IBM Token-Ring Network Manager

Communications Family

Personal Computer Software

LY30-5595-0

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Note: This product is intended for use within a single establishment and within a single, homogeneous user population. For sensitive applications requiring isolation from each other, management may wish to provide isolated cabling or to encrypt the sensitive data before putting it on the network.

First Edition (June 1986)

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ɔout this Book

IBM Token-Ring Network Manager is a network ıagement program and problem determination aid for IBM Token-Ring Network. This manual explains how ıstall and operate it.

ganization

e you will find instructions for performing specific :s. If you are starting the Network Manager for the ; time, read Chapters 1 and 2 of this manual.

ɐr, when you need information regarding specific :s, turn to the tables starting on page C-1, which cate where to find instructions for each task.

Chapter 1 describes the IBM Token-Ring Network Manager and gives general information about using it ınd the introduction diskette with an IBM Personal Computer.

Chapter 2 tells you how to install the Network Manager and perform initial system definition.

Chapter 3 includes instructions about using the Network Manager after you have installed it.

Chapter 4 describes helpful hints about using the Network Manager to troubleshoot the ring.

Appendix A contains a summary of Network Manager nessages and the prescribed actions you should take in response to the messages.

Appendix B contains a list of files found on the IBM Token-Ring Network Manager diskettes.

- Appendix C is a table of Network Manager function and the page numbers for the descriptions of each function.

- Appendix D is the statement of service for the Netw Manager.

Help Panels and Introduction Diskette

If you need information about a specific panel (screen) the Network Manager, press F1 (Help) on that panel.

For an overview of the IBM Token-Ring Network and t IBM Token-Ring Network Manager, view the introduct diskette shipped with your Network Manager. Instructions for using the diskette are on page 1-5.

Users of this Manual

The IBM Token-Ring Network *administrator* uses this manual to learn how to enter data concerning the configuration of the network. This book can be used to train network operators and to resolve problems on the network.

The *operator* of the Network Manager uses this manual learn how to monitor the status of attaching devices on the ring, to test the path between adapters, to list all of the active adapters on the ring, and to create reports th include information about errors and configuration changes on the ring. The manual explains error and al messages and gives instructions for recovering from mi network problems.

Prerequisite Knowledge

You will find it helpful to be familiar with the IBM Token-Ring Network. View the introduction diskette that accompanies this program for an overview of the network and the IBM Token-Ring Network Manager.

Knowledge of the IBM Personal Computer and the Disk Operating System (DOS) is also helpful.

Prerequisite Publications

- *IBM Token-Ring Network Introduction and Planning Guide*, GA27-3367

Related Publications

- *IBM Cabling System Planning and Installation Guide*, GA27-3361
- *IBM Token-Ring Network Problem Determination Guide*, SY27-0280-1
- *IBM Token-Ring Network Installation Guide*, GA27-3678
- *IBM Token-Ring Network PC Adapter Guide to Operations* (with adapter and diskette)

IBM Personal Computer Publications

If you are not familiar with the IBM Personal Computer, we recommend that you consult the *Guide to Operations* for your model.

Other documents related to the IBM Personal Computer may be useful:

- IBM Personal Computer *Hardware Maintenance and Service*
- IBM Personal Computer *Disk Operating System*
- IBM Personal Computer *Technical Reference.*

How to Get IBM Publications

Requests for IBM publications should be made to your IBM representative or to the IBM branch office serving your region.

Contents

Chapter 1. Introduction

This chapter provides:

- A description of the contents of the Network Manager package
- A list of equipment and materials you will need to operate the Network Manager
- An overview of the Network Manager.

Contents of the Package

The IBM Token-Ring Network Manager package includes this manual and three diskettes.

The two system diskettes are labeled *IBM Token-Ring Network Manager Diskette 1* and *IBM Token-Ring Network Manager Diskette 2.*

The third diskette is labeled *IBM Token-Ring Network Manager Introduction* and contains a brief presentation about the IBM Token-Ring Network and the IBM Token-Ring Network Manager.

Additional information about how to view the introduction diskette is on page 1-5.

What You Need

Computer Equipment and Supplies

- IBM Personal Computer (one of the following) with at least 512 KB of memory

  - IBM Personal Computer
  - IBM *Portable* Personal Computer
  - IBM PC XT
  - IBM Personal Computer AT

- Disk drives (one of the following):

  - One 10 MB (or larger) fixed disk and one dual-sided diskette drive (This is the recommended drive combination.)

  - One 1.2 MB high-capacity diskette drive and one dual-sided diskette drive

  - Two dual-sided diskette drives

- Diskettes needed for two-drive systems only: four 360 KB diskettes or one 1.2 MB diskette (according to the type of disk drive used)

- Display: IBM Monochrome Display or equivalent or IBM Color Display (80-Column) or equivalent.

- Printer: IBM Personal Computer printer or equivalent if you wish to print network reports

Network Hardware

Your computer must be connected to the IBM Token-Ring Network. You should have already installed:

- An IBM Token-Ring Network PC Adapter Kit (P/N 6339100).

To connect the adapter to the network, you need:

- An IBM Token-Ring Network PC Adapter Cable (P/N 6339088) if your network uses the IBM Cabling System, or
- A Type 3 Media Filter, or its equivalent, if your network uses telephone twisted-pair media.

See the *IBM Token-Ring Network PC Adapter Guide to Operations* for information about the adapter and the adapter cable. See the *IBM Token-Ring Network Telephone Twisted-Pair Media Guide*, GA27-3714, for information about the media filter.

Software

- Operating System: IBM Personal Computer Disk Operating System (DOS), Version 3.2 or higher
- IBM Token-Ring Network PC Adapter Support Interface (on the IBM Token-Ring Network PC Adapter Diskette)

Overview: Introduction Diskette

To learn quickly some basic concepts about the IBM Token-Ring Network and its Network Manager, you can view the *IBM Token-Ring Network Manager Introduction* diskette that comes with the Network Manager. You will need an IBM Personal Computer with at least 128 KB of memory. It does not need to be connected to a network.

To view the diskette, do the following:

1 Load DOS (Version 2.1 or higher. Version 3.2 is needed to run the Network Manager.)

For information about loading DOS or loading diskettes, refer to the chapter titled "Getting DOS Started" in your DOS reference manual.

2 Insert the diskette into drive A. You should not use any other drive.

3 Set the DOS prompt to A>.

4 If you have a color display with an IBM Color/Graphics Monitor Adapter, type:

COLOR

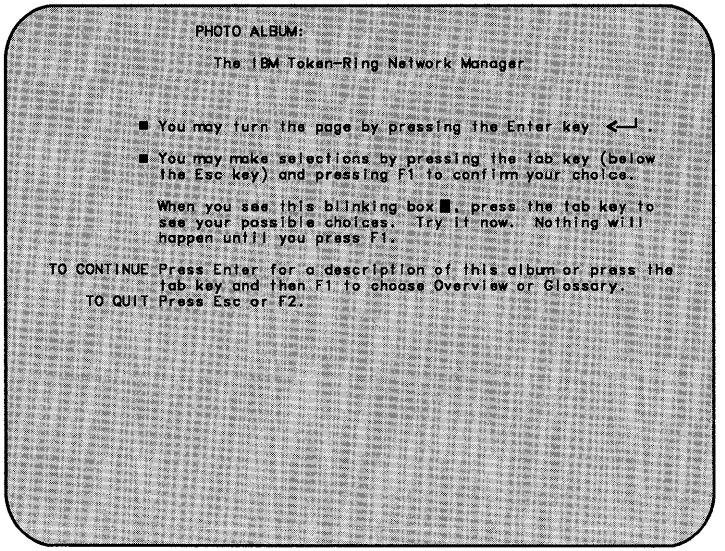
If you have a monochrome display or a color display without an IBM Color/Graphics Monitor Adapter, type:

MONO

5 Press **Enter**.

You may need to wait a few seconds before the first panel is displayed.

6 Press **Enter** on the first panel for hints about viewing the diskette.



Overview: The Network Manager

The Network Manager allows you to maintain network records, monitor network status, and determine the source of problems on one ring of the network. The Network Manager monitors activity only on the ring to which its adapter is attached. You need a Network Manager for each ring that you wish to monitor.

The IBM Token-Ring Network is composed of several devices attached to one another by means of cable. Information is exchanged among the devices in the form of data frames that are passed around the network.

The Network Manager functions are divided into three parts:

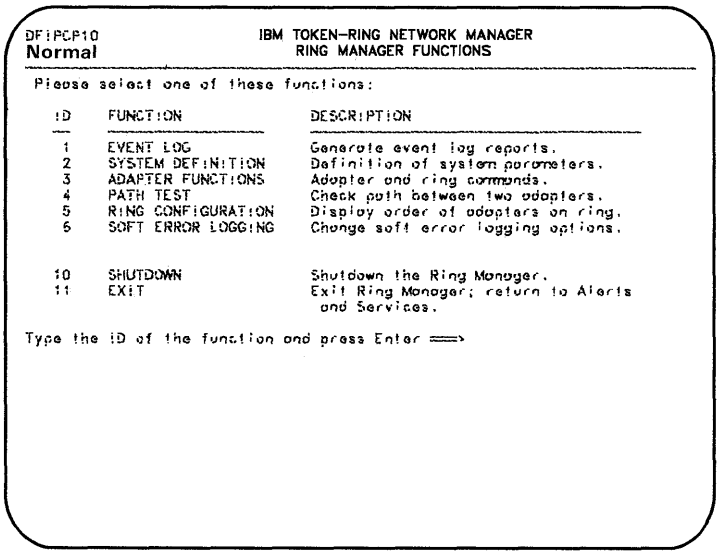
- Services
- Alerts
- Ring Manager Functions.

Specific information about the functions available is in Chapters 2 and 3. Appendix C includes a table that indicates the pages where information about each function can be found.

Ring Status

In the upper left corner of each panel below the panel ID (such as "DFIPCP10"), you see a ring status area. The status condition displayed there pertains only to the ring to which the Network Manager is attached. Status information is useful when troubleshooting the ring and when performing the problem determination procedures found in the *IBM Token-Ring Network Problem Determination Guide.*

The figure below shows the location of the ring status area on the screen.



All ring status conditions are listed below. Each ring status condition except **Normal** is highlighted and remains highlighted until the ring status returns to normal.

When the status changes, you will receive messages either in the form of alerts or error messages displayed on the bottom of your screen or in the event log. These messages and alerts give you more information about what may have caused the status to change. Messages are described in Appendix A and alert information can be displayed using the **Alerts** function of the Network Manager.

The ring status area on the **Main Selection** panel and on panels that are part of the **Alerts** and **Services** functions display the status only when it has changed during the time you are viewing that panel. This is true for the Help panels that accompany these panels, also.

Normal: The Network Manager is processing information and the ring is operating normally.

Soft Error: The ring is experiencing intermittent failures that cause data to be transmitted on the ring more than once to be received correctly. The alert that accompanies the "Soft Error" status includes the fault domain, the segment of the network that is experiencing the failures.

Beaconing: The ring is experiencing an error condition detected by an adapter when there is either signal loss (possibly caused by a broken line) or no token is circulating the ring within the predefined time limit. Beaconing indicates that the ring is inoperative. If the ring cannot automatically recover by removing the adapter having the problem, you receive an alert containing the fault domain.

Beaconing is indicated by one of the following messages:

DFIPD200 Ring not working
DFIPD201 Ring not working - this adapter beaconing
DFIPD202 Ring recovery failed

DFIPD203 Ring recovered
DFIPD204 Ring recovered - adapter removed
DFIPD205 Ring not working - fault domain changed.

