]	' '

## Printing

---

Most of your printing needs are served by the applications you use, such as Document Designer or Image Designer. The files created by most applications contain special formatting characters for printing various fonts, graphics, and page formats. Such files are printed by issuing print requests from within your applications program. For more information, see the documentation for the applications you use.

With the Executive, printing is limited to ASCII text files. ASCII text files contain the standard ASCII character set (letters, numbers, punctuation, and a carriage return symbol), but no special formatting characters. ASCII text files are usually created with the Editor application and include the following types of files:

- Programming source code files
- Workstation and SRP configuration files

### Generic Print System

Many clusters, particularly those equipped with laser printers, use the Generic Print System (GPS). GPS is required for printing with certain applications. Check with your system administrator to find out if GPS is installed on your cluster.

If GPS is installed on your cluster, you can use the Print Manager to print ASCII text files. The Print Manager is an application for installing printers, issuing print requests, and monitoring printer status. It can be started by issuing the **Print Manager** command from the Executive Command line (there is no command form).

To print an ASCII text file with the Print Manager, you select a printer by positioning the highlight and then pressing F1 (Print). A form appears, in which you supply the name of the file you want to print. You then press **Go** to print the file. See the *Printing Guide* for a complete description of the Print Manager.

## Printing With the Executive

If GPS is not installed on your cluster, you use Executive commands to print ASCII text files. In most cases you can also use these commands in conjunction with GPS; for example, the **Format** command, described below, provides some features that are not available with the Print Manager.

If your workstation is connected to an established cluster, most likely printers are installed and ready to use. Check with your system administrator or an experienced user to find out what queue or device names to use for the printers on your cluster.

See the *Printing Guide* for complete information about spooled and direct printing.

### The Format Command

With the **Format** command, you can specify certain formatting characteristics when you print ASCII text files. For example, you can set margins and page lengths with the **Format** command. You can use this command if you use the Editor application to create simple documents, such as letters or memos. When you print a file with **Format**, a temporary file is created so that formatting characters are not added to the original file.

The following procedure describes how to print an ASCII file with default format characteristics. See the *Executive Manual* for more detailed information.

1. On the Command line, type **Format** and press **Return** to display the command form.
2. Fill in the fields described below, using parameter values that pertain to your own workstation.

*File list.* Enter the name of the file (or files) you want to format and print.

[Print to]]. Enter the queue name (for spooled printing) or device name (for direct printing) of the printer you want to use.

For example:

Format	
File list	<u>Boss.memo</u>
[Print to]	<u>[SpIB]</u>
[Confirm each?]	_____
[Title]	_____
[First page to format]	_____
[Last page to format]	_____
[Suppress page numbers?]	_____
[Suppress date?]	_____
[Suppress time?]	_____
[Double-space?]	_____
[Left margin (default 10 spaces)]	_____
[Text width (default 65 spaces)]	_____
[Page length (default 66 lines)]	_____
[Top margin (default 6 lines)]	_____
[Bottom margin (default 6 lines)]	_____
[Tab width (default 8 spaces)]	_____
[Suppress page ejects between files?]	_____

4. Press **Go** to execute the command.

### The Print Command

To print an unformatted ASCII file on a spooled printer, you use the **Print** command, as described in the following procedure. See the *Executive Manual* for more detailed information.

1. On the Command line, type **Print** and press **Return** to display the command form.

2. Fill in the fields described below, using parameter values that pertain to your own workstation.

*File list.* Enter the name of the file (or files) you want to format and print.

*[Queue name (default = SPL)].* Enter the queue name of the spooled printer you want to use.

For example:

Print	
File list	FileName _____
[Queue name (default = SPL)]	[Sp B] _____
[Number of copies]	_____
[Delete after printing?]	_____
[Special forms name]	_____
[Print wheel name]	_____
[Printing mode]	_____
[Align form?]	_____
[After date time]	_____
[Security mode?]	_____
[Priority]	_____
[Confirm each?]	_____

4. Press **Go** to execute the command.

### The Copy Command

To print an unformatted ASCII file to a direct printer, you use the **Copy** command, as described in the following procedure. See the *Executive Manual* for more detailed information.

1. On the Command line, type **Copy** and press **Return** to display the command form.

2. Fill in the fields described below, using parameter values that pertain to your own workstation.

*File from.* Enter the name of the file (or files) you want to format and print.

