



*Personal Computer  
Productivity Series*

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# Cluster Program

Public Volume Manager  
Program Guide

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# Cluster Program

**Public Volume Manager  
Program Guide**

**First Edition (December 1983)**

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# About This Book

This book is a guide to the Public Volume Manager program. It is designed to be used as part of the IBM Personal Computer Cluster program.

The following topics covered in this book are directed to the cluster operator. They are:

- An introduction to Public Volume Manager procedures
- A description of its place in the IBM Personal Computer Cluster program.
- A discussion of the shared disk concept
- Public and private volumes
- Using Public Volume Manager procedures
- Screen description and special keys
- Error message cause and action

# Organization of this book

This book has 2 chapters and 2 appendixes, with an index:

- Chapter 1 contains an overview of the product and the Public Volume Manager program.
- Chapter 2 contains a guide for using the functions supported by the Public Volume Manager program.

Public Volume Manager description screens and special keys are explained in this chapter.

Screen illustrations are used where appropriate.

- Appendix A lists the error messages that may appear during the operation of the product, with recovery procedures.
- Appendix B contains Disk Server Station Drive Lettering information.

# Assumptions

This book assumes that a cluster has been designed and installed before using this product.

This book also assumes that you are familiar with the IBM Personal Computer.

The IBM Personal Computer Cluster Program runs under the Disk Operating System (DOS), Version 2.1. You should be familiar with DOS and its commands before you use this program.

# Related Publications

The following are related publications for this book:

- The *Introduction and Program Setup Guide*
- IBM Personal Computer *DOS Reference* manual, Version 2.1
- IBM Personal Computer *Guide to Operations*

# Requirements

See the *Introduction and Program Setup Guide* for machine requirements and programming requirements.

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# Chapter 1. Introduction

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**Notes:**

# Getting Started

Before you can use the IBM Personal Computer Cluster Program, you must have:

- A working knowledge of the DOS Path parameter. Read the description of Path in the *DOS Reference* manual if you are not familiar with **PATH**.
- A configured cluster
- A minimum of 128K memory
- The IBM Personal Computer Cluster adapter card installed
- An operational DOS 2.1 diskette containing the Public Volume Manager program, or a copy of this diskette in your station's private volume
- Write access to the public volume

Write access is given to the volume Manager station when the installation manager installs the IBM Personal Computer Cluster Program.

The Public Volume Manager station is the single station in the cluster that has write access to the public volume. It can be any station other than the disk server station.

The installation manager is responsible for training the cluster manager in the concepts of volume management.

The cluster manager has the responsibility for maintaining the public volume after it is created by the installation manager. The cluster manager uses the Public Volume Manager program to maintain the public volume.

**This chapter explains the Public Volume Manager procedures that the cluster manager uses to maintain the public volume at the disk server station.**

**When Public Volume Manager procedures are being performed, the disk server station can not be accessed by any other station on the link.**

# **Chapter 2. Using the Public Volume Manager Program**

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The Public Volume Manager program is not used until the cluster is completely installed. You use the Public Volume Manager procedures to:

- Copy files to the public volume
- Erase files from the public volume
- Make directory paths
- Remove directory paths

## **Starting the Public Volume Manager Program**

The disk server station and the public volume manager station must be active before you can use the Public Volume Manager program. Use the following procedure.

1. Reload DOS at the disk server station (system reset from the fixed disk).

This ensures that the public volume drive is active.

When C> is displayed:

Start the Information Transfer program at the disk server station.

2. Type IT DISK
3. Press Enter .
4. Select Item 6 from the Information Transfer Main Menu.

5. Press Enter ←↵.
6. Select Item 1 from the option screen to change drive access.
7. Press Enter ←↵.
8. Select Item 2 (read access) or 4 (read/write access) for each drive at the disk server station.

The Public Volume Manager can now use the drives at the disk server station.

9. Press Esc twice to return to the Information Transfer Main Menu.
10. Select Item 9 from the Information Transfer Main Menu to end the Information Transfer program.
11. Press Enter ←↵.
12. When the program asks if you want to keep the link up:
13. Press Enter ←↵.
14. Go to the Public Volume Manager station.

Follow these steps at the Public Volume Manager station.

1. Reload DOS at the public volume manager station.

When DOS is loaded:

2. Type IT
3. Press Enter ←↵.

4. Select item 9 from the Information Transfer main menu.
5. Press Enter **←↓**.
6. When the program asks if you want to keep the link up, type **1** and press Enter **←↓**.

The Public Volume Manager program supports the IBM color monitor and the IBM monochrome display.

To start the Public Volume Manager program:

7. Type **VM** for color or type **VM NOCOLOR**, if you do not want color.
8. Press Enter **←↓**.

The Public Volume Manager program displays the logo screen.