Two of the beaconing messages are alerts: DFIPD202 and DFIPD204.

Adapter Closed: The Network Manager's IBM Token-Ring Network PC Adapter is no longer actively attached to the network.

Wire Fault: A problem exists between the Network Manager's attaching device and its access unit (the unit that attaches the device to the ring). The attaching device or the access unit could be the source of the problem. The Network Manager's adapter is closed.

Data Lost: The Network Manager cannot log the errors as fast as they occur. Some error information will be lost.

Menus and Special Keys

To display the panel of the Network Manager that is appropriate for the function you wish to perform, you select items from menus and use function keys, scrolling keys, and a few pre-established key sequences.

A *menu* is a list of items on a panel. Type the ID number that corresponds to the function you need to perform and press **Enter**.

The *Enter* key is the carriage return key.

The *tab* allows you to move the cursor to each of the data entry fields on the panel. You can also use the tab key to move the cursor to choose an item from a list (other than menu items). When you press and hold the Shift key and then press the tab key, the cursor moves backwards to each of the fields.

Function keys are the set of keys indicated by "F" and a number. They have been assigned special instructions as indicated in the following list.

- *F1 (Help)*: Requests the appropriate Help panel to be displayed.

- *F2 (Quit)*: Cancels any input on this panel and returns you to the panel from which you chose the current panel.

- *F4 (Return)*: Cancels any input on this panel and returns you to the most recently displayed main menu. The main menus are:

  - **Main Selection**
  - **Ring Manager Functions**
  - **Limited Ring Manager Functions**.

- *F5 (Redisplay)*: Cancels any input on this panel and allows you to start again to select new options or enter new input. It displays the panel as it originally appeared.

On the **Alerts** panel and on the **Soft Error Conditions** panel, *F5 (Refresh)* will clear the screen and then fill it with updated information.

The functions assigned to the other F keys vary with the panel on which they appear. These will be explained later.

Scrolling keys allow you to read all of the information provided, even though it may exceed one panel.

- *PgUp*: Page Up allows you to see the previous panel.

- *PgDn*: Page Down allows you to see the next panel.

- *Home*: The Home key allows you to see the first panel of the data you are currently viewing.

- *End*: The End key allows you to see the last panel of the data you are currently viewing.

- *Scroll Lock*: The Scroll Lock key allows you to return to the **Main Selection** panel from any panel.

  When you select again the function (**Services**, **Alerts**, or **Ring Mgr**) from which you pressed Scroll Lock, you are automatically returned to the panel of that function on which you pressed Scroll Lock.

  Using the Scroll Lock key is a handy way to enter and leave **Ring Manager Functions** since it does not require you to enter your password again when you return to a **Ring Manager Functions** panel.

Pre-established key sequences function exactly as they do in normal operation of the IBM Personal Computer.

- *Ctrl-Alt-Del*: Press and hold Control (Ctrl) and Alternate (Alt) and then press Delete (Del).

  This sequence restarts the IBM Personal Computer so that you will need to reload the Network Manager and DOS. You may use this sequence only at the copyright panel. It will not work on any other panels.

- *Ctrl-Num Lock*: Press and hold Ctrl and then press Number Lock (Num Lock).

  Warning: This sequence induces a pause during which the IBM Personal Computer will not continue processing until another key is pressed. You may lose error information, so do not use this key sequence while you are running the Network Manager.

- *Shift-PrtSc*: Press and hold the Shift key and then press Print Screen (PrtSc).

  This sequence will print the data that is displayed on the screen.

  Warning: The functions of the Network Manager will be suspended while the data is printing and you may lose error information.

Other Help Available

If you need information about a specific panel of the Network Manager, press F1 (Help) on that panel.

- Press F1 (Help) to view the Help panel.
- Press the Enter key to view the next Help panel, if there is one.
- Press the Escape (Esc) key to view the previous Help panel in a series.
- Press F2 (Quit) to leave the last Help panel in a series and return to the current system panel.

Chapter 2. Installing the IBM Token-Ring Network Manager

This chapter explains how to install the Network Manager and perform initial system definition.

Before you begin this procedure, you will need to follow the instructions in the *IBM Token-Ring Network PC Adapter Guide to Operations* to:

- Install the IBM Token-Ring Network PC Adapter Kit.
- Load and use the IBM Token-Ring Network PC Adapter Diagnostics.

Making Backup Copies

To keep from damaging the Network Manager diskettes, you will need to make copies of them for use in daily operation. These copies must be made onto two 360 KB diskettes using the DOS DISKCOPY command. Make the copies now before continuing.

You may choose to make backup copies of some Network Manager files, such as the symbolic names file DFISYMNM.DAT. Use the DOS COPY command to copy any file you wish to back up.

Continue with the instructions appropriate for your computer.

- If you have an *IBM Personal Computer with a fixed disk*, go to page 2-3.
- If you have an *IBM Personal Computer with a 1.2 MB diskette drive*, go to page 2-6.
- If you have an *IBM Personal Computer with two 360 KB diskette drives*, go to page 2-8.

IBM Personal Computer with a Fixed Disk

The following procedure allows you to install the IBM Token-Ring Network Manager on your C disk. (If you have two fixed disks, the program will be installed on your C disk.) Approximately 800 KB of disk space is used at the time of installation. When the log files, such as the event log, are full, the Network Manager requires 1 MB of disk space.

If you already have a CONFIG.SYS file in your root directory, it will be saved under the name CONFIG.SAV and replaced by a new CONFIG.SYS. You may choose to add some of the commands from your existing CONFIG.SYS file to the file created by this procedure. The new file sets the BUFFERS=25 and the FILES=99. Those are minimum values and can be increased.

1 Make sure you have loaded DOS 3.2 or higher. To check the version that is currently loaded, use the DOS VERSION command. Type:

    VER

2 Make sure that you have 440 KB of free memory. To check, type:

    CHKDSK

3 Insert the *IBM Token-Ring Network Manager Diskette 1* into drive A.

4 Type:

    A:INSTALL1

    and press **Enter**.

5 Follow the instructions for the installation procedure given on your screen.

6 When the installation is complete, remove the original diskettes and store them in a safe place.

7 Copy the IBM Token-Ring Network PC Adapter Support Interface file TOKREUI.COM from the IBM Token-Ring Network PC Adapter Kit diskette to the RINGMGR directory. Insert the PC Adapter Kit diskette into the A drive.

Type the DOS COPY command:

```
COPY A:TOKREUI.COM C:\RINGMGR
```

8 If you choose to copy the introduction diskette to another diskette, do so now. It cannot be copied to the fixed disk.

9 Restart the system. Press and hold the Ctrl and Alt keys and then press Del.

10 At the appropriate prompts, enter the date and time. It is critical that you enter these correctly.

11 Change the current directory to RINGMGR using the DOS CD command.

```
CD\RINGMGR
```

12 To start the Network Manager, type:

```
DFIRINGM
```

13 At the copyright panel, press **Enter**.

You may need to wait a few seconds for all three selections to appear on the **Main Selection** panel.

If all three selections do not appear, turn off the computer and then make sure that it has at least 440 KB of free memory.

14 When the **Main Selection** panel is displayed, type the ID number for "Ring Mgr."

15 Go to the section "Starting the System for Initial Definition" on page 2-12.

IBM Personal Computer with a 1.2 MB Diskette Drive

Before you begin copying diskettes, you will need to format the 1.2 MB diskette as a system diskette (with DOS 3.2 or higher) using the DOS FORMAT command with the /S option. Label the diskette "Network Manager."

To copy the diskettes to the 1.2 MB diskette, do the following:

1 Insert the *IBM Token-Ring Network Manager Diskette 1* into drive B (the 360 KB drive).

2 Type:

B:

and press **Enter**.

3 Type:

B:INSTALL1

and press **Enter**.

4 Follow the instructions for the installation procedure given on your screen.

5 When the installation is complete, remove the original diskettes and store them in a safe place.

6 Copy the IBM Token-Ring Network PC Adapter Support Interface file TOKREUI.COM from the IBM Token-Ring Network PC Adapter Kit diskette to the 1.2 MB Network Manager diskette. Insert the PC Adapter Kit diskette into the B drive and the

Network Manager (1.2 MB) diskette into the A drive.

Type the DOS COPY command:

COPY B:TOKREUI.COM A:

7 If you choose to copy the introduction diskette to another diskette, do so now.

8 To start the Network Manager, insert the 1.2 MB Network Manager diskette into drive A. Restart the system by pressing and holding holding the Ctrl and Alt keys and then pressing the Del key.

9 At the appropriate prompts, enter the date and time. It is critical that you enter these correctly.

10 At the copyright panel, press **Enter**.

You may need to wait a few seconds for all three selections to appear on the **Main Selection** panel.

If all three selections do not appear, turn off the computer and then make sure that it has at least 440 KB of free memory.

11 When the **Main Selection** panel is displayed, type the ID number for "Ring Mgr."

12 Go to the section "Starting the System for Initial Definition" on page 2-12.

IBM Personal Computer with Two Diskette Drives

1 Format a diskette with the DOS FORMAT command using the /S option. Label the diskette "Network Manager (A)."

2 Format three more diskettes using the DOS FORMAT command *without* the /S option. Label the diskettes "Network Manager (B)," "Network Manager (C)," and "Network Manager (D)."

3 Insert the *IBM Token-Ring Network Manager Diskette 1* into drive A.

4 Type:

A:INSTALL1

and press **Enter.**

5 Follow the instructions for the installation procedure given on your screen.

6 When the installation is complete, remove the original diskettes and store them in a safe place.

7 Copy the IBM Token-Ring Network PC Adapter Support Interface file TOKREUI.COM from the IBM Token-Ring Network PC Adapter Kit diskette onto the diskette labeled "Network Manager (A)." Insert the PC Adapter Kit diskette into the A drive and the Network Manager (A) diskette into the B drive.

Type the DOS COPY command:

COPY A:TOKREUI.COM B:

8 If you choose to copy the introduction diskette to another diskette, do so now.

9 Insert the Network Manager (A) diskette into drive A and the Network Manager (B) diskette into drive B.

10 Restart the system by pressing and holding the Ctrl and Alt keys and then pressing Del.

11 At the appropriate prompts, enter the date and time. It is critical that you enter these correctly.

12 At the copyright panel, press **Enter**.

You may need to wait a few seconds for all three selections to appear on the **Main Selection** panel.

If all three selections do not appear, turn off the computer and then make sure that it has at least 440 KB of free memory.

13 When the **Main Selection** panel is displayed, type the ID number for "Ring Mgr."

You will be prompted to remove diskettes (A) and (B) and to insert diskette (C) into drive A and diskette (D) into drive B.

14 Go to the section "Starting the System for Initial Definition" on page 2-12.

Resetting the Password

The following procedure allows you to erase an existing password if you have forgotten it. Once you have completed these steps, you will need to set a new password using the instructions on page 2-20. Follow the directions appropriate for your computer.

Fixed disk

1 Insert the *IBM Token-Ring Network Manager Diskette 1* into drive A.

2 Type:

A:RESETPW

and press **Enter**.

3 Follow the instructions given on your screen.

1.2 MB drive

1 Insert the *IBM Token-Ring Network Manager Diskette 1* into drive B (the 360 KB drive).

2 Type:

B:

and press **Enter**.

3 Insert the Network Manager diskette (the 1.2 MB diskette) into drive A, the 1.2 MB drive.

4 Type:

B:RESETPW

and press **Enter**.