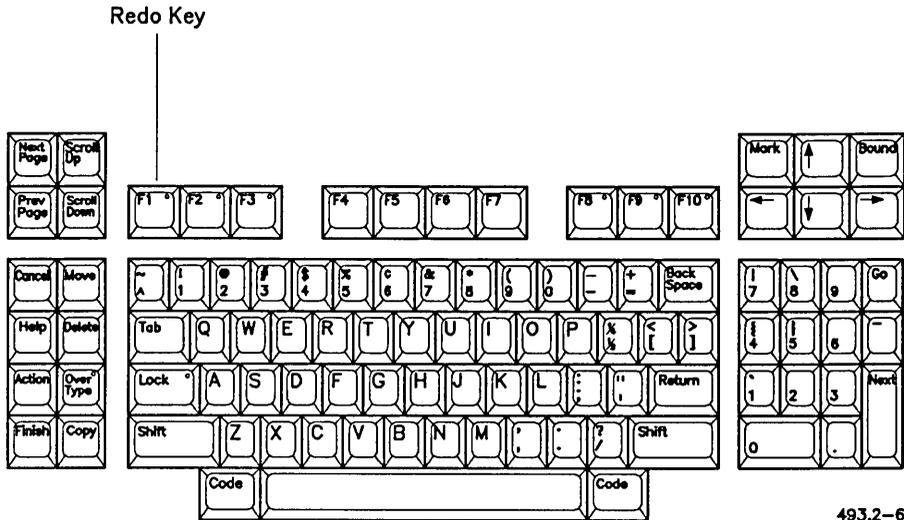
*File to.* Enter the device name of the direct printer you want to use.

Copy

File from	FileName _____
File to	[Lpt] _____
[Overwrite ok?]	_____
[Confirm each?]	_____

4. Press **Go** to execute the command.

To perform the same task several times in a row, you can use the Redo key. When you are using the Executive, Redo is the F1 function key, as shown in Figure 2-6.



493.2-6

Figure 2-6. Redo Key

Pressing **F1** displays the last command form you used, containing the parameter values you previously filled in. You can change the parameter values before reexecuting the command, or leave them as they are.

## How to Redo the Previous Command

Try using Redo with the **Files** command, as described in the following procedure.

1. On the Command line, type **Files** and press **Return** to display the command form.
2. Fill in the command form with the parameter values shown below:

```
Files
[File list]          [Sys]<Sys>*.user
[Details?]          yes
[Print file]         _____
[Suppress sort?]    _____
[Max columns]       1
```

3. Press **Go** to execute the command.
4. To use the Redo feature, press **F1** (Redo).

The **Files** command form, with the parameter values you previously filled in, is displayed.

5. *Optional step.* Change one or all of the parameter values.

At this point, you can reexecute the command with the current parameter values, or you can make changes. For example, you could change the *[File list]* parameter value as shown below:

```
Files
[File list]          [Sys]<Sys>*.sub
[Details?]          yes
[Print file]         _____
[Suppress sort?]    _____
[Max columns]       1
```

 To move the cursor to the end of the parameter value, press **Code-Right Arrow**. Then use **Backspace** to delete “user,” and type **sub** in its place.

6. Press **Go** to reexecute the command.

## Suppressing Redo

You can preserve a redo sequence while you execute other commands.

For example, if you filled in a lengthy command form, such as **LCopy**, but the command failed because you specified a nonexistent directory, you might want to execute **Volume Status** to find out the name of the directory.

To save the **LCopy** command form, which you previously filled in, press **Shift-Go** (instead of **Go**) when you execute **Volume Status**. This suppresses Redo; you can then redisplay the **LCopy** command form by pressing **F1** (Redo).

You can, if necessary, execute many subsequent commands with **Shift-Go**. The last command that was executed with the **Go** key alone remains stored on the Redo key.

## Renaming Files

---

You can change the name of a file or group of files with the **Rename** command. The **Rename** command works in a similar manner to the **Copy** command; in fact, the command forms are identical. The difference is that **Rename** *does not* make a duplicate copy. After executing **Rename**, there is still only one file, but its name has been changed.

You can also move files with the **Rename** command. See “Moving Files,” earlier in this chapter.

### How to Rename a File

The following steps describe the procedure for renaming a file.

1. On the Command line, type **Rename** and press **Return** to display the command form.
2. Fill in the fields described below:

*File from.* Enter the current name of the file you want to rename.

*File to.* Enter a new name for the file you want to rename.

For example:

```
Rename
  File from      CurrentFileName _____
  File to        NewFileName         _____
  [Overwrite ok?] _____
  [Confirm each?] _____
```

3. *Optional step.* Fill in the remaining fields according to your needs.

The **Rename** command form contains two optional fields, which are described below:

- *[Overwrite ok?]*. This option only applies if a file with the name you specified in *File to* already exists. If it does, and you enter **Yes** in this field, the file you are renaming overwrites the existing file, which is destroyed in the process. Use this option when you are not sure if you are duplicating file names. If you enter **No** in this field, existing files will not be overwritten. If you leave this field blank, you are asked for confirmation before overwriting existing files.
- *[Confirm each?]*. If you are using wild cards and are not sure you want to rename all matched files, specify **Yes** in this field. The Executive then prompts you for confirmation before renaming each file that matches your wild cards.