Type the required information and press Enter **←↓**.

The Public Volume Manager program displays the Volume Manager Main Menu screen.

Item

- 1 Display the disk server station index
- 2 Copy a private volume file to the public volume
- 3 Copy a disk server file to the public volume
- 4 Copy a file from your disk to the public volume
- 5 Erase a file from the public volume
- 6 Make a directory path on the public volume
- 7 Remove a directory path from the public volume
  
- 9 End the Public Volume Manager program

Select an item number: [ ]

F1=Help

**This screen contains a list of all the Public Volume Manager tasks.**

**Press the F1 key for help.**

**The Public Volume Manager program displays the following screen.**

The following keys are used in the Public Volume Manager program:

- |       |   |
|-------|---|
| Tab   | Press <b>→</b> or <b>←</b> to move between input fields on a screen.                                    |
| Enter | After you have typed all necessary information, press <b>↵</b> to give your information to the program. |
| Esc   | Press Esc if you wish to return to the previous input screen.   |
| PgUp  | Press PgUp to display the previous page of information.   |
| PgDn  | Press PgDn to display the next page of information.   |

PgDn=Next

Esc=Return

**This screen describes the action of the special keys used by the Public Volume Manager program. Notice that when these keys are active, their names appear at the bottom of the screen, except for the tab and enter key.**

**Press PgDn to see the next Public Volume Manager description screen.**

F1 Displays more information about the function of the current screen.

The Public Volume Manager program maintains the contents of the public volume on the disk server disk for the link.

The Public Volume Manager program can only be used at the station given public volume write access by the Disk Configurator program. The contents of the public volume can only be changed by using the Public Volume Manager program.

When you use the Public Volume Manager program, no other stations on the link can access the public or their private volume.

PgUp=Previous

Esc=Return

**You see from the help message that you must physically be at the station that has write access to the public volume to use the Public Volume Manager program.**

**Note:** No other station on the link can use the disk server disk when the Public Volume Manager program is being used.



Up to 16 entries can be displayed on one screen. If more than 16 entries exist, press the PgDn key to see the remaining entries.

This screen tells you which stations own a private volume. The stations that do not own a private volume have a size of 0000.

# Copying a Private Volume File to the Public Volume

Use the Drive Letter chart in Appendix B with this procedure.

This procedure allows the cluster manager to copy files from any station's private volume.

Two options are supported by this procedure. (1) You can copy a single file by specifying the name of the file; or (2) You can copy selected files on a private volume by specifying global filename characters.

Refer to the *DOS Reference* manual for a full explanation of global filename characters.

**Note:** You cannot rename the public volume files when doing global copies

1. Select Item 2 from the Public Volume Manager Main Menu.
2. Press Enter .

The Public Volume Manager program displays the Copy a Private Volume File to the Public Volume screen.

The screen asks for private and public file specifications using the DOS path parameter and the filename as descriptors.

3. Press the F1 key, for help.

The Public Volume Manager program displays the help message.

Messages appear at the bottom of the screen while the file is being copied to show the progress of the operation.

Error messages appear if the operation is not successful.

If an error occurs, look it up in Appendix A and do the indicated action.

4. Press Esc to return to the Public Volume Manager Main Menu or retry the operation.

## **Copying a Disk Server File to the Public Volume**

The cluster manager can copy any disk server file to the public volume using this procedure. However you are not allowed to copy more than one disk server file at a time.

1. Select Item 3 from the Public Volume Manager Main Menu.
2. Press Enter .

The Public Volume Manager program displays the Copy a Disk Server File to the Public Volume screen.

The screen asks for disk server file and public file specifications, using the DOS path parameter and the filename as descriptors.

3. Press the F1 key, for help.

The Public Volume Manager program displays the help message.

Messages appear at the bottom of the screen while the file is being copied to show the progress of the operation.

Error messages are posted if the operation is not successful.

If an error occurs, look it up in Appendix A and do the indicated action then retry the operation.

## Copying a File from Your Disk to the Public Volume

With this procedure the cluster manager can copy files to the public volume from a diskette or fixed disk at the Public Volume Manager station.

Two options are supported by this procedure. You can copy a single file by specifying the name of the file or you can copy selected files from a diskette by specifying global filename characters.

Refer to the *DOS Reference* manual for a full explanation of global filename characters.

**Note:** You cannot rename the public volume files when doing global copies

You are not allowed to copy files from the public volume without renaming the copied file; and you must use the single file option.

1. Select Item 4 from the Public Volume Manager Main Menu.
2. Press Enter **←**.

The Public Volume Manager program displays the Copy a File from Your Disk to the Public Volume screen.

The screen asks for your disk file and the public file specifications, using the DOS path parameter and the filename as descriptors.