5 Follow the instructions given on your screen.

Two diskette drives

1 Insert the *IBM Token-Ring Network Manager Diskette 1* into drive A.

2 Insert the diskette labeled "Network Manager (C)" into drive B.

3 Type:

A:RESETPW

4 Follow the instructions given on your screen.

Starting the System for Initial Definition

To prepare the Network Manager for operation, you need to define some aspects of your network to the system. If you have already performed these initial steps and need information about starting the Network Manager for daily use, go to page 3-2.

If you have not already started the Network Manager, do the following:

1 Set the DOS prompt to the fixed disk or the drive containing the working system diskette.

2 If you do not have a fixed disk, go to step 3.

If you have a fixed disk, change the current directory to RINGMGR if you are not already in that directory. Type:

CD\RINGMGR

3 To start the Network Manager type:

DFIRINGM

and press **Enter**.

4 At the copyright panel, press **Enter**.

You may need to wait a few seconds for all three selections to appear on the **Main Selection** panel.

5 When the **Main Selection** panel is displayed, type the ID number for "Ring Mgr" (for Ring Manager Functions) and press **Enter**.

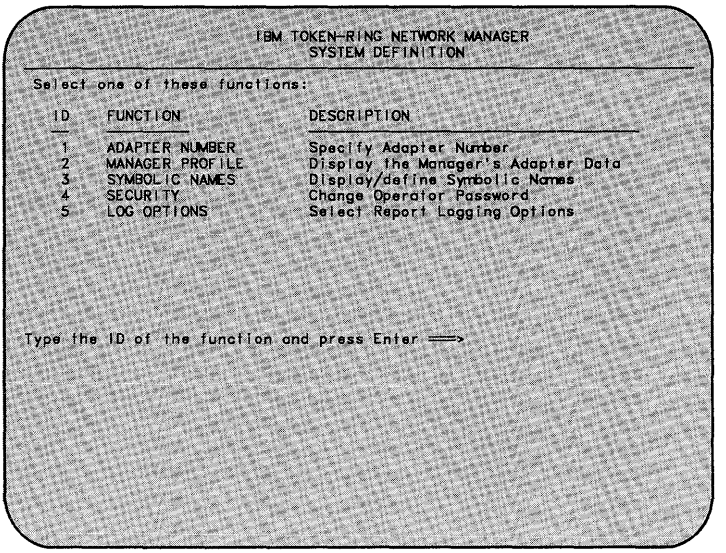
The word "Inactive" appears next to "Ring Mgr" until it has been selected. Once it is selected, the status changes to "Active" and remains that way until **Ring Manager Functions** has been shut down. After it has been shut down, the **Main Selection** panel indicates the shutdown with the phrase "Session Closed" next to "Ring Mgr."

6 Go to "Initial System Definition" on page 2-14.

Initial System Definition

When you start the Network Manager for the first time, do the following steps. Each is performed after you have chosen "System Definition" from the **Ring Manager Functions** panel.

The figure below indicates the **System Definition** panel. You do not need to choose "System Definition" yet.



Note: As you perform the following steps, you will notice in the upper left corner of the screen a ring status indication. See page 1-8 for a complete explanation.

The following is a general list. Detailed instructions are given on the pages indicated.

1. Determine how many IBM Token-Ring Network PC Adapters are installed in your computer. See page 2-16.

2. Set the operator password on the **Change Operator Password** panel. See page 2-20.

3. Check the information on the **Manager Profile** panel to see the adapter address and ring ID (always "0000") of the Network Manager's adapter. See page 2-24.

4. Define symbolic names for the adapters on the ring on the **Symbolic Names Definition** panel. See page 2-27.

Adapter Number Specification

Description

Choose "Adapter Number" to:

- Check whether the adapter number has been set correctly
- Change the adapter number.

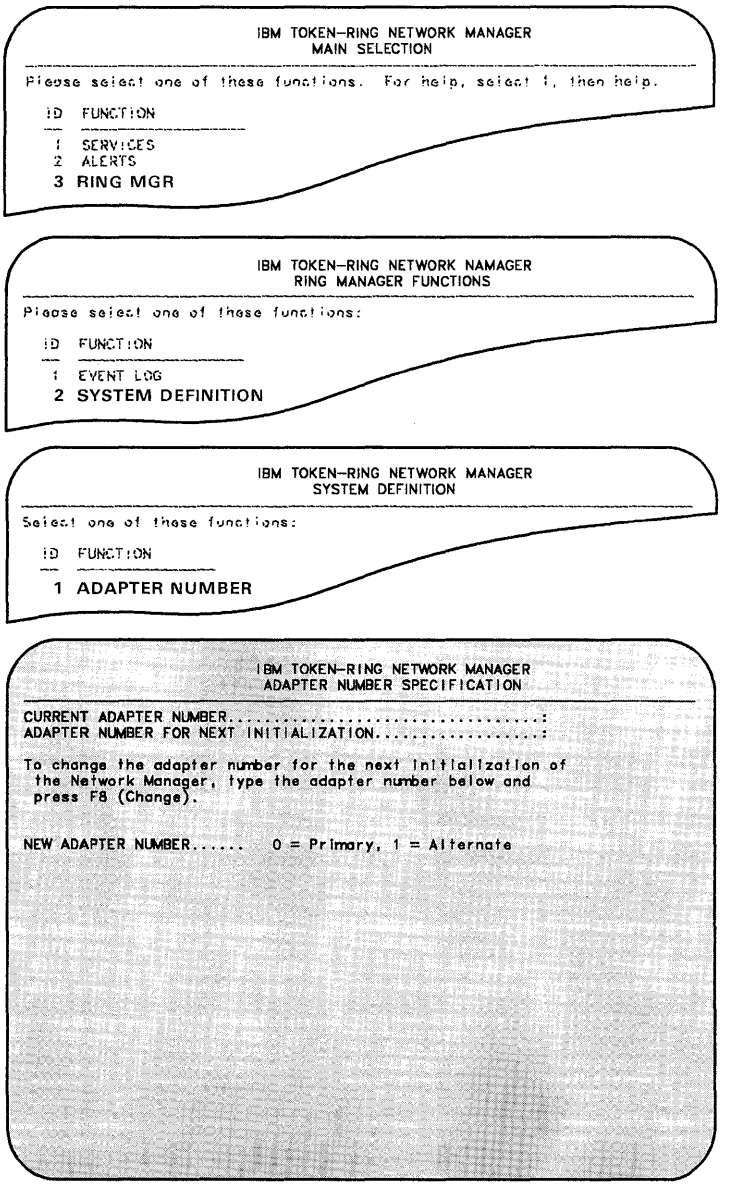
1. Ask your network administrator which adapter the IBM Token-Ring Network Manager should use. The answer should be *primary* or *alternate.*

2. If the IBM Token-Ring Network Manager should use the *primary* adapter, follow the instructions in this section to make sure the adapter number is set to "0."

   If it should use the *alternate* adapter, follow the instructions in this section to make sure the adapter number is set to "1."

   For more information on primary and alternate adapters and how the switches on the adapter are set, see the *IBM Token-Ring PC Adapter Guide to Operations*, Chapter 2, the section titled "Primary-Alternate Switch."

Panel Sequence



Instructions

1 On the **Adapter Number Specification** panel, if the "Current Adapter Number" is incorrect, enter the correct number in the "New Adapter Number" field.

Otherwise, press F2 (Quit) to return to the **System Definition** panel. Go to the next section, "Security (Password)" on page 2-20.

2 Press F8 (Change) to change the number to the value you just entered.

3 Return to the **Ring Manager Functions** panel by pressing F4 (Return).

Since you have changed the adapter number, you must shut down the **Ring Manager Functions**, shut down the Network Manager (return to DOS), and then start the Network Manager again so that the change can take effect. You may do this now or at a later time. To do so now, continue with step 4. Otherwise, go to step 8 on page 2-19.

4 On the **Ring Manager Functions** panel, type the ID number for "Shutdown" and press **Enter**. See page 3-90 for information about shutting down **Ring Manager Functions**.

5 If you have a fixed disk, type:

```
CD\RINGMGR
```

6 Then type:

```
DFIRINGM
```

At the copyright panel, press **Enter**.

7 On the **Main Selection** panel, type the ID number for **Ring Manager** and press **Enter**.

8 On the **Ring Manager Functions** panel, type the ID number for **System Definition** and press **Enter**.

9 Follow the instructions in "Security (Password)" on page 2-20 if you are doing initial configuration of the Network Manager and want to set an operator password.

If you do not want to set a password, go to "Manager Profile" on page 2-24.

Security (Password)

Description

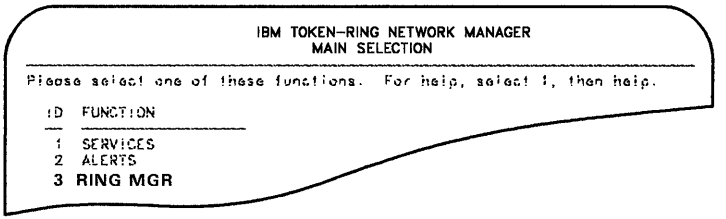
The operator security function of the Network Manager allows you to ensure that only an authorized network operator has access to the functions of the Network Manager and configuration data. Although the security function is optional, we strongly recommend that you follow the instructions below to set the operator password. You may choose to change the password often. Use the following instructions for both setting and changing the password.

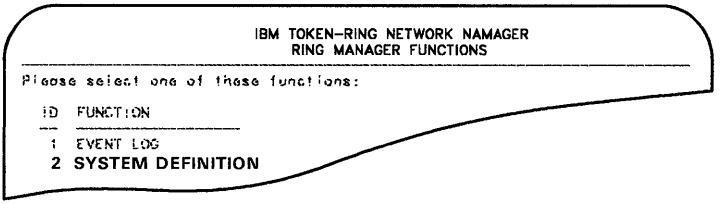
If you do set a password, you will be asked for the password each time you select "Ring Mgr" from the **Main Selection** panel.

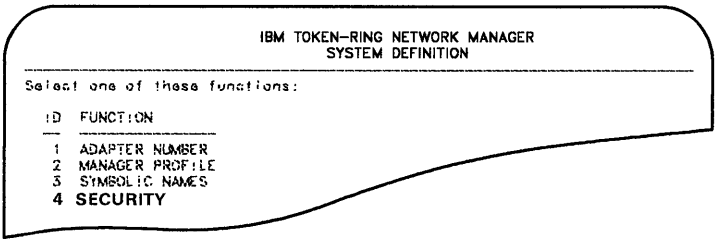
If you do not set a password, the **Ring Manager Functions** panel is the first panel you will see when you select "Ring Mgr" from the **Main Selection** panel.

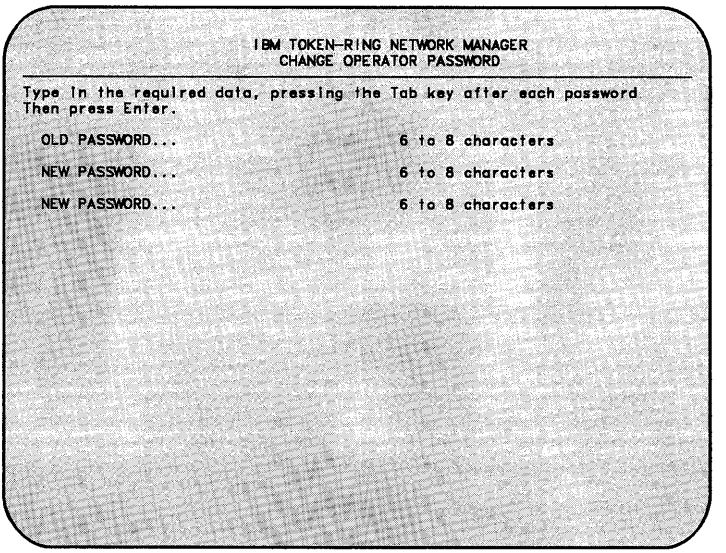
If you set a password and forget what you have entered, you may erase the password by using the reset procedure explained on page 2-10.