4. Press **Go** to execute the command.

If the Executive requires confirmation before renaming a file, a prompt (similar to the one below) is displayed. If you used wild cards, this can happen several times during the command:

```
File FileName already exists. Overwrite?
(Press GO to continue, CANCEL to deny, FINISH to exit)
```

Press **Go** to rename the file, **Cancel** to go on to the next file, or **Finish** to terminate the command.

### Using Wild Cards to Rename Files

You can rename a group of files by using wild cards with the **Rename** command. For example, you can change all file names ending with “.prelim” to end with “.final,” as shown in the following example:

```
Rename
File from      *.prelim_____
File to       *.final_____
[Overwrite ok?] _____
[Confirm each?] _____
```

See “\* and ? Wild Cards,” earlier in this chapter, for more information about wild cards.

### Changing the Case of Letters in File Names

When you create a file with any application, the file name is stored exactly as you typed it, for example, “roughdraft.chap1.” When displaying file names with the **Files** command, file names appear with uppercase and lowercase characters, as you typed them when you created the files. If you would prefer to see uppercase and lowercase letters, for example, “RoughDraft.Chap1,” when you execute the **Files** command, you can change capitalization with the **Rename** command.

For example:

```
Rename
File from   roughdraft.chap1
File to     RoughDraft.Chap1
[Overwrite ok?]
[Confirm each?]
```

Although the Executive and other applications are case insensitive, capitalization conventions can help you to keep track of your files.

You can set several screen attributes with the **Executive Video** command. For example, all workstations provide the following options:

- Screen time out, so that your screen will automatically turn off when you haven't used it for a certain length of time
- Scrolling, so that you can suppress the pause that occurs before information is scrolled off the top of the screen

On color monitors, you can also set color. Foreground color, which affects text, command fields, and so on, can be selected on all color monitors. Background color is only available on enhanced video hardware. See the *Executive Manual* for information about setting color attributes.

### How to Set Scrolling

Before command information is scrolled off the top of the screen, the following prompt is displayed:

Press Next Page or Scroll Up to continue

For most commands, this is a necessary feature, for example, when displaying a long list of files with the **Files** command. In some cases, though, it is convenient to suppress the pause, for example, when you are performing a backup that you want to leave unattended.

To suppress the pause, you use the **Video** command, as described in the following steps:

1. On the Command line, type **Video** and press **Return** to display the command form.

2. Fill in the command form as shown below:

Video

[Suppress pause between pages?]	yes _____
[Screen time out (in minutes)]	_____
[Color (e.g., Green)]	_____
[Narrow characters?]	_____
[Background color]	_____

3. Press **Go** to execute the command.

To turn the pause back on, execute the **Video** command again with no parameter values.

-  To suppress the pause while a command is executing, press **Code-Next Page**, either when the prompt is displayed or while information is scrolling.

## How to Set Screen Time Out

You can set your screen to turn off automatically when you haven't used your workstation for a specified length of time. It is a good idea to turn the screen off when you are not using it, especially over night. This prevents an image from "burning" into the screen, which can cause "ghosts" in the background. These can seriously degrade the quality of the image you work with every day.

To set screen time out, you use the **Video** command, as described in the following steps:

1. On the Command line, type **Video** and press **Return** to display the command form.
2. Fill in the command form as described below:

In the *[Screen timeout (in minutes)]* field, enter the number of minutes to elapse before the screen is turned off.

For example:

Video

[Suppress pause between pages?]	_____
[Screen time out (in minutes)]	10_____
[Color (e.g., Green)]	_____
[Narrow characters?]	_____
[Background color]	_____

3. Press **Go** to execute the command.

To turn the screen back on, simply press any key; **Shift** or **Code** are recommended because they won't change anything on the screen.

 To turn the screen off at any time, press **Action-Overtime**.



## Different Kinds of Problems

You can encounter different types of problems when using the Executive (or your workstation in general). For example:

- Misunderstandings about what is accomplished with certain commands or functions
- User errors, such as supplying incorrect or invalid parameter values
- Unfamiliar situations that require new skills
- System problems, which can be caused by defective equipment or improper installation of hardware or software

## Where to Find Help

When the results of a command are not as you expected, refer to the *Executive Manual* for detailed information about how the command functions and to make sure you understand the parameter values.

When error messages occur, see “Common Error Messages,” later in this chapter, for details about the most common error messages. If the error message is not covered here, see the *Status Codes Manual*, which contains a complete listing of all error messages.

Unusual situations, which require additional skills, are briefly described later in this chapter. See the *Executive Manual* for more detailed information.

“Troubleshooting Commands,” later in this chapter, briefly describes the Executive commands you can use for diagnosing system problems. See the *CTOS System Administrator’s Guide* for more information.

## Common Error Messages

Many error messages are the result of typing errors or invalid parameter values. Other errors can be caused by other users on the cluster. Table 3-1 describes some common error messages and provides suggestions about what can cause them and how to remedy them. The errors are listed in numerical order.