3. Press the F1 key for help.

The Public Volume Manager program displays the help message.

4. Type the required information and press Enter **←**.

Messages appear at the bottom of the screen while the file is being copied to show the progress of the operation.

Error messages are posted if the operation is not successful.

5. Press Esc if successful to return to the Public Volume Manager Main Menu.

If an error occurs, look it up in Appendix A and do the indicated action, then retry the operation.

# Erasing a File from the Public Volume

Use the drive lettering chart in Appendix B with this procedure.

The Public Volume Manager program has an erase command that allows you to erase a file from the public volume. You can erase one file at a time from the public volume.

1. Select Item 5 from the Public Volume Manager Main Menu.
2. Press Enter **↵**.

The Public Volume Manager program displays the Erase a File from the Public Volume screen.

The screen prompts you to enter the public file specification, using the DOS path parameter and the filename.

3. Press the F1 key, for help.

The Public Volume Manager program displays the help message.

4. Type the required information and press Enter **↵**.

Error messages are posted if the operation is not successful.

5. Press Esc if successful to return to the Public Volume Manager Main Menu.

If an error occurs, look it up in Appendix A and do the indicated action then retry the operation.

# Making a Directory Path on the Public Volume

Use the Drive Letter chart in Appendix B with this procedure. The cluster manager creates directory paths on the public volume using this procedure. This function can be useful in file management.

Seldom used files can be stored in one directory while files that are used more often can be stored in the root directory. This would mean faster access to the public volume for each station in the link.

1. Select Item 6 from the Public Volume Manager Main Menu.
2. Press Enter **↵**.
3. The Public Volume Manager program displays the Make a Directory Path on the Public Volume screen.
4. Type the the directory path.
5. Press Enter **↵**.

One of the following status messages appears on the screen:

The directory path has been made  
The directory path could not be made

If an error occurs, look it up in Appendix A and perform the indicated action.

You can press Esc to return to the Public Volume Manager Main Menu or retry the operation.

# Removing a Directory Path from the Public Volume

Use the drive lettering chart in Appendix B with this procedure.

Before a directory can be removed it must be empty. You cannot remove the root directory or current directory.

1. Select Item 7 from the Public Volume Manager Main Menu.
2. Press Enter **←**.

The Public Volume Manager program displays the Remove a Directory from the Public Volume screen.

3. Type the directory path that you want to remove.
4. Press Enter **←**.

One of the following status messages appears on the screen:

The directory has been removed  
The directory could not be removed

If an error occurs, look it up in Appendix A and perform the indicated action.

You can press Esc to return to the main menu or press Enter **←** to retry the operation.

# Ending the Public Volume Manager Program

Use this procedure to end the Public Volume Manager program.

1. Press the Esc Key to the Public Volume Manager Main Menu.
2. Select Item 9 to end the Public Volume Manager program.
3. Press Enter .

Every station in the cluster must do a system reset after the the Public Volume Manager program has been run. You must do a system reset at the disk server station first. Once the link is up at the disk server station, the other stations can be started.

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# Appendix A. Error Messages

The IBM Personal Computer Cluster Program error messages are listed in alphabetic order.

## **Cannot write to public volume**

**Cause:** You tried to write to the public volume and you do not have write access.

**Action:** Ask the cluster manager to use the Public Volume Manager program to copy files to the public volume.

## **Cannot write to the remote system reset volume**

**Cause:** You tried to write to the remote system reset volume and you do not have write access.

**Action:** If you want to add files to the remote system reset volume, have the cluster manager add the files to the diskette labeled "For Remote System Reset Volume Creation." Then the volume must be erased and created again with the Disk Configurator program. If the files are not used for remote system reset, put them on the public volume.

## **Cluster adapter failed**

**Cause:** A hardware problem occurred while trying to access the link.

**Action:** Follow the steps in the “Problem Determination Procedures” section in the *Guide to Operations* to identify and correct the problem.

## **Cluster adapter missing**

**Cause:** This station does not have a Cluster adapter card.

**Action:** Install an adapter card or contact the installation manager.

## **Directory is full**

**Cause:** The directory does not have enough room for a file.

**Action:** Run CHKDSK to determine if the directory is full or if some other condition caused the error. Erase any unnecessary files to make room for the file or place it in a different directory.

## **Disk failure on the disk server disk**

**Cause:** A hardware problem occurred when you tried to validate the disk server disk drive to create the public volume.

**Action:** Follow the steps in the “Problem Determination Procedures” section in the *Guide to Operations* to identify and correct the hardware problem.

## **Disk server drive is not a fixed disk**

**Cause:** You tried to create a public or private volume on a drive that is not a fixed disk.

**Action:** If the drive you selected is not a fixed disk, select the fixed disk drive. If this is a fixed disk drive, contact your IBM Personal Computer dealer.