Panel Sequence









Instructions

To leave this panel without changing your password, press F2(Quit) or F4 (Return).

1 On the **Change Operator Password** panel, fill in the three fields (blank spaces). Use the tab key to move between fields.

The password you type is not displayed on the screen. On a color display, the cursor is invisible. On a monochrome display, the cursor is visible.

If you lose your place, press the Home key (the same as the "7" key on the number pad) to position the cursor at the beginning of the first field.

- **OLD PASSWORD**:

  If you are doing initial configuration of the Network Manager and setting the password for the first time, do not type anything in this field. Just press the tab key once.

  If you are changing an existing password, type your old password. Then press the tab key.

- **NEW PASSWORD**:

  Type any combination of six to eight characters. You may use letters "A" to "Z" (upper- and lower-case), numbers "0" to "9," and special characters @, $, %, and #. After you have typed the new password, press the tab key.

  Type the same combination of letters, numbers, and characters again.

2 After you have filled in the password fields, press **Enter** to set your password.

If you have correctly entered the old and new passwords, the message "Operation completed successfully" is displayed.

Otherwise, a message is displayed that indicates the password that is in error and why it is wrong.

3 Press F4 (Return) to return to the **Ring Manager Functions** panel or F2 (Quit) to return to the **System Definition** panel.

4 If you are doing initial configuration, continue with the next section, "Manager Profile" on page 2-24.

Manager Profile

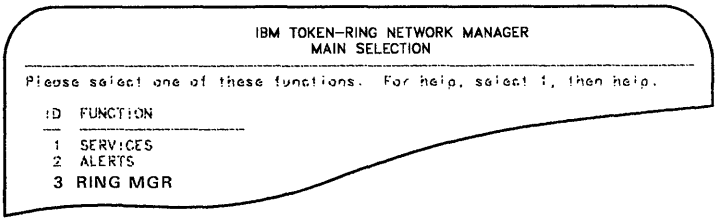
Description

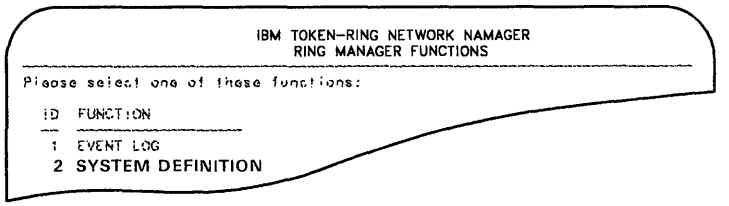
To display information about the adapter on which the Network Manager is running (your adapter), look at the manager profile.

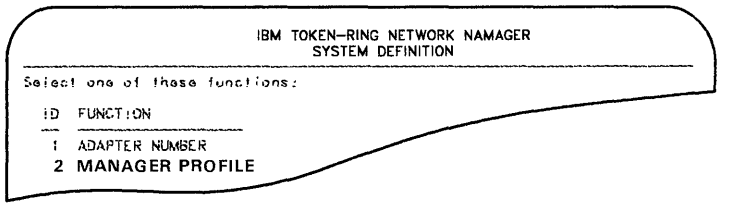
This function gives you the following information about the Network Manager's adapter:

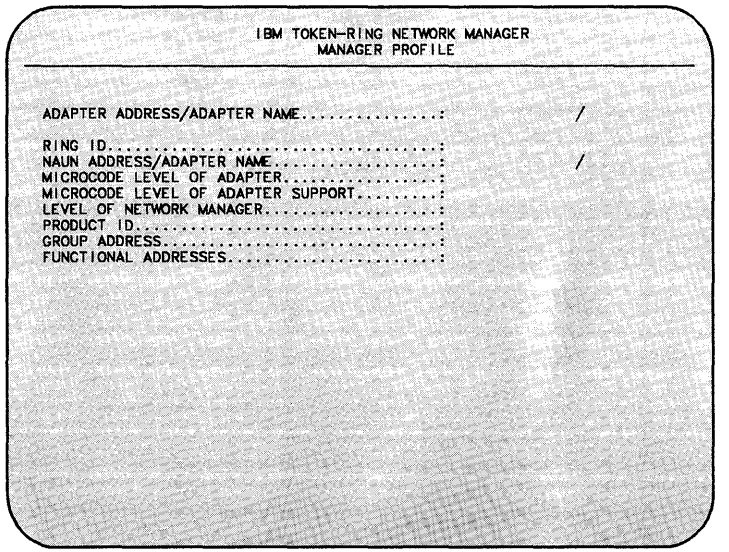
- Its symbolic name (if one has been assigned)
- Its adapter address
- Its ring ID (always "0000")
- Its Nearest Active Upstream Neighbor (NAUN)
- The microcode level of its adapter
- The microcode level of the IBM Token-Ring Network PC Adapter Support Interface
- The version of the Network Manager
- Its product ID
- Its group address (if one has been assigned by an application program)
- A list of its functional addresses.

Panel Sequence









Instructions

The **Manager Profile** panel is a display of information. You cannot enter or type any data here. Use the PgUp and PgDn keys to scroll through the panels (if there are more than one). Use the Home or End key to display the top or the bottom of the information.

After you have viewed the panel, press F2 (Quit) to return to the **System Definition** panel.

If you are doing initial configuration, follow the instructions in the next section to assign symbolic names to adapters.

Symbolic Names

Description

The Network Manager uses symbolic names or adapter addresses to specify adapters in functions that require adapter identification.

Each adapter has encoded in its memory a unique hexadecimal address that is exactly 12 characters long. Using the Network Manager, you may assign a symbolic name that is easier to record and remember than the hexadecimal address. The symbolic names file will hold up to 400 symbolic names.

If you want to assign a symbolic name but do not know the hexadecimal address, you may display or print a list of the hexadecimal addresses of all the active adapters on the ring. See page 3-81 for instructions.

A symbolic name may consist of a maximum of 16 characters in any combination of letters and numbers and four special characters (A-Z, 0-9, @, $, %, #). It may not, however, contain exactly 12 characters in a combination of numbers and the letters "A-F."

You may change the symbolic name assigned to an adapter address. However, assigning a different symbolic name to a particular adapter address affects event log reports. The event log records information by adapter address. Therefore, if you change a symbolic name and request a report for:

- The previous symbolic name: You receive a message indicating that no data exists in the event log for this adapter.

- The current symbolic name: The event log report translates the symbolic name into an adapter address and includes all the information for that address (including information for the adapter when it was assigned the previous symbolic name). The report is

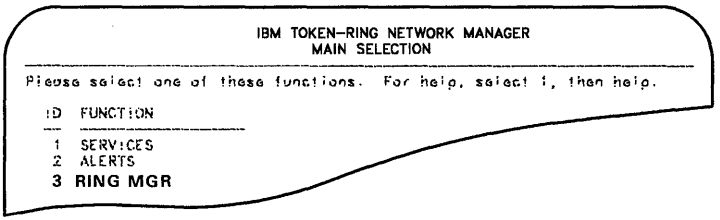
the same as if you had requested a report using the hexadecimal address.

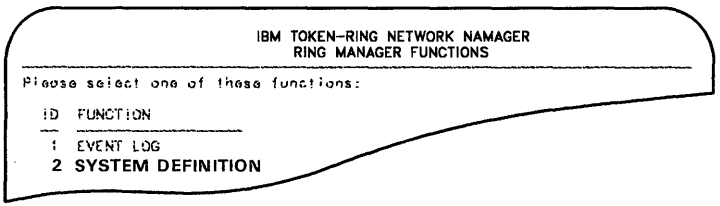
- The adapter address (hexadecimal): The event log report includes all of the information for that address, regardless of previous or current symbolic names. The report is the same as if you had requested a report using the current symbolic name.

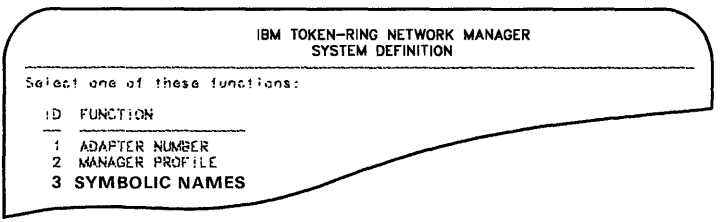
You may find it helpful to maintain a record of hexadecimal addresses and all previous and current symbolic names that have been assigned to them so that if you need a report of an adapter whose symbolic name has been changed, you can request a report using the hexadecimal address instead.

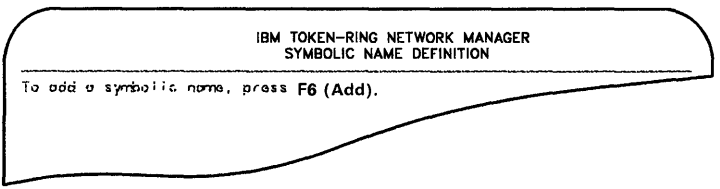
This section includes only information about adding symbolic names. To learn about deleting, changing, and finding symbolic names, see page 3-45.

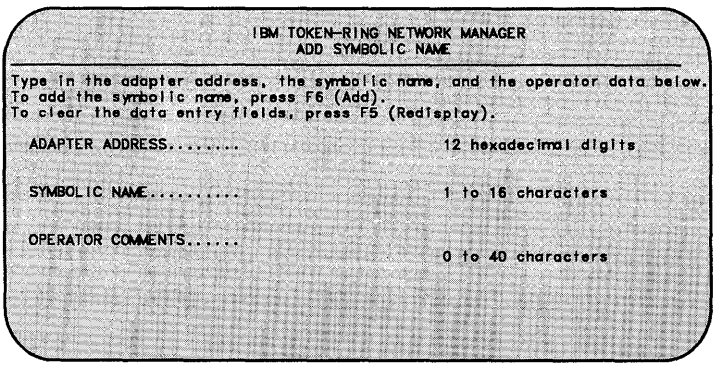
Panel Sequence











Instructions

1 On the **Symbolic Name Definition** panel, press F6 (Add).

Use the PgUp and PgDn keys to scroll through the panels (if you are viewing a long list of symbolic names already added to this file). Use the Home or End key to see the top or the bottom of the information.

2 On the **Add Symbolic Name** panel, fill in the fields and press F6 (Add).

Use the Operator Comments field to record information about this adapter. You do not have to fill in this field.

Consult the Help panel for a reminder about the number and combination of characters necessary for each blank.

3 To add another symbolic name, repeat step 2.

4 To return to the **Symbolic Name Definition** panel, press F2 (Quit).

To return to the **Ring Manager Functions** panel, press F4 (Return).

5 If you are starting the Network Manager for the first time, go to Chapter 3 for information on daily operation.

Chapter 3. Daily Operation

Chapter 2 described how to install the Network Manager for the first time. This chapter provides information about using the Network Manager after you have installed it.

Starting the Network Manager for Daily Operation

To start the Network Manager after installing it, follow the instructions appropriate for your computer.