The *Status Codes Manual* lists and describes all error codes that are in use at the time it is published. As applications are developed and enhanced, additional error codes are implemented. Sometimes, when you look up an error, the *Status Codes Manual* states “Reserved for future use.” This means that the error code was implemented after the latest edition of the *Status Codes Manual* was published. See the Release Notice for the application that is producing the error for a list of additional error codes.

**Table 3-1. Common Error Messages**

(Page 1 of 4)

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Error Code	Explanation
4	Operator intervention  Occurs when you terminate a command while it is executing. Commands can be terminated from a prompt (such as “Press Go to continue, Cancel to deny, or Finish to exit”) or by pressing <b>Action-Finish</b> (see “Cleaning Up a Disk,” in Chapter 2). This error message is for your information only and requires no action from you.
6	Master workstation not running  Either the master has been turned off or has crashed, or someone has disabled the cluster. Check with your system administrator.

---

**Table 3-1. Common Error Messages**

(Page 2 of 4)

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<b>Error Code</b>	<b>Explanation</b>
7	<b>Not implemented</b>  The command or function you are trying to execute is not available on your workstation. No action is required; you just can't do it.
31	<b>No such request</b>  In most cases, this error occurs when a system requires rebooting after an application has been installed or updated. Try rebooting the workstation or SRP; if this does not correct the problem, the software package probably was not properly installed. Try repeating the software installation procedure using the <b>Install</b> command.
33	<b>Service not available</b>  This error occurs when you execute a command requiring a system service that has not been installed. For example, before you can use a mouse, you must execute the <b>Install Mouse Server</b> command to install Mouse Services on your workstation. See the documentation for the application you are trying to use, or check with your system administrator.
202	<b>Directory full</b>  The directory you are using is full. Create a larger directory and move your files (see "Creating Directories" and "Renaming Files," in Chapter 2); or use a different directory.
203	<b>No such file</b>  The file name you have used does not exist. Check for typing errors in the command form. Use the <b>Files</b> command with various wild card combinations to locate the correct file name (see "Listing Files," in Chapter 2).

---

**Table 3-1. Common Error Messages**

(Page 3 of 4)

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<b>Error Code</b>	<b>Explanation</b>
204	<p>No such directory</p> <p>The directory name you have used does not exist. Check for typing errors in the command form; use <b>Volume Status</b> to double check the directory name (see "Listing Directories," in Chapter 2).</p>
205	<p>Bad file specification</p> <p>The Executive does not recognize the file specification you have used. This is usually caused by a missing or misplaced square ([ ]) or angle (&lt; &gt;) bracket. Check for typing errors.</p>
215	<p>No such volume</p> <p>The volume or device name you have used does not exist. If you used a volume name, try using the device name instead (see "Volume and Device Names," in Chapter 2). If you get this error while using a device name, check with your system administrator.</p>
216	<p>Volume not mounted</p> <p>Usually occurs when you are trying to execute a command on a floppy and forget to insert the diskette. Insert the diskette and try it again. (The Redo key comes in handy here; see "Redo," in Chapter 2). If this error occurs when you are using a hard disk, check with your system administrator.</p>
219	<p>Access denied</p> <p>You need a password to execute the command. This can happen when you are trying to use a password-protected disk on the master.</p>

---

**Table 3-1. Common Error Messages**  
(Page 4 of 4)

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<b>Error Code</b>	<b>Explanation</b>
220	File in use  Someone else is using the file you want to use. Try the command again later; check with other users to see if they have finished using the file.
230	Disk full  You have run out of disk storage space. Try performing the disk cleanup procedure (see "Cleaning Up a Disk," in Chapter 2). Give some thought to archiving files that you seldom use (see "Selective Backup," in the <i>Executive Manual</i> ).
301	Disk I/O error  This is <i>not</i> a common error; it is included here, however, because it requires immediate attention. This error means that a portion of the disk has become unreadable. See your system administrator immediately; most data can usually be salvaged with the <b>Backup Volume</b> command (see the <i>Executive Manual</i> ).

---

## Unusual Circumstances

Occasionally you may encounter a situation that requires one of the following techniques.

### Entering a Parameter Value That Contains More Than One Word

If you are using the Executive for programming or system administration, you may need to enter a parameter value containing more than one word. You might need to do this, for example, to create a new Executive command or to create or delete multiple-word file names.

To enter a parameter value that contains more than one word, surround the entire entry with a pair of single quotation marks ('). The following example shows a field from the **New Command** command form:

Command name    'Sample Command' \_\_\_\_\_

### **Entering a Parameter Value That Does Not Fit in a Field**

If a parameter value contains several file names or too many characters to fit in the command form field, it must be entered via an at-file. At-files are briefly described in "Listing Files," in Chapter 2. See the *Executive Manual* for more detailed information about at-files.