## **Disk server station does not respond**

**Cause:** Your station did not receive a response from the disk server station for one of the following reasons: (1) The disk server station is powered off; (2) The Public Volume Manager program is being used; or (3) The disk server station is busy.

**Action:** Verify that the disk server station is on the link and that the Public Volume Manager is not being used. Retry the operation.

## **Disk server station index file could not be loaded**

**Cause:** You tried to access the disk server station index file, DSERVER.TAB, but the file cannot be read. Either the drive is not ready or the diskette has been damaged.

**Action:** Make sure the drive is ready. Copy DSERVER.TAB from the current backup diskette and try again.

## **Disk server station index file not found**

**Cause:** The disk server station index file, DSERVER.TAB, could not be found on the disk server disk drive. If public or private volumes do not exist, the disk server station index is not in any drive on the link.

**Action:** Copy the current backup of the disk server station index, DSERVER.TAB, to the disk server disk. Reload the Disk Configurator program. If you do not have a current backup of DSERVER.TAB, see Appendix B in the *Disk Server Guide* for a description of DSE.

## **Disk server station is busy**

**Cause:** The activity at the disk server station has temporarily exceeded the capacity.

**Action:** Try the function later.

## **Disk write protected**

**Cause:** You tried to write to a diskette that is write-protected.

**Action:** Make sure you are using the correct diskette. If you are using the correct diskette, remove the write-protect tab and retry the operation.

## **Drive access denied**

**Cause:** The drive access at the remote station will not allow you to read or write to it, depending upon your request. Remember, the default is no access.

**Action:** Ask the station operator to use the Information Transfer program to change the drive access.

## **Drive not ready**

**Cause:** The diskette containing your file is in a drive that is not ready.

**Action:** Make sure the disk drive door is closed and retry the operation.

## **Duplicate station**

- Cause:** The new station name or number you specified already exists in the station index or two stations have the address switches set to the same number.
- Action:** Press F10 to display the current names and numbers in the station index. Select a unique entry and retry the operation. If you still experience the problem, follow the steps in the “Problem Determination Procedures” section in the *Guide to Operations*.

## **Duplicate volume**

- Cause:** You have non-disk server files on the disk server disk with reserved file names.
- Action:** Rename, move, or erase any non-disk server files on the disk server disk that have reserved file names. The reserved filenames are PCLPUB.VOL for the public volume, RMTIPL.VOL for remote system reset volume, and \PCLINK.PVT\PCLPVT.V## for private volumes. If you cannot erase a volume using the DOS Erase command, see Appendix B in the *Disk Server Guide* for a description of DSE.

## **ERROR 9999**

**Cause:** PLLSCR.COM cannot be accessed because: (1) it is not on the DOS default drive; (2) it is not in the root directory; (3) your system does not have enough memory for the file; or (4) you are using DOS Version 1.0 or 1.1.

**Action:** Copy PLLSCR.COM to a DOS 2.1 formatted diskette. Make sure it is in the root directory on the DOS default drive.

### **File already exists at the remote station**

**Cause:** You are trying to send a file that already exists at the remote station with the drive and path you specified.

**Action:** Specify another filename or path.

### **File creation error**

**Cause:** The file you are copying or creating already exists as a read-only file or you tried to add a file to the root directory and the root is full.

**Action:** Use the DOS DIR command to see if the directory or file already exists in the directory you specified. Use CHKDSK to see if your directory is full.

## **File not found**

**Cause:** You specified a file that does not exist.

**Action:** Retry the operation with the correct path and filename. If the filename is correct, verify that the diskette is in the correct drive and the drive letter is assigned to the correct volume.

## **Input required for this field**

**Cause:** The cursor is positioned at a field where you must enter information.

**Action:** Type the required information in this field and press Enter .

## **Insufficient disk space**

**Cause:** You are trying to get or send a file, but the disk does not have enough room to receive it.

**Action:** Specify another drive and/or path. Erase any unnecessary files or insert another diskette.

## **Insufficient disk space for the station index**

**Cause:** The disk server disk has too many files or the public volume is too large.

**Action:** Erase or move files from the disk server disk or decrease the size of the public volume.

## **Insufficient disk space for the volume**

**Cause:** You specified a volume size that is larger than than the amount of 34K byte blocks available on the disk server disk or, you specified a diskette drive instead of a fixed disk drive.

**Action:** Display the disk server station status to find out the available size for the volume. Erase any unnecessary files on the disk server disk. Make sure you specify a fixed disk drive.