Fixed disk

1 Turn on the computer.

2 Type the date and time. Be sure that you do this correctly since the Network Manager uses the date and time you enter as the date and time stamp for ring events that are logged.

3 Make sure the default drive is set to the fixed disk.

4 Type:

```
CD\RINGMGR
```

5 Then type:

```
DFIRINGM
```

and press **Enter**.

6 At the copyright panel, press **Enter**.

You may need to wait a few seconds for all three selections to appear on the **Main Selection** panel.

If all three selections do not appear, turn off the computer and then make sure that it has at least 440 KB of free memory.

1.2 MB drive

1 Insert the Network Manager diskette into drive A.

2 Turn on the computer.

3 Type the date and time. Be sure that you do this correctly since the Network Manager uses the date and time you enter as the date and time stamp for ring events that are logged.

4 At the copyright panel, press **Enter**.

You may need to wait a few seconds for all three selections to appear on the **Main Selection** panel.

If all three selections do not appear, turn off the computer and then make sure that is has at least 440 KB of free memory.

Two diskette drives

Insert the Network Manager diskette (A) into drive A.

2 Insert the Network Manager diskette (B) into drive B.

3 Turn on the computer.

4 Type the date and time. Be sure that you do this correctly since the Network Manager uses the date and time you enter as the date and time stamp for ring events that are logged.

5 At the copyright panel, press **Enter**.

You may need to wait a few seconds for all three selections to appear on the **Main Selection** panel.

If all three selections do not appear, turn off the computer and then make sure that is has at least 440 KB of free memory.

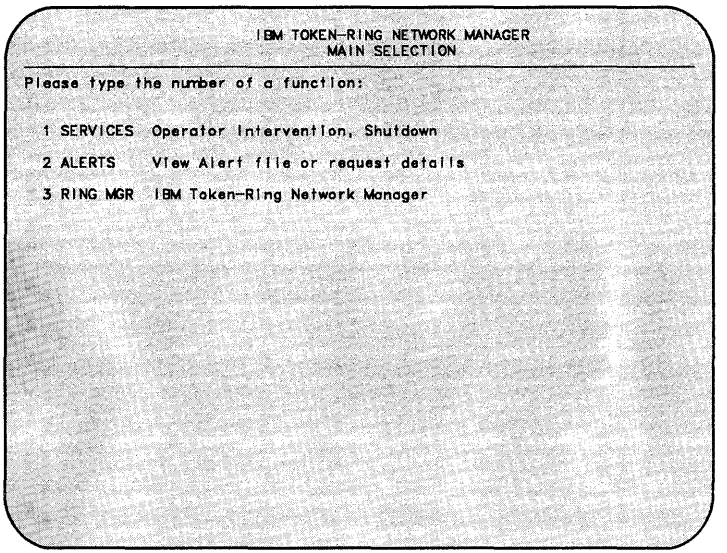
6 When you are prompted, insert the Network Manager diskette (C) into drive A and diskette (D) into drive B.

Main Selection

The **Main Selection** panel (the first panel you see after the copyright panel) allows you to choose among three choices. These are listed below along with the page number in the book where each is described. When the **Main Selection** panel is displayed, type the ID number of one of the following functions.

- Services: page 3-7
- Alerts: page 3-14
- Ring Manager: page 3-32.

Each section contains information about the Network Manager functions available when you select that choice.



Note: You will notice in the upper left corner of the screen a ring status indication. The only time you do not see the ring status is when you are viewing a panel that is part of the **Alerts** or **Services** functions. On those

panels, and on the Help panels accompanying them, you see ring status only when it changes during the time you are viewing those panels. See page 1-8 for a complete explanation.

Services

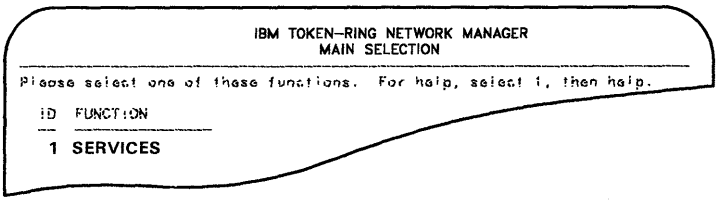
Description

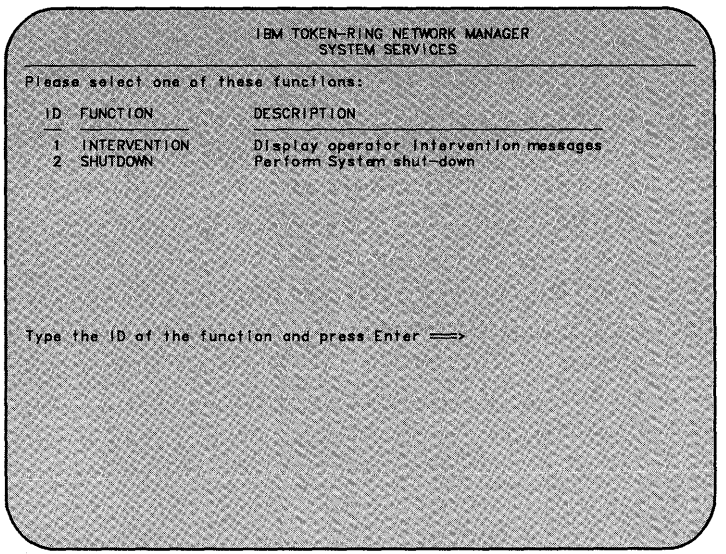
Use the "Services" functions to respond to messages requiring operator intervention (messages listed on page 3-9) or to shut down the Network Manager.

Choose "Services" from the **Main Selection** panel to display the **Services** panel. On this panel, you may choose between two selections:

- Intervention: page 3-9
- Shutdown: page 3-11.

Panel Sequence





Intervention

Description

Choose "Intervention" if the Network Manager displays a message that requires that you perform some action before continuing. These messages are listed below.

An example of a condition that would require operator intervention is an IBM Personal Computer problem such as the printer needing attention or the drive not being ready. The Network Manager displays the condition that caused the error and asks you to resolve the problem, if possible.

After you have resolved the problem, choose abort (A), retry (R), or ignore (I). The messages that are displayed are listed below with the possible responses indicated by an "A," "R," or "I."

- DCJSS871 Target file already exists (A, R, or I)

  Note: If you choose "I" for Ignore, the existing file will be overwritten.

- DCJSS872 Target file full (A or R)

- DCJSS873 Target disk full (A or R)

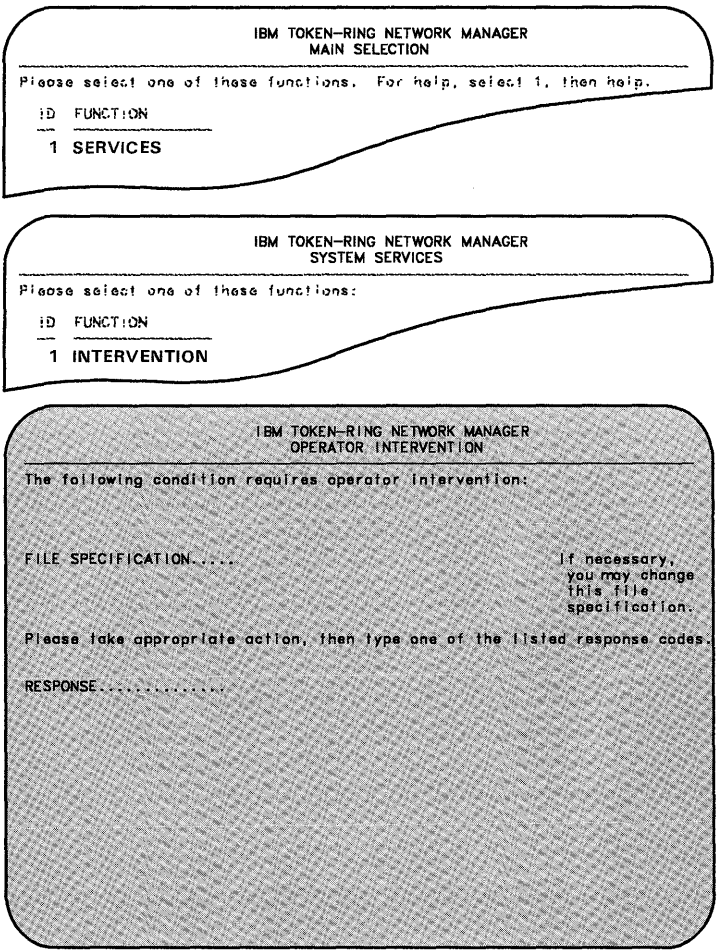
- DCJSS874 Target disk is write-protected (A or R)

- DCJSS875 Target drive not ready (A or R)

- DFIPPF10 The printer is not functioning properly (A or R)

Consult the Help panels for assistance in choosing among "A," "R," or "I."

Panel Sequence



Instructions

1 At the **Services** panel, select "Intervention."

2 Do what is necessary to correct the problem, then at the **Operator Intervention** panel, choose "A" (Abort), "R" (Retry), or "I" (Ignore).

Shutdown (Return to DOS)

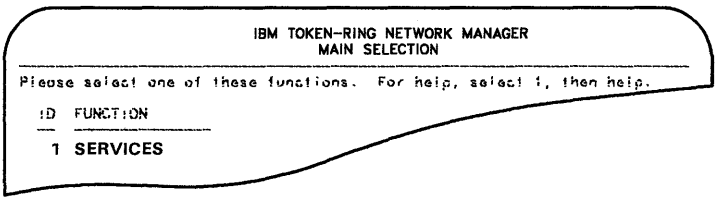
Description

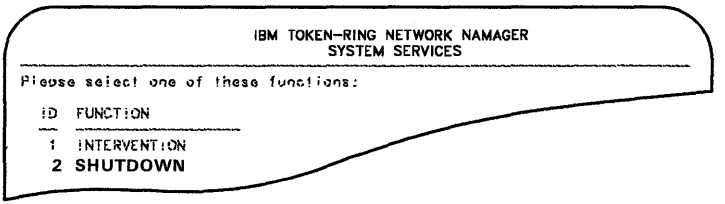
Choose "Shutdown" from the **Services** panel if you want to return to DOS.

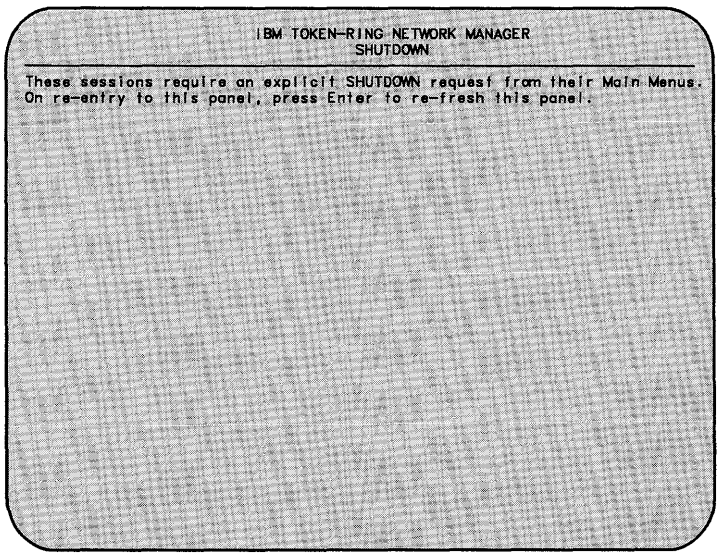
Before you can shut down the Network Manager and return to DOS, you need to have already selected "Shutdown" from the **Ring Manager Functions** panel and from the **Alerts** panel.