### **Typing Symbols That Do Not Appear on the Keyboard**

You may need to execute a command on a file or directory name containing a symbol that is not on the keyboard. For example, some software companies use symbols to designate special purpose directories, such as <WonderWare™>.

To enter a symbol in a command form, type the backslash character (\), which is located above the numeral 8 on the calculator keypad; nothing appears in the command form when you do this. Then, type the key-stroke(s) for the symbol. For example, to enter a trademark symbol (™), you would type the following sequence:

\ Code-5

Table 3-2 lists some of the most common symbols you may encounter. See the *CTOS Reference Manual* for a table of the entire keyboard character set.

**Table 3-2. Keystrokes for Common Symbols**

<b>Keystroke</b>	<b>Symbol</b>	<b>Symbol Name</b>
<b>Code-1</b>	£	pounds
<b>Code-2</b>	°	degree
<b>Code-3</b>	©	copyright
<b>Code-4</b>	®	registered
<b>Code-5</b>	™	trademark
<b>Down Arrow</b>	↓	down arrow
<b>F1</b>	÷	divided by
<b>F3</b>	§	section
<b>F6</b>	¶	paragraph
<b>Finish</b>	■	filled box
<b>Go</b>	●	filled circle
<b>Left Arrow</b>	←	left arrow
<b>Prev Page</b>	□	outlined box
<b>Right Arrow</b>	→	right arrow
<b>Up Arrow</b>	↑	up arrow

## Troubleshooting Commands

The Executive provides several troubleshooting commands, which are briefly described below. These commands can help you track down and fix system problems. See the *Executive Manual* and the *CTOS System Administrator's Guide* for detailed information about using these commands.

<b>Cluster Status</b>	displays the status of cluster communications.
<b>Partition Status</b>	displays information about system services and applications that are running on a workstation.
<b>PLog</b>	displays or prints the system error log, which includes information about system crashes and disk errors.
<b>Volume Status</b>	displays information about disk space utilization (see "Listing Directories" in Chapter 2).

**< >**. Used to enclose a directory name in a file specification or the path setting.

**\***. *See* wild card.

**{ }**. Used to enclose a node name in a file specification or the path setting.

**^**. Used to designate a password in a file specification.

**\$ directory**. *See* dollar sign directory.

**!**. *See* bang.

**?**. *See* wild card.

**[ ]**. Used to enclose a volume or device name in a file specification or the path setting. Also used to designate optional fields in command forms.

**<Sys>**. A directory on every disk that contains unique information about the disk. This information is used by the operating system when you issue commands and use applications.

**[Sys]**. A pseudonym for the volume that contains the bootable operating system for the workstation or SRP.

**[Sys]<Sys>**. The volume and directory that contain the bootable operating system. Usually your other applications programs are also stored in [Sys]<Sys>.

**archive file**. A file created by one of the backup commands. Archive files contain the contents of other files in a compressed format.

**archive media**. Floppy diskettes, hard disks, or tapes that are used for backups.

**at-file**. A text file that contains a parameter value. At-files are used to supply file lists or other parameter values that are too long to be typed in the command form. When the name of a text file is preceded by the at symbol (@) in a command form field, the contents of the file are substituted as the parameter value when the command is executed.

**bang (!)**. The exclamation point that is typed before the volume or device name to designate a disk on the master.

**case-insensitive**. No difference in the interpretation of uppercase and lowercase letters.

**command form**. Used to supply parameter values to the Executive.

**command line**. The highlighted line on the Executive screen where you enter the name of the command you want to issue.

**CT-Net**. A communications service that is used to connect masters together.

**CT-Net node.** When a master is connected to another master via CT-Net, the cluster becomes a CT-Net Node. Cluster workstations that are part of a CT-Net node can communicate with the other CT-Net masters.

**default directory.** The directory name that appears in angle brackets (< >) in the path setting on the screen.

**default file prefix.** The file prefix that appears to the right of <Directory> in the path setting on the screen.

**default path.** The volume and directory that appear in the path setting on the screen. *See also* path.

**default value.** A predetermined value with which the command is executed when you leave an optional field blank.

**default volume.** The volume or device name that appears in square brackets ([ ]) in the path setting on the screen.

**device.** A disk drive, printer, tape drive, modem, or other physical device that receives or transmits data. *See also* disk drive.

**device name.** The identifier for a device. When referring to a disk drive, the device name is determined by the physical location of the disk drive. When using the Executive, the device name can be used instead of the volume name in command forms.

**directory.** A subdivision of disk storage space, which can be compared to an electronic file cabinet. Directories are used to organize the many files that are contained on a disk.

**disk.** A physical device that is either contained within or attached to your workstation. It provides storage space for your files.

**disk drive.** The mechanism that holds the disk. The disk drive stores and retrieves information to and from the disk.

**distribution media.** The diskette(s) or tape on which applications programs are supplied. You install applications from the distribution media to your hard disks.

