Cluster Program

Information Transfer Program Guide

IBM

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Information Transfer
Program Guide

About This Book

This book is a guide to the Information Transfer program, designed to be used as part of the Cluster Program.

The topics in this book are written for the station operators:

- An introduction to Information Transfer

- Its place in the Cluster Program

- A discussion of the shared disk concept

- Public and private volumes

- Using Information Transfer

- Screen description and special keys used with the program

- Using Information Transfer from the disk server station

- Error message cause and action

Organization of This Book

This book has two chapters and three appendixes, with an index:

- Chapter 1 contains an overview of the product and the Information Transfer program. This chapter includes material to get you started using the Information Transfer program.

- Chapter 2 contains a guide for using the functions supported by Information Transfer, including a description of screens and special keys. This chapter also explains how to use Information Transfer from the disk server station.

- Appendix A lists the error messages with recovery procedures.

- Appendix B contains a table with drive letter designations for system units in a cluster.

- Appendix C contains a sample for Automating Information Transfer.

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.

Notes:

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Chapter 1. Introduction

Contents

Notes:

Information Transfer Program Overview

This chapter explains the Information Transfer program and the functions you can perform with it.

The Information Transfer program is one of three programs that form the Cluster Program. The Cluster Program connects a group of IBM Personal Computers. These computers, called stations, are linked together to transfer messages and files between stations. The product runs under the Disk Operating System (DOS), Version 2.1. You should be familiar with DOS before you use the Cluster Program.

The installation manager installs the hardware and the programs that allow your computer to be part of the cluster. Stations can communicate with each other after they have been "linked" together. For convenience, you can build a a station index of names for each station number in the cluster.

As part of the cluster, Information Transfer allows you to:

- Send messages to other stations in the cluster

- Display messages that have been sent to your station from other stations

- Send files to other stations

- Copy files from other stations

- Display a station's file directory

- Change the station options

- Display or edit a station index

Clusters

Clusters can be set up with or without a disk server station.

The disk server station must have a fixed disk. The fixed disk is divided into several areas. One area contains a set of files called the *public volume*. All stations in the cluster can read the files on the public volume.

The second area contains an optional *remote system reset volume*. This volume contains Cluster Program files, system files, and optional applications. The remote system reset volume can be used by any station in the cluster, but the drive letter varies according to your configuration.

The third area contains many parts. These parts are called *private volumes*. Each station can have one private volume.

Any volume is like having another diskette drive. To determine the drive letter, see the Drive Letter Chart in Appendix B.

If you have a cluster without a disk server station, you cannot have volumes. However, you can still use Information Transfer to send and receive messages and files, and display file directories of other station's drives.

How to Use Volumes

The type of system reset you perform determines the drive letters for your volumes. A *system reset* is how you start or load DOS (Ctl-Alt-Del keys.) When you load DOS from the remote system reset volume, you're doing a remote system reset. When you load DOS from your disk drives, it's a local system reset.

You don't have to have any drives at your station to use the public volume, the remote system reset volume, and private volumes. If you do have drives, DOS treats these volumes as if they were additional drives.

You use volumes as if they were disk drives at your station. For example, if you don't have drives at your station and you are on the link, DOS treats the remote system reset volume as drive A. The same is true for a private volume. When your station is on the link and has a private volume, DOS treats your private volume as drive D. (The public volume becomes drive C.)

> **Note:** The drive letter varies according to your configuration. See the drive letter chart in Appendix B to determine the drive letter for each of the volumes. Then you must change the default drive or specify it in your commands.

The link must be activated at the disk server station for other stations to use volumes. If changes are made at the disk server station, you must restart DOS for the changes to be effective at your station.

How Volumes are Assigned

The installation manager gives your station access to these volumes by making an entry for you in the disk server station index. The *disk server station index* is a listing of the stations on the link with their station number and private volume size.

The installation manager decides which stations need private volumes and what size they should be before the cluster is configured. As requirements change, the installation manager or cluster manager can add or remove stations from the disk server station index.

About Files

Let's see how files and directories fit into the cluster.

Operation of the Cluster Program depends on files. Files must be copied to your station to run the programs. Files used by the Information Transfer program are called internal use files.

The internal use files, MSG.SYS and TBL.SYS, are contained on the IBM Personal Computer Cluster Program diskette. These files are updated each time someone sends you a message. They must be together in a root directory.

Because the public and private volumes are treated like drives at your own station, they also have directories with files in them. You must know the path, or direction, to get to the files in the directories. See the *DOS Reference* manual for a complete description of file types.

Important: Do not direct data to a write-protected diskette, the public volume, or the remote system reset volume. This may result in an unexpected error.

Notes:

Chapter 2. Using Information Transfer

Contents

Introduction

This chapter explains all of the functions you can use
with the Information Transfer program. They are
described in the order they appear on the Information
Transfer Main Menu.

Before you can use Information Transfer, your station
must be "active" on the link. That tells the cluster that
you are ready or able to receive messages and files.
Another station on the link will not be able to reach
you if your station is not active.

Think of this situation like your phone. You can't use
your phone unless you have a dial tone. Activating the
link is like telling the cluster that your computer is
ready.

Getting on The Link

You must activate the link to use the Information Transfer program. The installation manager has copied the Cluster Program files to a diskette for your station. If you have disk drives, insert the diskette into the default drive and do a system reset (Ctl-Alt-Del keys). If you do not have disk drives, these files are on the remote system reset volume.

To activate the link:

1. Type **it**

   Type **it nocolor** to display the program without color.

2. Press Enter ◄─┘ to activate the link.

   Remember: The Cluster Program files must be in the root directory of the DOS default drive.