If you have not shut down those functions, leave the **Shutdown** panel by pressing Scroll Lock. The **Main Selection** panel is displayed. Select "Ring Mgr" or **Alerts** according to the function that has not been shut down. Follow the instructions on page 3-90 to shut down the **Ring Manager Functions** or the instructions on page 3-30 to shut down the **Alerts**. Then choose "Services" at the **Main Selection** panel.

Panel Sequence







Instructions

1 Be sure that you have selected "Shutdown" from the **Ring Manager Functions** panel and from the **Alerts** panel before you attempt to exit to DOS.

2 At the **Main Selection** panel, type the ID number of the **Services** panel and press **Enter**.

3 At the **Services** panel, type the ID number of the "Shutdown" option and press **Enter**.

Alerts

An *alert* is a notification that appears on the bottom line of any panel to indicate an interruption or a potential interruption in the flow of data around the network.

Description

Select "Alerts" to check:

- Details for a selected alert
- Recommended actions for a selected alert.

To view an alert message (after you have received an "AL" indication at the bottom of your screen) select "Exit" from the **Ring Manager Functions** panel or press the Scroll Lock key.

Either action displays the **Main Selection** panel. Choose "Alerts" to use any of the functions available in **Alerts**.

A beep and the letters "AL" displayed on the last line of the panel tell you that the network has an alert condition and that the Network Manager is unable to perform certain tasks.

An alert can appear while you are viewing any Network Manager panel. However, you must select "Alerts" from the **Main Selection** panel to display the list of alerts, delete an alert from the list, or to request details or recommended actions for an alert. Use PgUp and PgDn to scroll the **Alerts**, **Details for Selected Alert**, and **Recommended Actions for Selected Alert** panels.

As each alert occurs, it is recorded in the alerts file and in the event log. (Alert DFIPD990 is not included in the event log.) The alerts file holds 250 alerts and then begins to overwrite existing alerts. The messages "Alert file 80% full" and "Alert file full" warn that the Network Manager is about to begin or has begun overwriting the oldest

entries in the alert file. You may delete alerts to make more room, if you choose.

Each of the alert panels indicates the following:

- Application
- Resource
- Type
- Time
- Date
- Alert Number
- Descriptive information.

The *application* is the name of the application program that has reported the alert information to this panel. In this case, application will always be "Ring Mgr."

The *resource* is the name of the software or hardware that has detected the alert status. In this case, resource will always be "LAN" (IBM Token-Ring Network).

The *type* indicates the severity of the alert. The seven types are listed below.

- **00 UNKNOWN**: The Network Manager does not know how severe the alert is.

- **01 PERM ERROR**: The adapter that is the source of the problem will not recover from the permanent error by itself.

- **02 TEMP ERROR**: The user of the adapter that is the source of the problem will notice that an error has occurred, but the adapter will recover from the temporary error by itself.

- **03 PERFORMANC**: The performance of the adapter that is the source of the problem has been degraded. It is responding more slowly than the established normal response time.

- **04 INTER.REQ**: Operator intervention is required to solve the problem. See page 3-9 for further information.

- **05 NOTIFICATI**: The Network Manager is notifying you that the adapter that is the source of the problem may encounter a critical error soon.

- **06 DELAYED**: Reporting the error was delayed since the error prevented the Network Manager from reporting it.

The *time* displayed is the time the alert occurred.

The *date* displayed is the date the alert occurred.

The *alert number* is the number assigned to each alert when it is logged. Numbers range from 1 to 10,000 and repeat after 10,000.

The descriptive information includes a short description of the alert. The following table indicates the Network Manager error message that corresponds to the short description of the alert. You can find additional information about each error message in Appendix A.

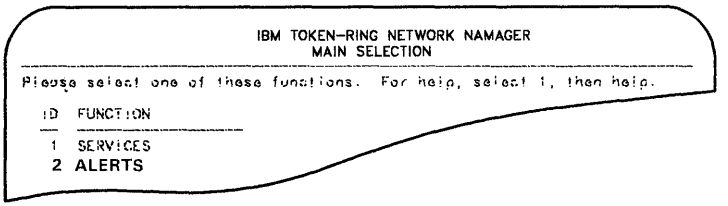
Short Description	Message No.	Error Message
Error limit exceeded	DFIPD101	Ring error limit exceeded
LAN Manager error reporter failed	DFIPD120	Error reporter failed, processing continues
Ring not working	DFIPD202	Ring recovery failed
Adapter automatically removed	DFIPD204	Ring recovered, adapter removed
LAN Manager ring attachment lost	DFIPD209	Auto-removal error
LAN Manager ring adapter inoperative	DFIPD212	Ring adapter hardware failed
LAN Manager ring adapter inoperative	DFIPD213	Ring adapter microcode failed
LAN Manager ring attachment lost	DFIPD215	Ring adapter or lobe failed
LAN Manager ring attachment lost	DFIPD222	Adapter removed
Software program abnormally terminated	DFIPD990	System abend

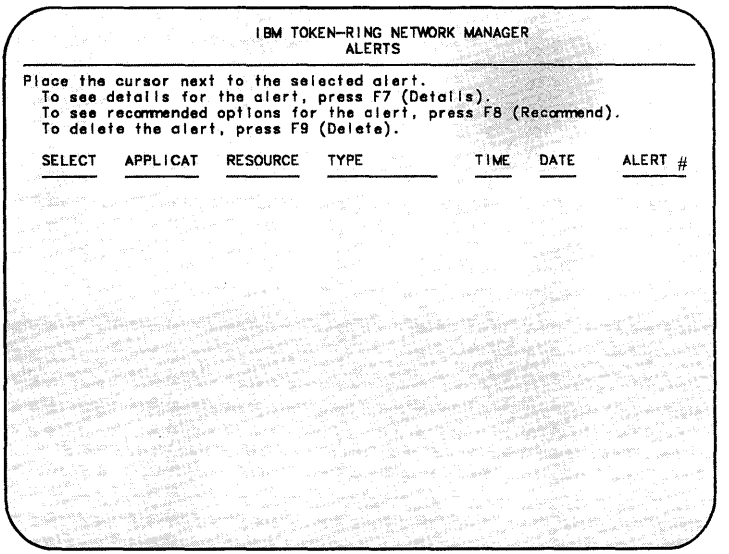
From the **Alerts** panel, you may choose to do the following:

- F5 (Refresh): Display any new alerts that are received while the **Alerts** panel is displayed
- F7 (Details): Request further details about a particular alert
- F8 (Recommend): Request recommended actions for a particular alert
- F9 (Delete): Delete an alert from the list of alerts displayed
- F10 (Shutdown): Close the alerts file to prepare for Network Manager shutdown.

Function	Task	Page
F5 (Refresh)	Display new alerts to the list of alerts	3-28
F7 (Details)	Request description of an alert	3-20
F8 (Recommend)	Request suggestions for solving an alert	3-23
F9 (Delete)	Delete an alert from the alert file	3-26
F10 (Shutdown)	Close the Alerts part of the Network Manager	3-30

Panel Sequence





Details

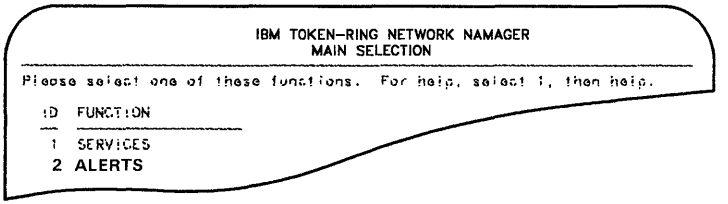
Description

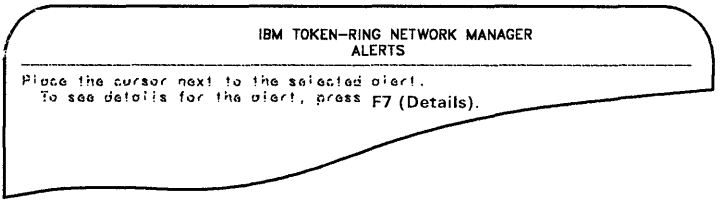
Press F7 (Details) to see additional information about the alert or to make sure you are deleting the correct alert before you press F9 (Delete).

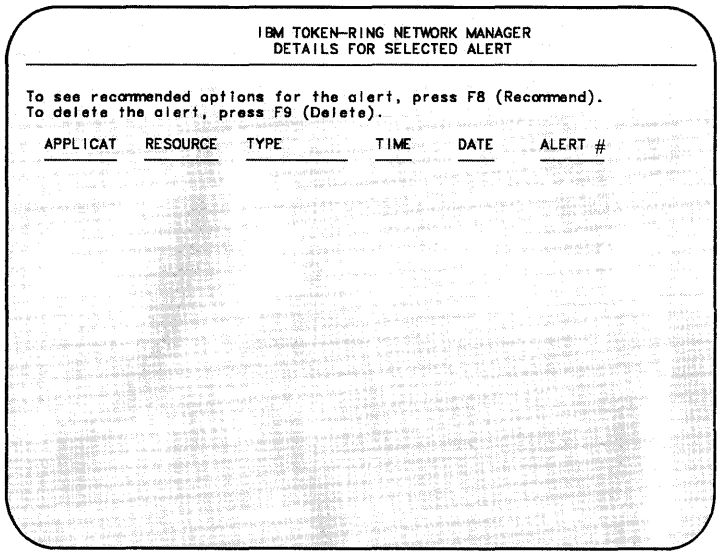
The **Details** panel gives the following information about the alert:

- Probable cause: An indication of the network component that failed, in a list of up to 10 probable causes from the most probable to the least
- Alert description: The Network Manager error message and a description of the error
- Text message: Any additional information about the alert and its fault domain (the area of the network in which the problem is occurring).

Panel Sequence







Instructions

1 On the **Alerts** panel, tab the cursor to the alert you want to examine. Press F7 (Details) to see additional information about the alert you have selected.

2 To see recommended actions for the alert, press F8 (Recommend).

3 Use PgUp and PgDn to scroll through the panels (if there are more than one). Use the Home or End key to display the top or the bottom of the information.

4 To delete the alert, press F9 (Delete).

To return to the **Alerts** panel, press F2 (Quit).

To return to the **Main Selection** panel, press F4 (Return).

Recommended actions

Description

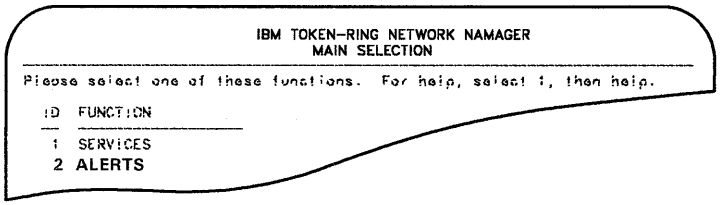
Press F8 (Recommend) to see additional information about the alert or to make sure you are deleting the correct alert before you press F9 (Delete).