**dollar sign directory.** A directory that is used for storing temporary files that are created by applications.

**drive.** *See* disk drive.

**expansion.** The physical replacement, within a command form, of wild card characters for the actual characters they match. Also, the physical replacement of the contents of a file when using an at-file as a parameter value.

**field.** A blank line in a command form where you type a parameter value.

**field name.** Describes the type of information to enter in a command form field.

**file.** A unit of data that can be used by your workstation. Files can be executable programs or they can be documents, spreadsheets, pictures, and so on, which you create with applications.

**file specification.** A unique identifier that contains the name of a file, as well as its volume and directory location.

**file system.** All the information contained on a workstation's disks.

**floppy diskette.** A small, flexible disk that is inserted into a floppy disk drive. They are usually used to store backups or install new applications.

**floppy disk drive.** A slot-like opening on the front of the workstation that is used to hold a floppy diskette. *See also* disk drive.

**initialization.** The procedure that prepares a disk for use on a workstation or SRP.

**logging out.** The opposite of signing on. Logging out exits the Executive.

**macro.** A single keystroke or command that defines a sequence of operations.

**mandatory field.** In a command form, a field that must be filled in or the command cannot be executed. A mandatory field is not surrounded by square brackets.

**master.** A workstation or Shared Resource Processor (SRP) to which cluster workstations are connected. The master controls many system services, such as printing and communications. Co-workers can share the files and applications that are stored on the master's disks.

**node.** *See* CT-Net node.

**optional field.** In a command form, a field that does not have to be filled in for the command to execute. An optional field is surrounded by square brackets ([ ]). If such a field is left blank, a default value is used.

**operating system.** The program that controls the execution of the applications and utilities on your workstation.

**overwrite.** To replace the contents of an existing file with the contents of another file. Overwriting destroys the original file. This is an option with many Executive commands.

**parameter field.** *See* field:

**parameter value.** The information you type in a command form field.

**password.** An access code that restricts the use of a system. Workstations or masters can have several passwords that allow varying levels of access to different users.

**path.** The default volume and directory. This volume and directory are used automatically when you execute a command unless you override the path with a file specification. The path setting appears in the status area of the screen.

**query field.** In a command form, a field that is defined by a field name in the form of a question.

**record.** To store a group of commands that can be reexecuted later.

**Redo key.** A function key that is used to repeat the previous command.

**Release Notice.** A document that contains information about new versions of software products.

**replay.** To reexecute a group of commands that were recorded earlier. *See also* record.

**Shared Resource Processor (SRP).** A multiprocessor computer that is always used as a master. Cluster workstations can be connected to an SRP.

**SignOn.** The procedure that prepares your workstation for use. When you sign on, you enter a user name, which determines the applications and commands that are available on the workstation. You also enter your access password when you sign on.

**status area.** The top two lines of the Executive screen where default path, user name, and date/time information are displayed.

**submit facility.** An Executive feature that executes groups of commands.

**Sys.** An abbreviation for "System." It is used in file names to denote files that are necessary for the workstation or SRP to boot and function correctly. It is also used as the name for the volume and directory that contain the operating system. *See also* <Sys>, [Sys], and [Sys]<Sys>.

**utility.** A program that carries out a specific task, such as copying or deleting files.

**valid volume.** A disk that has been initialized for use on a workstation or SRP.

**volume.** An initialized disk. *See also* valid volume.

**volume name.** The name that is assigned to a disk when it is initialized.

**wild card.** A special character used by the Executive to match character strings in file specifications. The asterisk (\*) wild card matches 0 to any number of characters; the question mark (?) wild card matches exactly one character.



- \* (wild card), 2-4
  - @-files. *See* At-files.
  - \$ directories, 2-18
  - !. *See* Bang.
  - ? (wild card), 2-4
  - <Sys> directory, 2-27, 2-37
  - [Sys] volume, 2-37
  - [Sys]<Sys>, 2-37
- 
- Action-Finish, keystroke, 3-2
  - Archive commands, 2-12
  - Archive file, 2-11
  - Archive media, 2-11
  - ASCII files, 2-70
  - At-files, 2-52 to 2-56
- 
- Backing up disks, 2-11 to 2-17
    - archive files, 2-11
    - archive media, 2-11
    - Backup Volume command, 2-12
    - complete backup, 2-11
    - daily backup, 2-11
    - procedures for, 2-13, 2-15
    - incremental backup, 2-11
    - Restore command, 2-11, 2-12
    - restoring archive files, 2-17
    - Selective Backup command, 2-12
    - tape commands, 2-12
    - theory of, 2-11
    - weekly backup, 2-11
  - Backup Volume command, 2-12, 3-5
  - Bang, 2-40
- 
- Cleaning up a disk, 2-18 to 2-19
    - procedure for, 2-18
    - temporary files and directories, 2-18
  - Cluster Status command, 3-8
- 
- Commands
    - abbreviating, 1-9
    - Backup Volume, 2-12
    - Cluster Status, 3-8
    - Copy, 2-20 to 2-23
    - Create Directory, 2-27 to 2-29
    - Delete, 2-30 to 2-31
    - Files, 2-51 to 2-56
    - Finish Executive, 2-33
    - Format, 2-71
    - how to issue, 1-8
    - Install, 2-45
    - IVolume, 2-41
    - LCopy, 2-23 to 2-26
    - Logout, 2-32
    - Partition Status, 3-8
    - Path, 2-67 to 2-69
    - Playback, 2-63
    - PLog, 3-8
    - Print, 2-72
    - Print Manager, 2-70
    - Record, 2-60
    - Rename, 2-64 to 2-66, 2-78 to 2-80