The IBM logo screen appears, and you are ready to use
Information Transfer.

```
Personal Computer
```

```
Cluster
Information Transfer Program
Version 1.00
```

```
(C)Copyright IBM Corporation, 1983

Date: [10/04/83]        Time: [00:27]
```

```
F1=Help
Press ⏎ to continue                                    Esc=Return
```
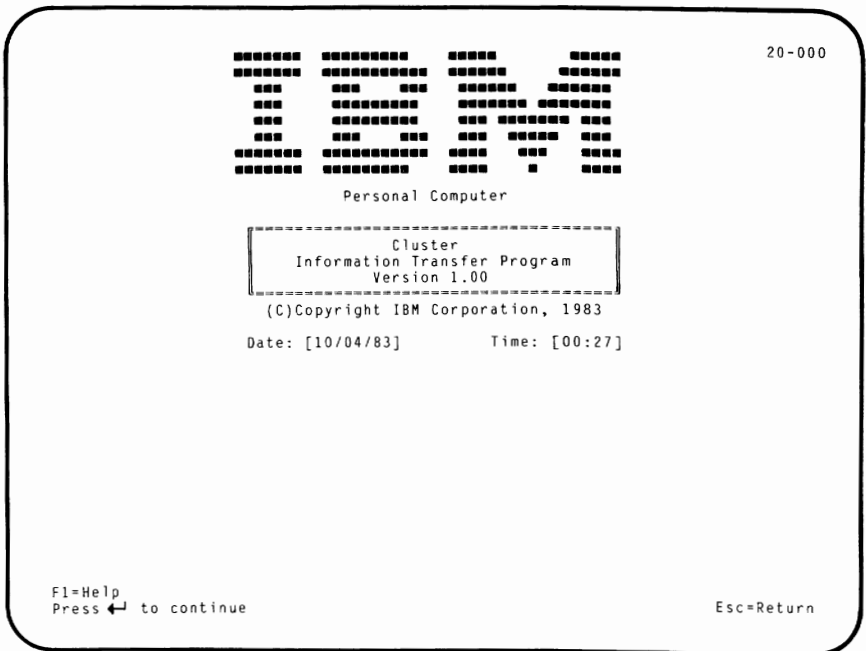
Check the date and time to make sure they are correct.

Set the date in month, day, year format. For example:

Type 07/04/83 for July 4, 1983

Press the Tab key to move between the input fields on the screen.

Set the time in continental form; that is, any number between 00:00 and 23:59 for the hours and minutes. You cannot enter the seconds. For example:

Type 13:05 for 1:05 P.M.

> **Note:** It is important to set the date and time. This sets the clock for the current session of Information Transfer. Messages you receive are identified by the date and time you enter.

Press Enter ◄─┘ to continue.

The Information Transfer Main Menu appears on the screen.

```
                        Information Transfer Main Menu                    20-001

             Item

              1  Send a message
              2  Display or erase messages
              3  Send a File
              4  Get a file
              5  Read a station's file directory
              6  Change the options for this station
              7  Display or edit the station index

              9  End the Information Transfer program

             Select an item number: [ ]




   F1=Help
```

Use the Information Transfer program to perform the functions given in the menu. Select the number next to the item on the Information Transfer Main Menu. Type any number between 1 and 7. Use item number 9 when you want to end the Information Transfer program and return to DOS.

Special Purpose Keys

Notice the **F1=Help** that appears near the bottom of the screen on the Information Transfer Main Menu. The F1 key is used to display help messages and the Information Transfer description screens. To get familiar with these keys, let's try the F1 key.

If you are already familiar with the Information Transfer program's special purpose keys, go to the section for the procedure you want to perform.

Press F1 to display the first Information Transfer Description screen.

```
                  Information Transfer Description              20-006
           The Information Transfer program connects
           your station with other stations.

           The following keys are used:

           Tab     Press →| or |← to move between
                   input fields on a screen.

           Enter   After you have typed all necessary
                   information, press ←┘ 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 keys that are used with the
Information Transfer program. Notice that when a key
can be used, its name appears at the bottom of the
screen. This is true of all keys, except the Tab (——▶|)
key and the Enter (◀—┘) key.

Press PgDn to see the following screen:

```
            Information Transfer Description              20-007

      The function keys may be used only when
      displayed on the screen:

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

      F3    Re-displays your previous message for
            sending.

      F5    Displays a list of messages received.

      F7    Broadcasts your message to all stations
            connected to your station.

      F9    Erases the currently displayed message.

      F10   Displays the station index on the
            current screen.




  PgUp=Previous              PgDn=Next              Esc=Return
```

This screen tells you about the function keys. Note
that they are only active when their names appear at the
bottom of the screen.

Press the PgDn key to see the last Information Transfer
program description screen.

```
┌─────────────────────────────────────────────────────────────┐
│              Information Transfer Description        20-008   │
│                                                              │
│         The Information Transfer program is used to:         │
│                                                              │
│         .  Send messages to other stations connected         │
│            to your station.                                  │
│                                                              │
│         .  Display messages that have been sent to           │
│            your station from other stations.                 │
│                                                              │
│         .  Send files to other stations connected            │
│            to your station.                                  │
│                                                              │
│         .  Copy files from other stations connected          │
│            to your station.                                  │
│                                                              │
│         .  Display the file directory of a station's         │
│            disk.                                             │
│                                                              │
│                                                              │
│                                                              │
│                                                              │
│                                                              │
│  PgUp=Previous                              Esc=Return       │
└─────────────────────────────────────────────────────────────┘
```

This screen contains a description of the functions
supported by the Information Transfer program.

Press Esc to return to the Information Transfer Main
Menu.

You can select an item from the menu to perform the
function you want.

Decide what you want to do and type the item number.

Press Enter ◄─┘ .

The rest of this chapter presents a description of each
function of the Information Transfer program. You can
read each individual section for whatever procedure you
want to perform. The descriptions are given in the
order they appear on the Information Transfer Main
Menu.

Notes:

Sending a Message

You can send a message to another station or to all stations in the cluster. A message sent to all stations is a *broadcast*.

To send a message, select Item 1 from the Information Transfer Main Menu and press Enter ◄┘. The following screen appears:

```
                        Send a Message                        20-102
                        Station: [              ]
                Alternate station: [              ]
                   Type in message:
        [                                                    ]
        [                                                    ]
        [                                                    ]
        [                                                    ]
        [                                                    ]
        [                                                    ]




    F1=Help                F3=Display previous message        F7=Broadcast
    F10=Display station index                                 Esc=Return
```

To send a message:

1. Type the station name or number where you want to send a message.

   a. The name must be in your station index and can be 1 to 15 characters.

   b. The number can be 00 to 63.

   If you are going to broadcast a message, leave the field blank.

   Press F10 to display your station index.

2. Type an alternate station name or number if you want the message to be sent to that alternate station when the first station is not available.

   Note: When a message is sent to an alternate station, the message becomes part of that station's message file and the original station does not see it.

3. Type the message.

   The message can be up to eight lines long (512 characters). Another station receives the message exactly as it looks when you type it on this screen.

4. Send the message.

   Press Enter ◄─┘ to send the message to one station on the cluster.

   Press F7 to broadcast the message to all stations on the cluster.

Press F3 to display the last message you sent. The message is displayed in the message input field and can be edited as if you had just typed it.

When you send a message to only one station, you receive an acknowledgement at your station that the message has been received.

When you broadcast a message, you do not receive an acknowledgement from the receiving stations.

When you finish sending a message, one of the following status messages appears near the bottom of the screen:

```
The message has been sent
The message could not be sent
The message has been sent to the alternate station
The message has been sent to all stations
```

If the message could not be sent, an error message appears below this status message. To correct the error, see Appendix A.

A station must be active on the link to receive a message, but the Information Transfer program does not have to be running. For a complete description of ending the Information Transfer session and keeping the link active, see "Ending the Information Transfer Program" on page 2-58.

Displaying or Erasing Messages

Select Item 2 from the Information Transfer Main Menu to display or erase the messages you have received.

Press Enter ◄┘ .

```
                    Display or Erase Messages                    20-201
          Item

               1   Display the message log
               2   Display all messages
               3   Display messages by station
               4   Display messages by date
               5   Erase messages
               6   Free erased message space

          Select an item number: [ ]

                                                          Esc=Return
```
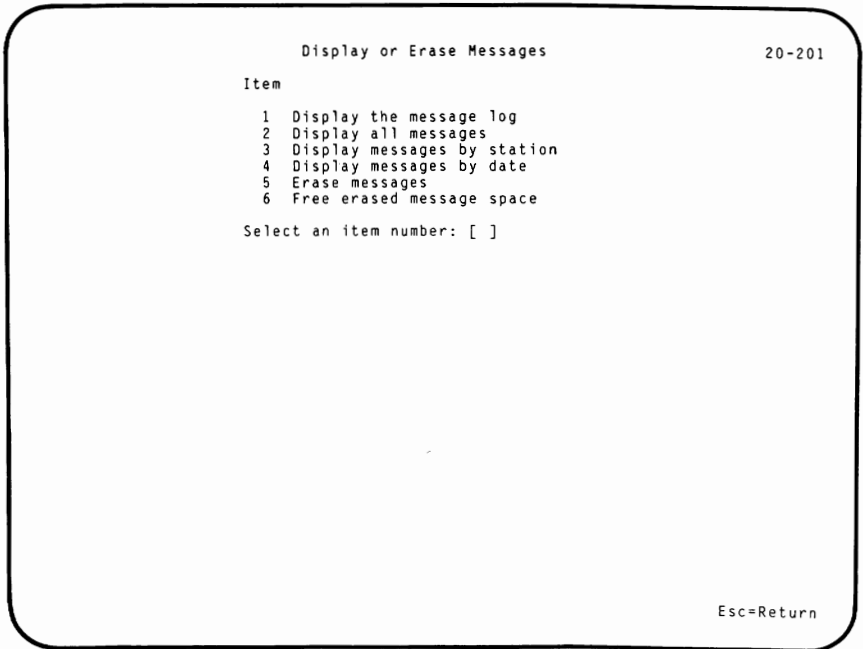
The procedures are described in the following pages. To use any of these functions:

- Select the Item number.

- Press Enter ⬅.

When the procedure is complete, you can return to this menu by pressing Esc.

Press Esc to return to the Information Transfer Main Menu.

All of the messages at your station are stored in the message file, MSG.SYS. The Information Transfer program uses this file when you display or erase messages.

> **Note:** When you select Item 2 from the Information Transfer Main Menu to display or erase messages, you must not remove the diskette containing MSG.SYS from the internal use files drive until you press Esc to return to the Main Menu. If you remove the diskette and insert a new diskette into the internal use files drive, the data on the new diskette will be over-written and unusable.

You can display messages by date, time, or station. Messages can be erased as they are displayed or by using Item 5 on the Display or Erase Messages menu.

After you erase messages, you can compress the freed space in your message file by choosing Item 6 from the Display or Erase Messages menu.

A log of the messages can also be displayed. The message log is a list of all messages you have received in your message file.

Displaying the Message Log

To display the message log for your station:

1. Select Item 1 from the Display or Erase Messages menu.

2. Press Enter ◄┘.

A sample screen follows:

```
┌─────────────────────────────────────────────────────────────────────────┐
│                    Display the Message Log                     20-216     │
│  |    Date     |   Time   |   From Station    |      Starting Text       |│
│  -----------------------------------------------------------------------  │
│     01/01/80      00:01      E. J. Carter        help                     │
│     10/04/83      00:01      E. J. Carter        I hope you are satisf    │
│     01/01/80      00:05      E. J. Carter        The quick brown fox j    │
│     01/01/80      00:07      E. J. Carter        The report you gave w    │
│     01/01/80      00:14      E. J. Carter        Let's eat,I'm getting    │
│     01/01/80      00:16      E. J. Carter        Now is the time for a    │
│     01/01/80      00:17      E. J. Carter        The quick brown fox j    │
│  **************************** End of Log ****************************      │
│                                                                           │
│                                                                           │
│                                                                           │
│                                                                           │
│                                                                           │
│                                                                           │
│                                                                           │
│                                                            Esc=Return      │
└─────────────────────────────────────────────────────────────────────────┘
```

In this example, notice "End of Log" appears after the last message.

The log contains:

- The date the message was received

- The time the message was received

- From station: the name or number of the sending station

- Starting text: the first 21 characters of each message

The screen displays up to 18 messages in the order they were received. The first message in your message log is the one you received first (or the oldest message). The last message is the one you have just received (or the newest message).

When you have more than 18 messages in your message log, use the PgDn key to see the next page of messages. Use the PgUp key to return to the previous page of messages.

To correct an error, see Appendix A.

When you finish displaying your message log, press Esc to return to the previous screen.

Displaying All Messages

To display all of the messages in your message file:

1. Select Item 2 from the Display or Erase Messages menu.

2. Press Enter ↵ to display all of your messages.

One message at a time is displayed, in the order received at your station, from the newest message to the oldest message. Because only one message is displayed at a time, you must use the PgDn key to see the next message. Use the PgUp key to see the previous message.

Each message contains the following information:

- Station name or number sending the message

- Date the message was received

- Time the message was received

- The message

```
                        Display All Messages                    20-226

                        From:   01

                        Date:   01/01/80

                        Time:   00:07

      The report you gave was excellent. Please send me a copy as soon
      as possible.

















    F9=Erase message
    PgUp=Previous                    PgDn=Next                  Esc=Return
```

Press F9 to erase messages you don't want to keep.
The message is cleared from the screen and you see:

The message has been erased

To correct an error, see Appendix A.

Press Esc to return to the previous screen.

Displaying Messages by Station

1. Select Item 3 from the Display or Erase Messages menu to display messages received from a specified station.

2. Press Enter ◄┘ .

   Press F5 to display your message log on the bottom of the screen. You can page up or down within the log using PgUp or PgDn.

3. Type the station name or number.

4. Press Enter ◄┘ to display the messages.

One message at a time appears, in the order received, from the station you selected.

Press PgDn to display the following messages, if you have more than one.

Press PgUp to page back to the previous messages, if it applies.

Press F9 to erase messages you don't want to keep.

Here is an example of the message log on the screen.

```
                    Display Message by Station                    20-232
                    Station: [                    ]




|    Date    |   Time   |   From Station   |      Starting Text      |
--------------------------------------------------------------------------------
   01/01/80     00:01     E. J. Carter       help
   10/04/83     00:01     E. J. Carter       I hope you are satisf
   01/01/80     00:05     E. J. Carter       The quick brown fox j
   01/01/80     00:07     E. J. Carter       The report you gave w
   01/01/80     00:14     E. J. Carter       Let's eat,I'm getting
   01/01/80     00:16     E. J. Carter       Now is the time for a
   01/01/80     00:17     E. J. Carter       The quick brown fox j
********************************* End of Log *********************************

F1=Help
                                                              Esc=Return
```

To correct an error, see Appendix A.

Press Esc to return to the previous screen.

Displaying Messages by Date

1. Select Item 4 on the Display or Erase Messages menu.

2. Type the starting date.

   The date you type must be in month, day, year format. For example:

   `Type 06/26/83 for June 26, 1983`

   If the date you entered does not match a date in your message file, the first message received after that date is displayed.

3. Type the time (optional).

   The time must be in continental form; that is, hours and minutes between 00 and 23:59. You don't have to enter the seconds. For example:

   `Type 15:15 for 3:15 P.M.`

   If the date and time you entered does not match a date in your message file, the first message received after that date is displayed.

4. Press Enter ◄┘ to display the messages starting at this date and time.

You can press PgUp or PgDn to display other messages.

Press F9 to erase messages you don't want to keep.

To correct an error, see Appendix A.

Press Esc to return to the previous screen.

Erasing Messages

Use this function to erase messages from your message file.

To erase all messages received between specific dates and times, enter both the starting and ending dates and times. If you don't enter the time, all messages for that date are erased.

To erase all messages received from one sender, specify only the station name or number without a date or time.

To erase messages received between two dates from one sender, enter the starting and ending dates, the optional times, and the station name or number.

To erase messages:

1. Select Item 5 from the Display or Erase Messages menu.

   This screen is displayed:

```
                          Erase Messages                         20-252
           Starting message                 Ending message
                  Date: [  /  /  ]                 Date:  [  /  /  ]
                  Time: [00:00]                     Time:  [23:59]
           From station: [                    ]




F1=Help
F5=Display message log                                      Esc=Return
```

You can press F5 to display the message log.

2. Type the starting and ending dates or times, or the
    station name or number.

3. Press Enter ◄⊣ to erase the messages.

When you finish erasing messages, you see this message
on your screen:

```
XXX messages have been erased
```

XXX is the number of messages that were erased.

Keep in mind that this function only marks the
messages you want to erase. Once you mark the
messages, they do not appear in your message log or
message display. They are, however, still part of the
message file.

You must compress the space to make room for more
messages to fit in the message file. Use Item 6 on the
Display or Erase Messages menu to compress the space
and remove the messages from the message file.

To correct an error, see Appendix A.

Press Esc to return to the previous screen.

Freeing Erased Message Space

1. Select Item 6 from the Display or Erase Messages menu to free or compress the erased message space in your message file.

2. Press Enter ←⎯ .

The status message:

```
Freeing message space
```

appears near the bottom of the screen. After you free the erased message space, one of these messages appears:

```
Message space freed
Message space could not be freed
```

If you cannot free the message space, an error message is displayed below this message.

To correct the error, see Appendix A.

Press Esc to return to the previous screen.

Things to Know About Files

To send or get a file using the Information Transfer
program, you must know several values.

Files are in directories on the drives at each station in
the cluster. Each drive has one main or root directory
and can have several sub-directories. Sub-directories
are specified by paths. You must know the path or the
direction you take to get to a directory.

When you select either Item 3 or 4 from the
Information Transfer Main Menu, you are asked to
enter these values. If you do not enter some of the
values, they will be preset, or default. Default means
that if you don't enter a choice, the program assumes
this is what you want. These are described below.

The default values are:

• Your drive: the current DOS default drive

• Path: a backward slash (\ ) or the root directory

  Other things to know about path:

  — The root directory is the main directory on a
    drive.

  — Path specifies a sub-directory. If a sub-directory
    is not used, the path is not required.

  — The path specification is not a required input
    field. If it is blank, the current directory is used.

- Filename: the filename you send or get

  When you send a file, the remote filename defaults to your filename.

  When you get a file, your filename defaults to the remote filename.

  Note: You cannot do any other procedures at your station while you are sending or getting a file. The procedure is being done in the *background* of the other station, so that station is able to do other jobs.

  You cannot send or get the internal use file, MSG.SYS.

The following two functions, Sending a File and Getting a File, are used to copy files between stations only.

If you want to copy a file to your station from the public volume or from your own private volume, end Information Transfer and use the DOS COPY command.

Use the drive letter chart in Appendix B for sending and getting files.

Sending a File

Use this function to copy a file from your station to another station in the cluster. You must have write access to that station's drive.

If you don't have write access, you have to ask the person at that station to change the access to that drive. The procedure for changing the access to a drive is in "Changing the Station Options" on page 2-41.

To send a file to another station you must know the following values:

- The drive that contains the file you are sending

- The path to the file you are sending

- The name of the file you are sending

- The drive, path, and filename for the remote station

Use the drive letter chart in Appendix B to determine the drive letter for the volumes.

To send a file to another station:

1. Select Item 3 from the Information Transfer Main
   Menu. The following screen appears:

```
                         Send a File                        20-302
        Your file specification
                 Drive: [A]
                  Path: [\                          ]
                       [                            ]
              Filename: [            ]
       To remote station: [               ]
        Remote file specification
                 Drive: [ ]
                  Path: [\                         ]
                       [                           ]
              Filename: [            ] (optional)




F1=Help                                              Esc=Return
```

2. Type your station's file specification: the drive,
   path, and filename of the file you are sending.

3. Type the name or number of the station where you
   are sending the file.

4. Type the station's file specification: the drive and
   path where you are sending the file. Type the
   filename if you want to rename it.

Note: If a file with the same name already exists at the remote station, you cannot send this file.

5. Press Enter ◄┘ to send a file.

You see this status message on your display screen:

```
Sending the file
```

while the file is being sent.

If one of the values is not valid, an error message appears near the bottom of the screen. The cursor moves to the appropriate file specification, so you can correct it.

When the procedure is complete, you see a message on your screen:

```
The file has been sent
The file could not be sent
```

To correct an error, see Appendix A.

After you send a file, you can send another or press Esc to return to the Information Transfer Main Menu.

Getting a File

Use this function to get a file from another station in the cluster. This function copies files from another station to your station. You must have read access to that station's drive.

If you don't have read access, you have to ask the person at that station to change the access to that drive. The procedure for changing the access to a drive is in "Changing the Station Options" on page 2-41.

To get a file from another station you must know the following values:

- The drive that contains the file you are getting

- The path to the file you are getting

- The name of the file you are getting

- The drive, path, and filename you are receiving

Use the drive letter chart in Appendix B to determine the drive letter for the volumes.

To get a file from another station:

1. Select Item 4 from the Information Transfer Main
   Menu. The following screen appears:

```
                            Get a File                          20-402
        From remote station:  [                    ]

        Remote file specification
                      Drive: [ ]

                       Path: [\                          ]
                             [                          ]

                   Filename: [                ]

        Your file specification
                      Drive: [A]

                       Path: [\                          ]
                             [                          ]

                   Filename: [           ] (optional)




  F1=Help
                                                        Esc=Return
```

2. Type the name or number of the station where you
   are getting the file.

3. Type the station's file specification: the drive, path,
   and filename of the file you want to get.

4. Type your station's file specification: the drive and
   path where you want the file sent. You can rename
   the file by typing in the optional filename.
   Otherwise, you receive the file with the same name.

Note: If a file with the same name already exists at your station, it is written over.

5. Press Enter ◄┘ to get the file.

While the system performs the operation, you see this status message on your screen:

```
Receiving the file
```

If one of the specifications is not valid, an error message appears near the bottom of the screen. The cursor moves to the drive of the file specification so you can correct it.

When the procedure is complete, you see a message on your screen:

```
The file has been received
The file could not be received
```

To correct an error, see Appendix A.

After you get a file, you can get another file or press Esc to return to the Information Transfer Main Menu.

Reading a Station's File Directory

This function reads a station's file directory and displays it at your station. For a remote station, you must have read access to the drive that contains the directory and you must know the directory path to a sub-directory. The station's root directory is listed, but the sub-directories for a remote station are not displayed. (Sub-directories for your own station are displayed.)

To read a station's directory:

1. Select Item 5 from the Information Transfer Main Menu.

2. Press Enter ◄┘ .

3. Type the following information:

   • Station: station name or number

   • Drive: the drive containing the directory

   • Path: the path to the sub-directory you want to read (This is optional. Leave this blank to display the current directory.)

   • Filename: use this field to display selected files from a directory (This is optional. Leave this blank to display all files in a directory.)

Press F10 to display the station index if you can't remember the station name or number. The index is displayed on the bottom half of the screen. Use PgDn to page through the index.

4. Press Enter ◄─┘ to list the directory.

After you enter the information, you see the status message

```
Reading the file directory
```

until the directory appears on your screen. When reading a station's file directory, a temporary file (DIR.SYS) is created on the internal use files drive.

If an error occurs, the message

```
The file directory could not be read
```

appears near the bottom of the screen with the error message below it. To correct an error, see Appendix A.

The following example shows a file directory display.