## **Insufficient disk space in private volume**

**Cause:** You are trying to copy a file to the private volume and you don't have enough space.

**Action:** Erase any unnecessary files in the private volume or increase the size.

## **Insufficient disk space on internal use files drive**

**Cause:** You specified a disk that does not have enough space for the internal use files. This may occur when you are reading a station's file directory.

**Action:** Erase any unnecessary messages from your message file and free the erased message space to make room on the disk. If the error still occurs, end the Information Transfer program and erase any unnecessary files on the disk.

When you are reading a station's file directory, you can put a blank diskette into your internal use files drive. If your internal use files are on a private volume, contact the cluster manager to increase the size of your volume.

## **Insufficient space in the public volume**

**Cause:** The public volume is too small for the file you are trying to copy.

**Action:** Erase any unnecessary files in the public volume or increase the size of the public volume.

## **Insufficient space on the public volume for system files**

**Cause:** The public volume is too small to contain all of the files on your diskette in drive A.

**Action:** Specify a greater number of 32K byte blocks for the public volume and retry the operation.

## **Internal use files read or write error**

**Cause:** Information Transfer cannot access the files on the internal use files disk.

**Action:** If the disk is not write-protected, it is damaged. Run CHKDSK, copy the internal use files from your backup copy, and retry the operation.

## **Internal use files disk write protected**

**Cause:** Information Transfer tried to write to the internal use files disk, which is write-protected.

**Action:** Make sure you are using the correct disk. If so, remove the write-protect tab and try again.

### **Internal use files drive not ready**

**Cause:** The drive door for the internal use files is open or a diskette is not in the drive.

**Action:** Close the drive door, place the correct diskette in the drive and retry the operation or, change the internal use files drive.

### **Internal use files may not be copied to the public volume**

**Cause:** You are trying to copy the internal use files to the public volume.

**Action:** MSG.SYS and TBL.SYS cannot be copied to the public volume.

### **Internal use files not found**

**Cause:** MSG.SYS and TBL.SYS were not found in the drive you specified as the internal use files drive or they are not together in the root directory.

**Action:** Move these files to the drive you specified. Make sure they are together in the root directory and retry the operation.

### **Invalid date**

**Cause:** The date you typed is not valid.

**Action:** Retry the operation with a valid date.

## **Invalid DISK parameter**

**Cause:** The link is active and you specified the incorrect Information Transfer parameter.

**Action:** When the link is active and you initialize Information Transfer again, you must enter it the same way (either IT or IT DISK).

## **Invalid disk server station index found**

**Cause:** The station index, DSERVER.TAB, contains information that is not valid or one of your diskette drives is assigned to the fixed disk.

**Action:** Make sure the drive letters are assigned correctly. Copy the current backup of the disk server station index, DSERVER.TAB, to the disk server disk. Reload the Disk Configurator program. If you do not have a current backup of DSERVER.TAB, see Appendix B in the *Disk Server Guide* for a description of DSE.

## **Invalid DOS version system diskette**

**Cause:** The diskette containing the system files you are copying to the public volume or to the remote system reset volume is DOS Version 1.0 or 1.1.

**Action:** Put a DOS Version 2.1 diskette containing the system files into drive A and retry the operation.

## **Invalid drive**

**Cause:** You specified a drive that: (1) is not between A and Z, (2) does not exist, or (3) you attempted to assign drive access to the public volume or remote system reset volume drives.

**Action:** Specify a valid drive and retry the operation.

## **Invalid drive specification**

**Cause:** You entered a DOS command to access the public volume, the remote system reset volume, or your private volume, but the volumes do not exist.

**Action:** Check your system reset drive for the CONFIG.SYS file. This file must specify DRIVE=RIODRV.COM. Check to see if the cluster manager is using the Public Volume Manager program. Verify that the link has been activated from the disk server station.

## **Invalid filename**

**Cause:** One or more characters you entered for the filename is not a valid filename character.

**Action:** Check the spelling of the filename you entered. Refer to your DOS manual for valid filename characters. Retry the operation.

### **Invalid path**

**Cause:** You tried to remove the current or root directory path on the public volume.

**Action:** Use DOS to change the current directory for the public volume. Then, restart the Public Volume Manager program and erase the directory you changed. You cannot remove the root directory.

### **Invalid private volume size**

**Cause:** You entered zero for the private volume size.

**Action:** Specify a one or a higher number for the private volume size and retry the operation. Use the disk server station status to help you determine the correct size of the private volume.

### **Invalid public volume size**

**Cause:** You specified a public volume size less than two 34K byte blocks.

**Action:** Specify two or more 34K byte blocks for the public volume size and retry the operation.

## **Invalid station**

**Cause:** (1) The station number you specified is greater than 63; (2) The name begins with a number; (3) The entry does not exist in the station index; or (4) You are trying to get or send a file or message to your own station.