- Commands (*cont.*)
  - Restore, 2-12
  - Selective Backup, 2-12
  - Video, 2-81 to 2-83
  - Volume Status, 2-47 to 2-50, 3-8
- Command form
  - fields, 1-6
  - parameter value, 1-6
- Context Manager
  - Finish Executive command, 2-33
  - starting the Executive from, 1-3
- Copy command, 2-20 to 2-23
  - printing with, 2-73
- Copying files, 2-20 to 2-26
  - master, 2-23
  - procedure for, 2-20
  - wild cards, 2-21
- Create Directory command, 2-27 to 2-29
- Creating directories, 2-27 to 2-29
  - <Sys>, 2-27
  - Create Directory command, 2-27
  - names of, 2-28
  - passwords, 2-29
  - personal, 2-27
  - procedure for, 2-27
  - sizes of, 2-28
  - special-purpose, 2-27
- CT-Net
  - definition of, 1-14
  - node name, 1-15, 2-34
- Cursor movement, 1-8
  
- Default path
  - changing, 2-67
  - definition of, 1-12
- Delete command, 2-30 to 2-31
  - wild cards, using with, 2-9
  
- Deleting files, 2-30 to 2-31
- Device names, 2-35
- Directory
  - <Sys>, 2-37, 2-47
  - creating, 2-27 to 2-29
  - definition of, 1-10
  - dollar-sign (\$), 2-18
  - full, 3-3
  - names, 1-11, 2-34
    - listing, 2-47 to 2-50
    - nonexistent, 2-69, 3-4
    - restrictions, 2-39
    - rules, 2-37
    - wild cards, using in, 2-8
- Diskless workstations, 2-40
- Disk
  - backups, 2-11 to 2-17. *See also* Backing up disks.
  - cleanups, 2-18 to 2-19. *See also* Cleaning up a disk.
  - drives, 2-35
  - full, 3-5
  - I/O error, 3-5
  - initializing, 2-41 to 2-44. *See also* Initializing disks.
  - names, 2-35
  - sectors, 2-48
  - space utilization, 2-48
  - volumes, 1-10
- Distribution media, 2-45
- Dollar-sign directories, 2-18
- Drive
  - definition of, 3-35
  - floppy, 2-35
  - hard, 2-35
  - names, 2-35
  
- Error messages, 3-2 to 3-5
- Exiting, 2-32 to 2-33

- File
  - [Sys]<Sys>, in, 2-37
  - copying, 2-20 to 2-26
  - definition of, 1-10
  - deleting, 2-30 to 2-31
  - in use, 3-5
  - master, using on, 2-40
  - moving, 2-64 to 2-66
  - moving and renaming simultaneously, 2-66
  - names, 1-11, 2-34
    - changing case in, 2-80
    - nonexistent, 3-3
    - prefixes, 2-38
    - restrictions, 2-39
    - rules, 2-38
    - suffixes, 2-38
  - renaming, 2-78 to 2-80
  - temporary, 2-18
- File headers, 2-48
- File specifications, 1-10 to 1-12, 2-34 to 2-35
  - directory name, using in, 1-11, 2-34
  - file name, using in, 1-11, 2-34
  - invalid use of, 2-35
  - node name, using in, 1-15, 2-34
  - optional parts, 2-34
  - override path setting, using to, 1-13
  - partial, use of, 1-13, 2-35
  - password, using in, 2-34
  - volume name, using in, 1-11, 2-34
- File system, 1-10 to 1-15, 2-34 to 2-40
- Files command, 2-51 to 2-56
  - wild cards, using with, 2-4 to 2-7
- Finish Executive command, 2-33
- Finishing. *See* Exiting.
- Format command, 2-71
- Formatting disks. *See* Initializing disks.
- Generic Print System (GPS), 2-70
- Initializing disks, 2-41 to 2-44
  - floppy, 2-41
  - recycling, 2-43
- Install command, 2-45, 3-3
- Installing software, 2-45 to 2-46
- IVolume command, 2-41
- Keystrokes, for common symbols, 3-7
- LCopy command, 2-23 to 226
- Listing directories, 2-47 to 2-50
  - <Sys>, 2-48
  - different types, 2-48
  - disk space utilization, 2-48
  - on master, 2-50
  - procedure for, 2-49
  - Volume Status command, 2-47
- Listing files, 2-51 to 2-56
  - at-files (@), 2-52 to 2-56
  - creating file lists, 2-52
  - Files command, 2-51 to 2-56
  - procedure for, 2-51
- Logout command, 2-32
- Macros, 2-57 to 2-63
  - definition of, 2-57
  - function key, 2-57 to 2-60
  - Playback command, 2-63
  - procedures for, 2-58, 2-61, 2-63
  - Record command, 2-60
  - recording, 2-60 to 2-63
  - replaying, 2-63
- Master
  - copying files on, 2-23
  - diskless workstations, 2-40
  - listing directories on, 2-50
  - not running, 3-2
  - using files on, 2-40