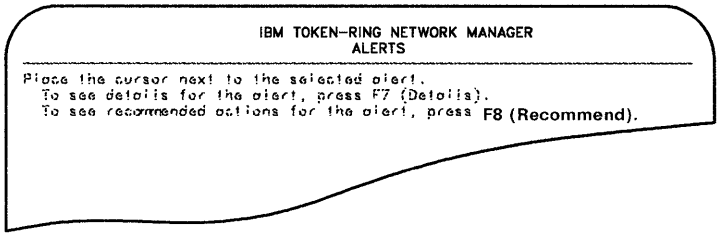
The **Recommended Actions** panel suggests additional possible causes and action you should take. The following information is displayed:

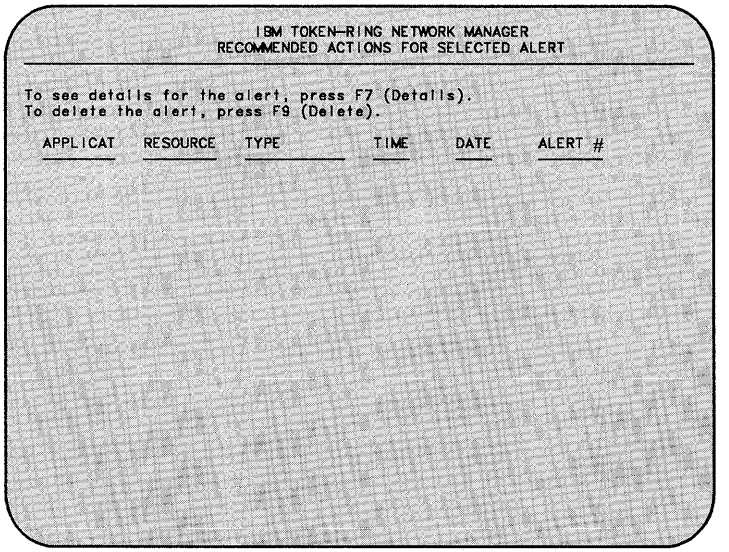
- Failure cause: An indication (more specific than "probable cause") of the component that failed, in a list of up to 10 failure causes from the most probable to the least

- Actions: The recommended actions you should take in response to the alert, listed in the order they should be performed.

Panel Sequence







Instructions

1 On the **Alerts** panel, tab the cursor to the alert you want to examine. Press F8 (Recommend) to see the recommended actions for the alert you have selected.

2 To see details for the alert, press F7 (Details).

3 Use PgUp and PgDn to scroll through the panels (if there are more than one). Use the Home or End key to display the top or the bottom of the information.

4 To delete the alert, press F9 (Delete).

To return to the **Alerts** panel, press F2 (Quit).

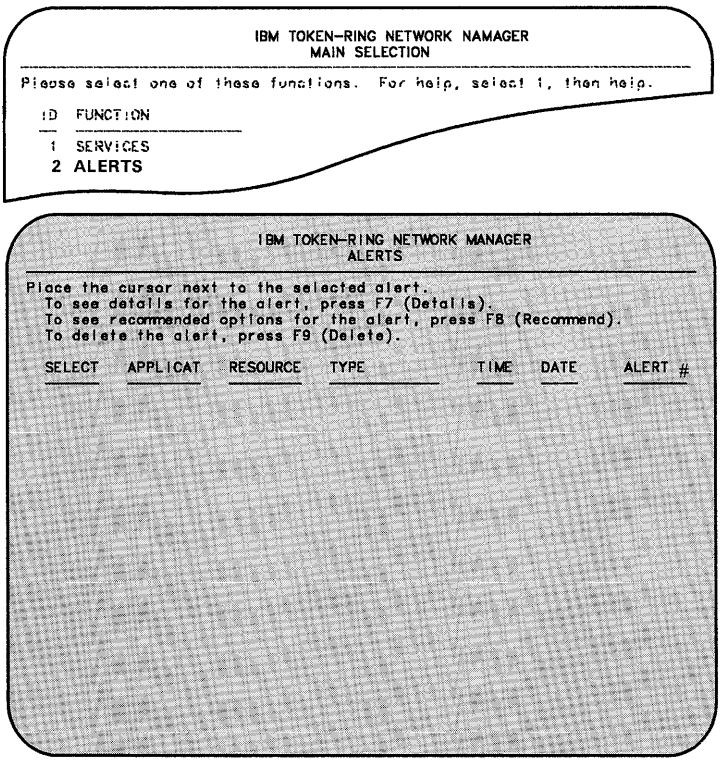
To return to the **Main Selection** panel, press F4 (Return).

Delete

Description

Press F9 (Delete) when you no longer need the alert information to be maintained in the alerts file. You may delete an alert from the **Alerts**, **Details for Selected Alert**, and **Recommended Actions for Selected Alert** panels.

Panel Sequence



Instructions

1 Use PgUp and PgDn to scroll through the panels (if there are more than one). Use the Home or End key to display the top or the bottom of the information.

2 If you are on the **Alerts** panel, tab the cursor to the alert you want to delete. Press F9 (Delete) to delete the alert from the alerts file.

If you are on the **Details for Selected Alert** panel, press F9 (Delete) to delete the alert from the alerts file.

If you are on the **Recommended Actions for Selected Alert** panel, press F9 (Delete) to delete the alert from the alerts file.

3 Respond to the message "Press F9 (Delete) to confirm deletion request" by pressing F9 again. Otherwise, press any key to cancel the delete request. Then press the appropriate function key for the action you choose to perform.

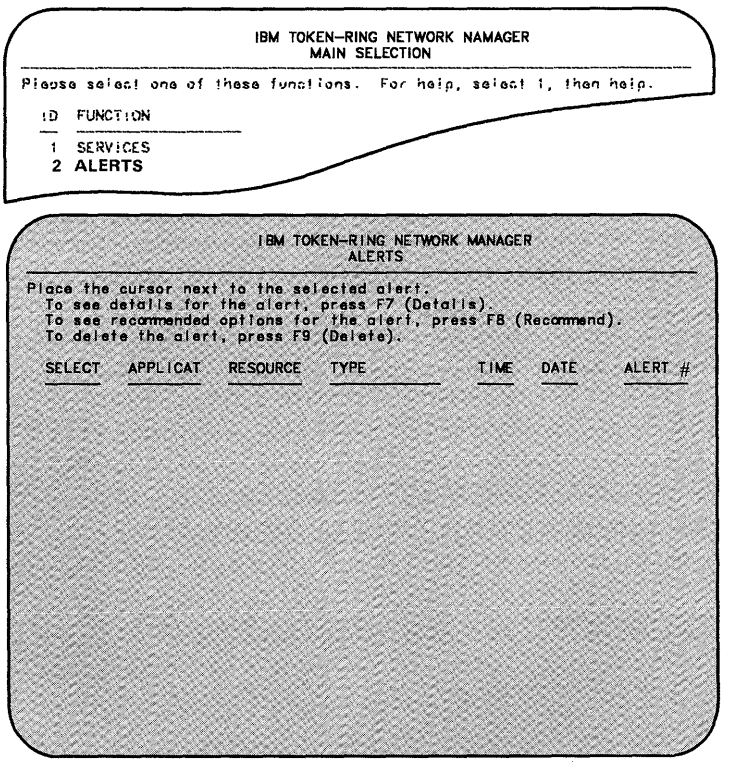
4 On the **Alerts** panel, press F2 (Quit) or F4 (Return) to return to the **Main Selection** panel.

Refresh

Description

You should choose to refresh if you receive an "AL" at the bottom of your screen while you are viewing either the **Alerts**, the **Details for Selected Alert**, or the **Recommended Actions for Selected Alert** panels.

Panel Sequence



Instructions

On the **Alerts** panel, the most recent alert is at the top of the list. To add the new alert to the top of the list, return to the **Alerts** panel (if you are not already there) and press F5 (Refresh).

Shutdown (from Alerts)

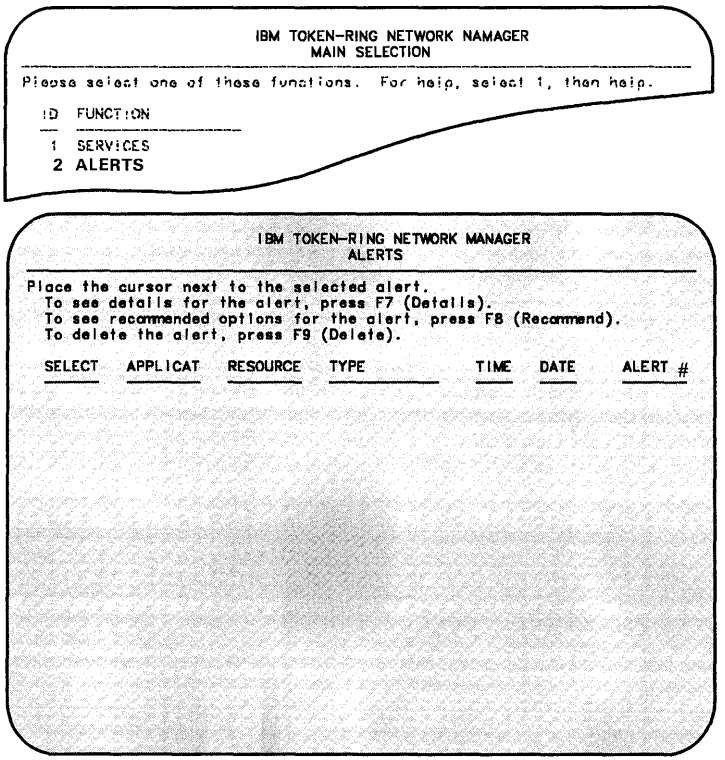
Description

Before you stop the Network Manager, you must shut down both **Alerts** and **Ring Manager Functions**.

Once you have shut down **Alerts**, you may not return to it without returning to DOS and restarting the Network Manager.

If you intend to return to **Alerts** before you stop the Network Manager, use either F2 (Quit) or F4 (Return) to return to the **Main Selection** panel.

Panel Sequence



Instructions

Press F10 (Shutdown) to leave the **Alerts** panel to prepare to return to DOS.

Ring Manager

Description

Select "Ring Mgr" to perform all other IBM Token-Ring Network Manager functions besides those available through **Services** or **Alerts**.

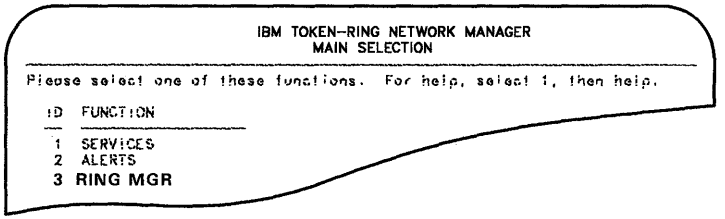
To use the **Ring Manager Functions**, select "Ring Mgr" from the **Main Selection** panel. If you have set an operator password, the **Password** panel is displayed. You must enter the password before the **Ring Manager Functions** panel appears. If you have not set a password, the **Ring Manager Functions** panel is displayed. You may need to wait for several seconds at the **Initialization** panel before you can continue. You do not need to do anything on this panel.

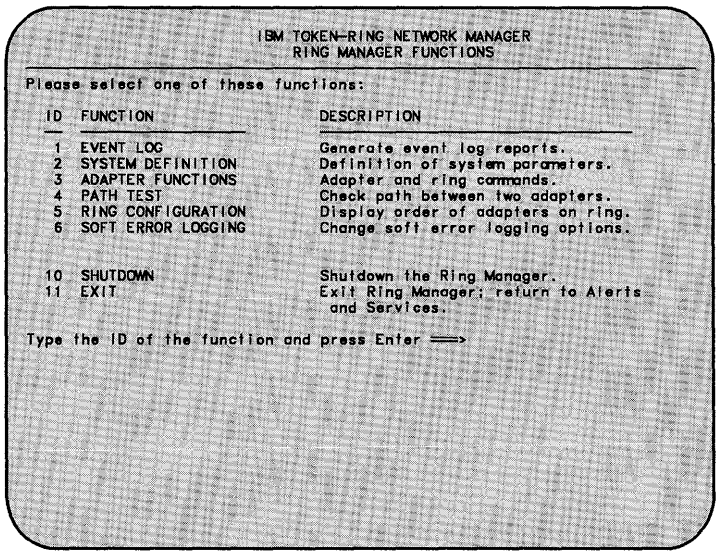
The menu allows you to choose among the following:

- Event Log
- System Definition
- Adapter Functions
- Path Test
- Ring Configuration
- Soft Error Logging
- Shutdown
- Exit.