**Action:** Check the station index for the correct entry and retry the operation.

## **Invalid time**

**Cause:** The time you entered is not valid.

**Action:** Enter a valid time between 00:00 and 23:59.

## **Link initialization failed**

**Cause:** The cluster adapter card failed to initialize.

**Action:** Follow the steps in the “Problem Determination Procedures” section in the *Guide to Operations* to identify and correct the problem.

### **Link is busy**

**Cause:** The activity on the link has temporarily exceeded the capacity.

**Action:** Try the function later.

### **Link is not active**

**Cause:** You ended the Information Transfer program and did not keep the link active to receive messages and files.

**Action:** Load the Information Transfer program from the disk server station. End the session and specify **1 (Yes)** to continue message and file transfer.

### **Link should not be active**

**Cause:** You ended the Information Transfer program and kept the link active when you ended it.

**Action:** Load the Information Transfer program from the disk server station. End the session and specify **2 (No)** to deactivate the link.

## **Message file cannot be copied**

**Cause:** You are trying to get or send the file, MSG.SYS.

**Action:** Do not specify MSG.SYS. This file cannot be sent to or copied from another station.

## **Message file not found**

**Cause:** MSG.SYS is not in the internal use files drive.

**Action:** Move MSG.SYS to the drive you specified or use Information Transfer to change the internal use files drive.

## **Message log file not found**

**Cause:** TBL.SYS is not in the drive you specified.

**Action:** Move TBL.SYS to the drive you specified or use Information Transfer to change the internal use files drive.

## **Path not found**

**Cause:** DOS was unable to find the directory path you specified.

**Action:** Refer to your *DOS Reference* manual for a complete description of the path structure. Specify the correct path and retry the operation.

## **Private volume has been erased**

**Cause:** The disk server station index shows that the station owns a private volume, but it cannot be found on the disk server disk.

**Action:** Notify the owner of the private volume. Use the Disk Configurator program to erase the private volume information from the disk server station index and create the private volume again.

## **Program files could not be loaded**

**Cause:** You are trying to access the Information Transfer program from your station. Either the drive is not ready or the disk has been damaged.

**Action:** Make sure that the drive is ready. If the drive is ready, run CHKDSK and copy the program files from your backup copy and retry the operation. The following files must be in the root directory: IT.COM, PCMDP.COM or PCMDISK.COM, PDT.COM, and PLLSCR.COM.

## **Program files not found**

- Cause:** The program files were not found in the root directory on the DOS default drive.
- Action:** Put the program files in the correct drive or copy them to the DOS default drive. The following files must be in the root directory of the default drive: IT.COM, PCMDP.COM, PCMDISK.COM, PDT.COM, and PLLSCR.COM.

## **Program too big to fit into memory**

- Cause:** The program is larger than your available unused memory.
- Action:** Your system does not have enough unused memory to execute the command. Erase any unnecessary files.

## **Public directory is not empty**

- Cause:** You tried to remove a sub-directory that still contains entries for files or other sub-directories.
- Action:** You cannot remove a directory unless it is empty and you cannot remove a current directory. Contact the cluster manager.

### **Public file is read only**

**Cause:** You tried to erase a read-only file from the public volume.

**Action:** You cannot erase a file from the public volume. Contact the cluster manager.

### **Public file or path creation error**

**Cause:** The file or directory you are copying or creating already exists as a read-only file or in a path on the public volume. Or you tried to add a directory or file to the root directory on the public volume and it is full.

**Action:** Use the DOS DIR command to see if the directory or file already exists in the directory you specified. Use CHKDSK to see if your directory is full.

### **Public/private volume device driver is not loaded**

**Cause:** This station does not have a public or private volume device driver installed.

**Action:** Specify DEVICE=RIODRV.COM in the configuration file (CONFIG.SYS). Make sure CONFIG.SYS and RIODRV.COM are on the same diskette. Use the Disk Configurator to create the public volume and a private volume for this station. Restart DOS.

## **Public/private volume device driver should not be active**

**Cause:** The problem occurred when you restarted DOS. You either had the remote system reset switch on or you had a CONFIG.SYS file in the system drive (drive A) that contained the parameter  
DEVICE=RIODRV.COM.

**Action:** Turn off the remote system reset switch and put a DOS 2.1 or later system diskette into drive A. Be sure that the system diskette does not have a CONFIG.SYS file with  
DEVICE=RIODRV.SYS. Restart DOS at the disk server station again.

## **Public volume does not exist**

**Cause:** A public volume does not exist.

**Action:** Restart DOS. Use the Disk Configurator program to create the public volume.

## **Read or write error**

**Cause:** This is a media error which usually means that the diskette is damaged and must be reformatted or discarded.

**Action:** Run CHKDSK to determine the error.

### **Read or write error at disk server station**

**Cause:** This is a media error which usually means that the diskette is damaged and must either be reformatted or discarded.