```
                    Read a Station's File Directory                    20-506

Station is: 08
Volume in drive a has no label
Directory of a:\

COMMAND  COM     17664   03/08/83   12:00p
TBL      SYS      3907   01/01/80   12:19a
PLLSCR   COM     34960   10/01/83   03:30p
MSG      SYS       529   01/01/80   12:19a
IT       COM      3440   10/01/83   03:27p
PDT      COM     50320   10/01/83   03:29p
RIODRV   COM      6240   10/01/83   03:32p
VM       COM     27280   10/01/83   03:31p
CONFIG   SYS        30   09/30/83   04:42a
PCMDP    COM     14480   10/01/83   03:27p
DIR      SYS         0   01/01/80   12:19a
         11 File(s)        174080 bytes free
****************************** End of Directory ******************************




                                                                  Esc=Return
```

The directory display contains:

- The station name or number

- The volume label and the drive letter that contains the directory

- The path given to find the directory

- The names of the files in the directory

The list of the file directory includes:

- The name of the files

- The size of each file in decimal bytes

- The date it was last updated

- The time it was last updated

When the directory is too large to be displayed on a single screen, PgUp and PgDn appear on the bottom of the screen.

At the end of the display, the number of displayed files is listed, followed by the amount of space left on the disk or diskette. Notice "End of Directory" appears at the end of the file display.

Press Esc to return to the previous screen.

Changing the Station Options

You can manage the options at your station using this function.

1. Select Item 6 from the Information Transfer Main Menu.

2. Press Enter ◄┘.

The following screen appears:

```
                    Change the Options for this Station                20-601

            Item

               1   Change the drive access
               2   Change the drive for internal use files
               3   Change the bell

            Select an item number: [ ]

















                                                              Esc=Return
```

The procedures are described in the following pages.
To change any of these options at your station:

- Select the **Item** number.

- Press Enter ◄┘.

When the procedure is complete, you can return to this
menu by pressing Esc.

Press Esc to return to the Information Transfer Main
Menu.

Changing the Drive Access

Use this function to change the access that other stations have to your station's drives, including your private volume. Each drive can have its own access mode. The modes are:

1. No access: other stations cannot read or write on this drive (this is the default).

2. Read only: other stations can read from this drive (stations can copy your files).

3. Write only: other stations can write to this drive (stations can add to your files).

4. Read or write: other stations can read from and write to this drive.

   Note: You cannot assign drive access to remote system reset volume or public volume drives.

To change the drive access:

1. Select Item 1 from Change the Options for this Station menu.

2. Press Enter ◄┘.

3. Type the following information:

   a. The letter of the drive you want to change. You
      can have up to 26 possible drives (the letters A
      through Z).

      The cursor moves to the next field. The current
      access mode is displayed before you enter the
      change you want to make. The default for a
      drive is no access.

   b. The number corresponding to the access mode
      you want for that drive.

4. Press Enter ⏎ to set the drive access.

   Note: Denying access does not apply to the internal
   use message file (MSG.SYS). Stations can write to
   this file if (1) it is not write-protected, and (2) it is
   not on the remote system reset volume or public
   volume.

A message appears near the bottom of the screen:

```
Drive access has been changed
```

To correct an error, see Appendix A.

Press Esc to return to the previous screen.

Changing the Drive for Internal Use Files

Use this function when you move the internal use files. You need internal use files for operation of the Information Transfer program. You can't be a part of the cluster without these files on your disk or private volume.

The internal use files, MSG.SYS and TBL.SYS, are contained on the diskette that was shipped with the Cluster Program.

You must physically move the diskette containing the files to a new drive before you use this function to change the drive. If you have a fixed disk or a private volume, you must use the DOS COPY command before you use this function.

To change the drive for internal use files:

1. Select Item 2 from the Change the Options for this Station menu.

2. Press Enter ◄┘ .

3. Type the letter of the drive that contains the diskette with the Cluster Program files.

   If you move your internal use files from one drive to another drive, you must tell the computer where you put them.

4. Press Enter ◄┘ .

One of the following status messages appears near the bottom of the screen:

```
Internal use files drive has been changed
Internal use files drive could not be changed
```

To correct an error, see Appendix A.

Press Esc to return to the previous screen.

Changing the Bell

Use this function to change the bell option at your station. The bell rings to let you know you received a message or file at your station.

To change this option:

1. Select Item 3 from Change the Options for this Station menu.

2. Press Enter ◄┘.

3. Type the bell signal option.

   If you set the bell signal On (1), it rings when your station receives a message or file. If you set the bell signal Off (2), it will not ring when your station receives a message or file.

   Press Enter ◄┘.

A message appears near the bottom of the screen:
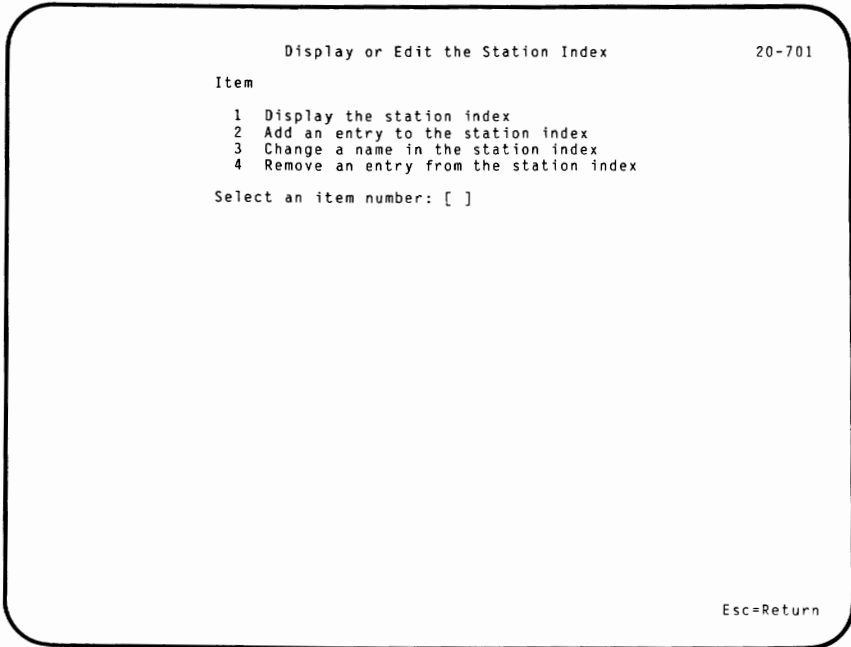
The bell signal has been changed

To correct an error, see Appendix A.

Press Esc to return to the previous screen.

Displaying or Editing the Station Index

Select Item 7 from the Information Transfer Main
Menu to display or change the station index for your
station. A station index allows you to equate a name to
a station number.

The following screen appears:

```
                    Display or Edit the Station Index          20-701
           Item

             1   Display the station index
             2   Add an entry to the station index
             3   Change a name in the station index
             4   Remove an entry from the station index

           Select an item number: [ ]




                                                            Esc=Return
```

The procedures are described on the following pages.
To use any of these choices:

- Select the Item number.

- Press Enter ◄┘.

When the procedure is complete, you can return to this menu by pressing Esc.

Press Esc to return to the Information Transfer Main Menu.

Displaying the Station Index

Use this function to display the contents of the station index. You create the station index by adding all of the stations you want. If you want to send information to another station on the link by name, it must be listed in your index.

The local station address is the first entry in the station index and appears at the top of the index. This local station address is the address of the station where you are:

```
*This station     Name and number for this station
```

The station number is determined by the switch settings on the Cluster adapter card.

The station index is listed in alphabetic order.

To display the station index:

1. Select Item 1 from the Display or Edit the Station Index menu.

2. Press Enter ◄─┘ .

```
                        Display the Station Index                    20-716
|         Name        |   Number  |                Comment                    |
---------------------------------------------------------------------------------
   *This station          08         Name and Number for this station
   E. J. Carter           01         Disk server station
   Main Lobby             33         Drive 1=No; 2=RW; 3=RO
   S. L. Howard           04         Asst. Manager
********************************** End of Index **********************************




                                                                  Esc=Return
```

The index contains:

- The station name: up to 15 characters

- The station number: between 00 and 63

- An optional comment: up to 35 characters

If the index is too large to fit on one screen, **PgDn** appears, so you can page down to see the rest of the index. **PgUp** appears, so you can page back up to the top of the index. "End of index" appears when you are at the end of the listing.

To correct an error, see Appendix A.

Press Esc to return to the previous screen.

Adding an Entry to the Station Index

Use this function to add an entry to the station index.
You can equate a station name to a station number, and
add an optional comment to the index. If a station is
listed in your index, you can transfer information with
that station using the name instead of the number.

To add an entry to the station index:

1. Select Item 2 from the Display or Edit the Station
    Index menu.

2. Press Enter ◄┘.

3. Type the following information:

    *   Name:

        Define the station name. This name can have up
        to 15 characters and cannot begin with a
        number. Uppercase and lowercase letters can be
        used. The name must be unique; that is, it may
        not already exist in the station index.

    *   Station number:

        The hardware address of the remote station on
        the link. This number can be any number
        between 0 and 63 and must not already exist in
        the station index. A number is assigned to each
        station according to the switch settings on the
        Cluster adapter card.

- Comment:

     You can add a comment here if you want a
     description for the station. The comment can be
     up to 35 characters long. Uppercase and
     lowercase letters can be used.

4. Press Enter ↵ after you type the station name,
   number, and comment.

Press F10 to display the station index on the bottom
half of the screen. You can use PgUp and PgDn within
the index when needed.

One of the following messages appears near the bottom
of the screen:

```
The station index entry has been added
The station index entry could not be added
```

To correct an error, see Appendix A.

Press Esc to return to the previous screen.

Changing a Name in the Station Index

Use this option to change the name or the comment of a station index entry.

To change the name and the comment, enter the name, the new name, and the comment.

To change only the comment, enter the current name and the comment.

To change an entry in the station index:

1. Select Item 3 from the Display or Edit the Station Index menu.

2. Press Enter ◄┘.

   Press F10 to display the current station index on the bottom half of the screen. You can use PgUp and PgDn within the index when needed.

3. Type the following information:

   • Current name:

     This name must exist in the station index.

- New name:

  This name cannot exist in the station index. The name can be up to 15 characters long and cannot begin with a number.

- Comment

  The comment is optional. If you want to enter a comment, it can be up to 35 characters long.

4. Press Enter ◄─┘ after you type the station name, the new name, and a comment, or just the station name and a comment.

When the procedure is complete, one of the following status messages appears near the bottom of the screen:

```
The station index entry has been changed
The station index entry could not be changed
```

To correct an error, see Appendix A.

Press Esc to return to the previous screen.

Removing an Entry from the Station Index

To erase an entry from the station index:

1. Select Item 4 from the Display or Edit the Station Index menu.

2. Press Enter ←⎯| .

3. Type the name or the number of the station that you want to erase from the index. This name or number must exist in the index. Uppercase and lowercase letters are not important.

   Keep in mind that when you remove an entry from the index, you can still transfer information with that station by using the number.

4. Press Enter ←⎯| .

Press F10 to display the station index on the bottom half of the screen. You can use PgUp and PgDn when needed.

When the procedure is complete, one of the following status messages appears near the bottom of the screen:

```
The station index entry has been removed
The station index entry could not be removed
```

To correct an error, see Appendix A.

Press Esc to return to the previous screen.

Ending the Information Transfer Program

To end the Information Transfer program and return to DOS:

1. Select Item 9 from the Information Transfer Main Menu.

2. Press Enter ◄┘.

3. Type the necessary information depending upon the session:

   • If you did not make any changes during the session or the changes you made were saved, your screen looks like this:

```
        End the Information Transfer Program           20-903
              Keep the link active: [1]
                    1 - Yes
                    2 - No