Moving files, 2-64 to 2-66  
    procedure for, 2-64  
    Rename command, 2-64

Network, 1-14

Node

    definition of, 1-14  
    names, 1-15, 2-34  
    nonexistent, 2-69  
    path setting, using in, 2-68

Operating system, version number,  
    1-5

Parameter value

    at-files, using in, 2-54  
    containing more than one word,  
        3-5  
    symbols, using in, 3-6  
    too long for field, 3-6

Partition Status command, 3-8

Password, 2-34

    access denied, 3-4  
    changing, 1-14, 2-68  
    commands, using with, 1-14  
    Create Directory command, 2-29  
    default, 1-14  
    file specifications, using in, 2-34  
    SignOn, 1-2, 1-14

Path

    command, 2-67 to 2-69  
    default, 1-12  
    definition of, 1-12  
    display, 1-5  
    nonexistent, 2-69  
    setting, 2-67 to 2-69  
        changing, 2-67  
        clearing a field, 2-69  
        overriding, 1-13  
        procedure for, 2-67

Playback command, 2-63

PLog command, 3-8

Print command, 2-72

Print Manager command, 2-70

Printing, 2-70 to 2-74

    Copy command, 2-73

    Format command, 2-71

    Generic Print System (GPS),  
        2-70

    Print command, 2-72

    Print Manager, 2-70

Problems. *See* Troubleshooting.

Quitting. *See* Exiting.

Record command, 2-60

Redo, 2-75 to 2-77

    procedure for, 2-75

    suppressing, 2-77

Release Notice, 2-45

Rename command, 2-64 to 2-66, 2-78  
    to 2-80

Renaming files, 2-78 to 2-80

    changing case, 2-80

    procedure for, 2-78

Restore command, 2-12

Restoring archive files, 2-17

Screen

    Command line, 1-5

    ready prompt, 1-5

    setting, 2-81 to 2-83

        scrolling, 2-81

        time out, 2-82

    status area, 1-5

    Video command, 2-81 to 2-83

Selective Backup command, 2-12

SignOn

    date/time, 1-2

    form, 1-2

SignOn (*cont.*)  
password, 1-2  
procedure, 1-2  
screen, 1-2  
user name, 1-2  
Software installation. *See* Installing software.  
Starting, 1-1 to 1-6  
from Context Manager, 1-3  
from SignOn, 1-3  
Status codes. *See* Error messages.  
Submit files, 2-57 to 2-63. *See also* Macros.  
Suppressing  
redo, 2-77  
screen pause, 2-81  
Symbols, using in command forms, 3-6  
System service, 3-3  
  
Tape backup commands, 2-12  
Temporary directories, 2-18  
Temporary files, 2-18  
Troubleshooting, 3-1 to 3-8  
commands, 3-8  
error messages, 3-2 to 3-5  
master not running, 3-2  
  
User name, 1-1 to 1-3, 1-5

Version number  
Executive, 1-5  
operating system, 1-5  
Video command, 2-81 to 2-83  
Volume Status command, 2-47 to 2-50, 3-8  
Volume  
[Sys], 2-37  
definition of, 1-10  
names, 1-11, 2-34  
restrictions, 2-39  
rules, 2-37  
nonexistent, 2-69, 3-4  
  
Wild cards, 2-4 to 2-10  
asterisk (\*), 2-4  
combinations, using, 2-7  
copying files with, 2-21  
definition of, 2-4  
deleting files with, 2-9  
directory names, using in, 2-8  
expansion in command forms, 2-9  
Files command, using with, 2-4 to 2-7  
LCopy command, using with, 2-24  
moving files with, 2-66  
practicing with, 2-4 to 2-7  
question mark (?), 2-4, 2-6  
renaming files with, 2-79  
volume names, using in, 2-8

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Network PC User's Guide, Second Edition  
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