**Action:** Run CHKDSK to determine the error.

### **Read or write error with non-DOS diskette**

**Cause:** You are trying to access a file with a disk that has not been formatted properly.

**Action:** Reformat the disk with DOS Version 2.1.

### **Remote station does not respond**

**Cause:** You are trying to get or send a file or message and the station does not respond or the alternate station does not respond.

**Action:** Ask the station operator to activate Information Transfer. You cannot specify your own station.

### **Remote station is busy**

**Cause:** You are trying to get or send a file or message and the activity at the station has temporarily exceeded the capacity.

**Action:** Retry the operation.

### **Remote station's drive not ready**

**Cause:** You are trying to get or send a file or message. Either the drive is not ready or the diskette is not inserted correctly.

**Action:** Contact the station you are trying to access. Make sure the drive door is closed and the diskette is properly inserted.

### **Remote station's message file not found**

**Cause:** You are trying to send a message, but the message file, MSG.SYS, could not be found. The message is not sent.

**Action:** Make sure the file named MSG.SYS is in the station's internal use files drive. Retry the operation.

### **Remote station's private volume has been erased**

**Cause:** You are trying to get or send a file to a private volume and it has been erased.

**Action:** Notify the owner of the private volume that it has been erased. Use the Disk Configurator program to create the private volume again.

## **Remote system reset files not found**

**Cause:** The Disk Configurator program tried to copy the remote system reset files to the remote system reset volume, but they were not on the diskette in drive A. The remote system reset files required are CONFIG.SYS and @#CLUSTR.COM.

**Action:** Make sure the correct diskette is in the drive. Retry the operation.

## **Remote system reset volume has been erased**

**Cause:** The disk server station index shows that the remote system reset volume exists, but it cannot be found on the disk server disk.

**Action:** Notify the cluster manager. Use the Disk Configurator program to erase the remote system reset volume information from the disk server station index and create the volume again.

## **Screen text file not found**

**Cause:** The file, PLLSCR.COM, was not found in the root directory on the DOS default drive.

**Action:** Insert the program diskette with PLLSCR.COM and retry the operation.

### **Screen text file drive not ready**

**Cause:** The DOS default drive is not ready.

**Action:** Make sure the disk drive door is closed.  
Retry the operation.

### **Start date greater than end date**

**Cause:** The end date must be after the start date.

**Action:** Enter the correct dates.

### **Start time greater than end time**

**Cause:** The end time must be after the start time.

**Action:** Enter the correct times.

### **Station index file could not be loaded**

**Cause:** The station index file, TBL.SYS, could not be accessed because the drive is not ready or the disk has been damaged.

**Action:** Make sure that the drive is ready. If it is, run CHKDSK, copy TBL.SYS from your backup diskette, and retry the operation.

## **System files required**

**Cause:** The Disk Configurator program tried to copy the system files to the remote system reset volume, but they were not on the diskette in drive A. The system files are: COMMAND.COM, CONFIG.SYS, IBMBIOS.COM, IBMDOS.COM, and RIODRV.COM.

**Action:** Make sure you have the correct diskette in the drive. Retry the operation.

## **This station does not own a private volume**

**Cause:** The station you specified does not have a private volume.

**Action:** Use the disk configurator to create a private volume for the station, if the station needs and wants one.

## **Too many files are opened**

**Cause:** Too many files are open at this station.

**Action:** Increase the number in the FILES= command in the configuration file (CONFIG.SYS). The default is 8 at remote stations and 30 at the disk server. Usually the defaults are sufficient. Restart DOS.

### **Too many files are opened on the remote station**

**Cause:** Too many files are open at the remote station.

**Action:** Increase the number in the FILES= command in the configuration file (CONFIG.SYS). The default is 8; usually the defaults are sufficient. Restart DOS.

### **Unsupported station number**

**Cause:** Your hardware switches are set to a number greater than 63.

**Action:** Follow the steps in the “Problem Determination Procedures” section in the *Guide to Operations* to identify and correct the problem.

### **Volume manager cannot run on this station**

**Cause:** You are trying to use the Public Volume Manager program from a station that does not have public volume write access.

**Action:** The Public Volume Manager program can only be used from a station that has been given write access by the Disk Configurator program. Contact the cluster manager to use the Public Volume Manager program.

## **Wrong configuration file**

**Cause:** The CONFIG.SYS file on the remote system reset volume did not have the first entry set to DEVICE=@#CLUSTR.COM.

**Action:** Make sure the correct diskette is in the drive where the first CONFIG.SYS parameter is  
DEVICE=@#CLUSTR.COM.