F1=Help
                                              Esc=Return
```

To continue to receive messages, the internal use files, MSG.SYS and TBL.SYS, must remain available in the internal use files drive and the link must remain active. If you move these files, see "Changing the Drive for Internal Use Files" on page 2-45.

If you are at the disk server station, you must continue to keep the link active for other stations to gain access to their volumes and to do a remote system reset.

4. Press Enter ← to complete the procedure.

   • If you could not access your internal use files, your screen looks like this:

```
              End the Information Transfer Program              20-902

              The station index and options could not
              be saved.
                          Retry: [1]
                             1 - Yes
                             2 - No

F1=Help

                                                               Esc=Return
```

This screen means that changes you made during the session could not be saved in the internal use file, TBL.SYS. If you want the changes saved for the next session, you must correct the error and try the function again.

If you cannot correct the error, type **2** (No) and the program will not save your changes.

- Press Enter ◄━┛ to complete the procedure.

An error message appears near the bottom of the screen and indicates the problem. To correct an error, see Appendix A.

When the input is successful, you have ended the Information Transfer session.

Using Information Transfer from the Disk Server Station

Note: If you run programs requiring I/O at the disk server station, performance in the cluster may be diminished.

The Information Transfer program is used differently at the disk server station. If you are using Information Transfer at the disk server station, read the *Disk Server Guide* before you begin.

When you are at the disk server station, you must keep the link active for other stations to access their volumes and to do a remote system reset. To do this:

1. Type it **disk** or it **disk nocolor** to activate the link.

If the programs to support remote system reset have not been installed, a message appears on the IBM logo screen:

Note: Remote system reset not supported

If stations require remote system reset, do the following:

a. Press Esc to return to DOS.

b. Make sure the file, RIPLPGM.COM, is in one of the disk server's root directories.

c. See the *Disk Server Guide* if you have not created the remote system reset volume.

2. Follow the procedures to get to the Information Transfer Main Menu.

   If you are activating Information Transfer to use the Public Volume Manager program, you should assign read/write access to all disk drives. Use Item 6 to change the station options.

   It is also a good idea to broadcast a message to all stations in the cluster to verify that everyone is on the link.

3. Select Item 9.

4. Press Enter ◄┘ .

The default is **1** (Yes) to keep the link active.

5. Press Enter ◄┘ .

   Note: Don't forget to leave MSG.SYS and TBL.SYS in the internal use files drive if you want to continue to receive messages.

Appendixes

Contents

Notes:

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 34K 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 corrrect 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:

Appendix B. Disk Server Station Drive Letter Chart

The charts on the following pages show the drive lettering within a disk server station cluster. The drive lettering is determined by (1) the number of drives on your IBM Personal Computer and (2) 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 tell (1) the drive letters for your station and (2) the drive letters for the public volume, the remote system reset volume, and your station's private volume.

**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.

B-2

	Diskette #1	Diskette #2	Fixed disk #1	Fixed disk #2	Remote system reset volume	Public volume	Private volume
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.

	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.

Notes:

Appendix C. Automating Information Transfer

You can create a file to automatically do Information Transfer functions. This will let you perform routine functions without having to enter the data each time.

You can do this with the DOS redirection of I/O function:

1. Go through the screens and write down all of the input information or keystrokes you use.

2. Create a file with these keystrokes.

3. Use the letter E in place of an Escape (Esc) key.

4. Create a patch file with DEBUG to change the letter E to 1B, its hexidecimal value.

5. Use this file containing the keystrokes as input to the Information Transfer program.

The following example shows you how you can build a file that will send a message. The first step is to create the keystroke file. You need to create the keystrokes for screens 20-000, 20-001, 20-102, 20-001 (a second time), and 20-903.

To create a file that sends the message "GOOD MORNING. LET'S GET COFFEE." to station 8, do the following:

1. Insert your Cluster Program diskette into your DOS default drive.

2. Type **COPY CON:KEYFILE**

3. Press Enter ↵.

4. Type **112983** for the date.

5. Press Enter ↵.

6. Type **1** for the Send a Message option on the Information Transfer Main Menu.

7. Press Enter ↵.

8. Type **8** for the station number, **Tab forward, Tab forward, GOOD MORNING. LET'S GET COFFEE.**

9. Press Enter ↵.

10. Type **E9**

11. Press Enter ↵.

12. Press Enter ↵ again.

13. Press F6 and Enter ↵.

You have created the keystroke file. Now you have to change the E you entered in step 9 to an Escape (Esc) key. Use DEBUG:

1. Type **DEBUG KEYFILE**

2. Press Enter ◄┘.

   The E9 you entered are the characters in the location to be changed, so display the file by typing:

3. **D**

   Note: The locations are variable depending on the number of keystrokes you entered. If these don't match the hexidecimal display, look at the column to the right and find E9.

4. Press Enter ◄┘.

   Location 12F and 13O should have hexidecimal 45 and hexidecimal 39.

5. Type **E 12F**

6. Press Enter ◄┘.

   45 should be displayed.

7. Type **1B**

8. Press Enter ◄┘.

   1B is the keystroke for an Escape (Esc) key.

9. Type **W**

10. Press Enter ◄┛ .

This will write the patch file for KEYFILE.

11. Type **Q**

12. Press Enter ◄┛ to end DEBUG.

Now you can send the message and end Information Transfer by typing: **IT<KEYFILE** and pressing Enter ◄┛ .

This procedure can be used to create other automated functions.

Just go through the screens and keep track of all the keys you type. Wherever you need an Esc key, just type in E. Then use DEBUG to patch the E's to hexidecimal '1B'.

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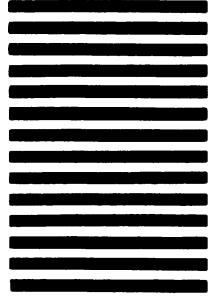authorized IBM Personal Computer dealer.
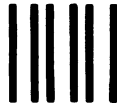
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