## **Wrong device driver**

**Cause:** The device driver @#CLUSTR.COM is not the same one that was on the Cluster Program diskette.

**Action:** Copy @#CLUSTR.COM from the Cluster Program diskette onto the "Remote system reset volume" diskette and rerun the Disk Configurator program to create a remote system reset volume.

# Notes:

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# Appendix B. Disk Server Station Drive Lettering Chart

The charts on the following pages show the drive lettering within a disk server station cluster. The drive lettering is determined by the number of drives on your IBM Personal Computer and the type of system reset done at your station.

First determine:

- The type of system reset done at your station.
- The chart that applies to your station.
- The number and type of drives at your station.

Follow the row that matches your station.

You can determine the drive letters for your station, for the public volume, the remote system reset volume, and your station's private volume.

# Notes:

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**\*\* Local system reset  
(with remote system reset volume and without private volumes)**

	Diskette # 1	Diskette # 2	Fixed disk # 1	Fixed disk # 2	Remote system reset volume	Public volume	Private volume
1 diskette drive 0 fixed disks	A/B	N/A	N/A	N/A	D	C	N/A
1 diskette drive 1 fixed disk	A/B	N/A	C	N/A	E	D	N/A
1 diskette drive 2 fixed disks	A/B	N/A	C	D	F	E	N/A
2 diskette drives 0 fixed disks	A	B	N/A	N/A	D	C	N/A
2 diskette drives 1 fixed disk	A	B	C	N/A	E	D	N/A
2 diskette drives 2 fixed disks	A	B	C	D	F	E	N/A

\*\* System reset is from a disk or diskette at your station.

**\*\* Remote system reset  
(with private volumes)**

	<b>Diskette # 1</b>	<b>Diskette #2</b>	<b>Fixed disk # 1</b>	<b>Fixed disk #2</b>	<b>Remote system reset volume</b>	<b>Public volume</b>	<b>Private volume</b>
0 diskette drive 0 fixed disks	N/A	N/A	N/A	N/A	A/B	C	D
1 diskette drive 0 fixed disks	B	N/A	N/A	N/A	A	C	D
1 diskette drive 1 fixed disk	B	N/A	C	N/A	A	D	E
1 diskette drive 2 fixed disks	B	N/A	C	D	A	E	F
2 diskette drives 0 fixed disks	B	C	N/A	N/A	A	D	E
2 diskette drives 1 fixed disk	B	C	D	N/A	A	E	F
2 diskette drives 2 fixed disks	B	C	D	E	A	F	G

\*\* System reset is from the remote system reset volume at the disk server.

**\*\* Local system reset**  
 (with remote system reset volume and with private volumes)

	Diskette # 1	Diskette # 2	Fixed disk # 1	Fixed disk # 2	Remote system reset volume	Public volume	Private volume
1 diskette drive 0 fixed disks	A/B	N/A	N/A	N/A	E	C	D
1 diskette drive 1 fixed disk	A/B	N/A	C	N/A	F	D	E
1 diskette drive 2 fixed disks	A/B	N/A	C	D	G	E	F
2 diskette drives 0 fixed disks	A	B	N/A	N/A	E	C	D
2 diskette drives 1 fixed disk	A	B	C	N/A	F	D	E
2 diskette drives 2 fixed disks	A	B	C	D	G	E	F

\*\* System reset is from a disk or diskette at your station.

**\*\* Local system reset**  
 (no remote system reset volume and no private volumes)

	Diskette # 1	Diskette # 2	Fixed disk # 1	Fixed disk # 2	Remote system reset volume	Public volume	Private volume
1 diskette drive 0 fixed disks	A/B	N/A	N/A	N/A	N/A	C	N/A
1 diskette drive 1 fixed disk	A/B	N/A	C	N/A	N/A	D	N/A
1 diskette drive 2 fixed disks	A/B	N/A	C	D	N/A	E	N/A
2 diskette drives 0 fixed disks	A	B	N/A	N/A	N/A	C	N/A
2 diskette drives 1 fixed disk	A	B	C	N/A	N/A	D	N/A
2 diskette drives 2 fixed disks	A	B	C	D	N/A	E	N/A

\*\* System reset is from a disk or diskette at your station.

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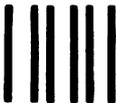
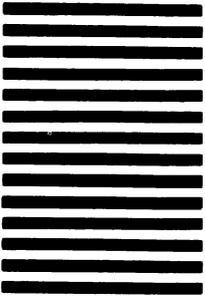
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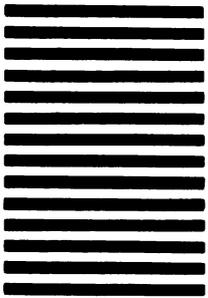
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