Function	Task	Page
Event Log	Display or print reports from the event log	3-35
System Definition	Check or change the adapter number	2-16
	Request information about the Network Manager's adapter	2-24
	Add/find/change/display symbolic names	3-45
	Establish or change the operator password	2-20
	Specify whether to log configuration changes	3-57
Adapter Functions	Request information about adapters	3-61
	Remove an adapter from the network	3-65
	Conduct a ring test	3-68
	Start traffic on the ring	3-71
	Display adapters experiencing soft errors	3-74
Path Test	Test the data path between two adapters	3-78
Ring Config.	Display or print order of active adapters on the ring	3-81
Soft Error Logging	Set or reset the mode in which errors are reported	3-86
Shutdown	Close **Ring Manager Functions** in order to return to DOS	3-90
Exit	Leave **Ring Manager Functions** to go to **Alerts** or **Services**	3-93

Panel Sequence





Event Log (Reports)

Description

You may use "Event Log" to:

- Determine where errors are occurring most frequently (by requesting reports by time, date, and adapter)
- See whether an alert status has been resolved
- Examine soft errors
- Create a report or summary of the event log
- Inspect information about NAUN changes.

The event log contains information about activity on the ring. All alerts except alert DFIPD990 are included in the event log.

The Network Manager can provide reports for the network for a specific date range, a specific time range, a segment of time within a date range, and for a specific adapter symbolic name or hexadecimal address. You may specify any combination of these values by filling in the fields on the **Request Event Log Report** panel.

If you do not fill in these fields, the Network Manager will display every entry in the event log.

Note: If you set the date and time incorrectly when you started the Network Manager, some entries in the event log will be filed with the wrong date and time stamps.

These are the fields on the **Request Event Log Report** panel:

- *Start date* and *stop date*: The format for dates is mm/dd/yy. If you indicate:

Only dates, the report will contain all of the events that occurred for all adapters during the given date range.

Only dates and times, the report will contain the events that occurred for all adapters during the given time range on each day within the given date range.

Dates, times, and an adapter, the report will contain events that occurred for the adapter within the range given.

- *Start time* and *Stop time*: The format for times is hh/mm/ss. Use the 24-hour system. For example, "2:00 p.m." should be typed as "14:00." If you indicate:

  Only times, the report will contain all of the events (for all days and all adapters) that occurred during the given time range.

  Only times and dates, the report will contain the events that occurred for all adapters during the given time range on each day that falls within the given date range.

  Times, dates, and an adapter, the report will contain the events for the adapter within the time range on each day that falls within the given date range.

- *Summary Only*: If you type "N" in the "Summary Only" field, the report will include a summary and a report from the event log.

  The summary appears at the end of the report.

  If you type "Y," you will see only summary and no report from the event log.

  A summary gives the number of times each type of event occurs for the range specified. Each Network Manager message is one of six types of events.

Soft Error Reporter Notifications

- 101: Ring error limit exceeded
- 102: Ring errors increasing
- 103: Ring errors decreasing
- 104: Recovered error counters
- 106: Ring error report
- 108: Ring poll failure
- 109: Ring monitor error - ring recovered

Ring Status (Beaconing)

- 200: Ring not working
- 201: Ring not working - this adapter beaconing
- 202: Ring recovery failed
- 203: Ring recovered
- 204: Ring recovered - adapter removed
- 205: Ring not working - fault domain changed

Adapter Status

- 210: Unable to initialize ring adapter
- 211: Unable to open ring adapter
- 212: Ring adapter hardware failed
- 213: Ring adapter microcode failed
- 214: Unable to close ring adapter
- 215: Ring adapter or lobe failed
- 216: Ring adapter closed
- 230: Unable to open ring adapter interface
- 231: Unable to close ring adapter interface

Ring Manager Events

- 001: Network Manager started
- 010: Full error logging enabled
- 011: Full error logging disabled
- 012: Limited error logging enabled
- 014: Error counters reset
- 017: Ring test 1 failed - test stopped
- 019: Ring test 2 failed - test complete
- 030: Data loss started
- 031: Data loss stopped
- 032: Soft error and NAUN change logging was stopped

- 033: Soft error and NAUN change logging was restarted
- 049: Network Manager ended
- 120: Error reporter failed, processing continues
- 225: Adapter removed by Network Manager

Ring Events

- 020: Traffic generation started
- 021: Traffic generation ended
- 140: Only adapter on ring
- 141: Additional adapters on ring
- 190: Invalid message length
- 191: Duplicate data in message
- 192: Missing data in message
- 222: Adapter removed
- 224: New ring monitor

NAUN Activity

- 220: NAUN change

- *Adapter*: The adapter value may be either a hexadecimal address or the symbolic name of an adapter.

- *Report entries*: The figure below shows a typical report entry. Events are listed by message number in Appendix A.

```
01/13/86 16:06:46 Ring error report                              DFIPD106E
   ADDR: 10005A000030 NAME:                RING: 0000 MISC: 0003070011
   ADDITIONAL DATA: 000000000000 800000000000 00000000
   ADDR: 10005A0002AB NAME:                           MISC:
```

A report is a subset of the event log, which includes information regarding:

- Changes in the configuration of the network
- Alerts
- Invalid data frames
- Change in the adapter that is running the Network Manager

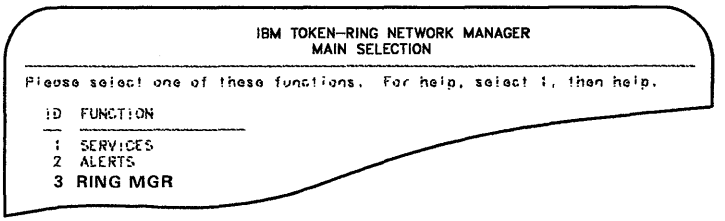
- Soft error reporter notifications
- Soft errors.

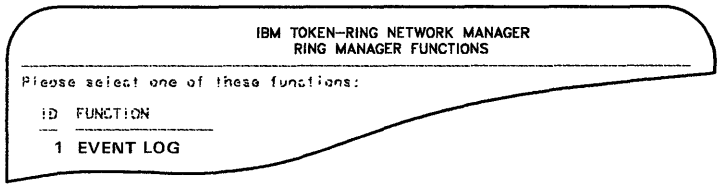
The event log report for the indicated time range and/or adapter hexadecimal address or symbolic name is displayed to the screen. You may print the entire report. Pressing F6 (Print) requests a printout, and pressing it again cancels the request. The following messages displayed at the bottom of the screen tell you whether your request is active or canceled:

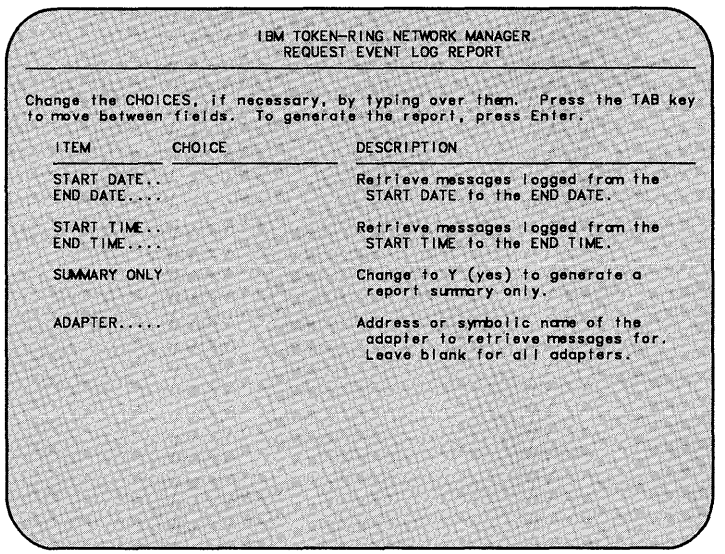
- "The report will be printed when F2 (QUIT) or F4 (RETURN) pressed"
- "The report will NOT be printed."

For detailed instructions about printing the report, see page 3-41.

Panel Sequence







Instructions

1 On the **Request Event Log Report** panel, fill in the appropriate information in the column titled "Choice."

Remember, if you do not change anything on the panel, the Network Manager provides a report of all events in the log for all adapters on the network.

2 Press **Enter** to see the logged messages for the time period and for the adapters specified.

3 Use the PgUp and PgDn keys to scroll through the messages. Use the Home or End key to display the top or the bottom of the information. Recent entries are added at the bottom of the list.

4 To request a printout of the configuration, press F6 (Print).

To cancel your request for a printout, press F6 (Print) again. Messages are displayed at the bottom of the screen to tell you whether your request is active or canceled.

The event log report will not be printed until you press F2 (Quit) or F4 (Return).

5 To return to the **Reports** panel, press F2 (Quit).

To return to the **Ring Manager Functions** panel, press F4 (Return).

System Definition

Description

Choose "System Definition" to use any of the following functions:

- Adapter Number
- Manager Profile
- Symbolic Names
- Security
- Log Options.

This section describes each function and suggests when to use it.

Adapter Number Specification

Description

Choose "Adapter Number" to:

- Check whether the adapter number has been set correctly
- Change the adapter number.

Instructions

For information about checking or setting the adapter number, see page 2-16.

Manager Profile

Description

This function gives you the following information about the Network Manager's adapter:

- Its symbolic name (if one has been assigned)
- Its adapter address
- Its ring ID (always "0000")
- Its Nearest Active Upstream Neighbor (NAUN)
- The microcode level of its adapter
- The microcode level of the IBM Token-Ring Network PC Adapter Support Interface
- The version of the Network Manager
- Its product ID
- Its group address (if one has been assigned)
- A list of its functional addresses.

Instructions

For information on how to use this function, see page 2-24.

Symbolic Names

Description

Choose "Symbolic Names" to:

- Display the entire list of symbolic names assigned to adapters on the ring.
- Display operator comments about each adapter
- Add or assign a symbolic name
- Find a symbolic name assigned to a particular adapter
- Change a symbolic name
- Delete a symbolic name.

Instructions

For information about symbolic names, see page 2-27.

For information about the functions available within the symbolic names function, continue reading this section.

Add

Description

Press F6 (Add) to assign a symbolic name to represent the hexadecimal address of an adapter.

Instructions

For information about assigning symbolic names, see page 2-27.

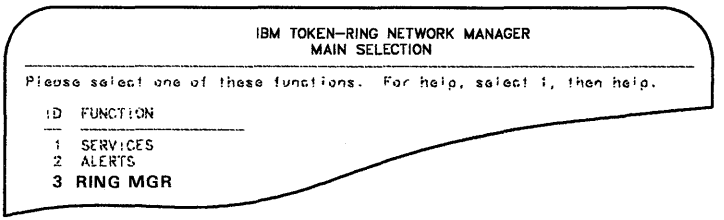
Find

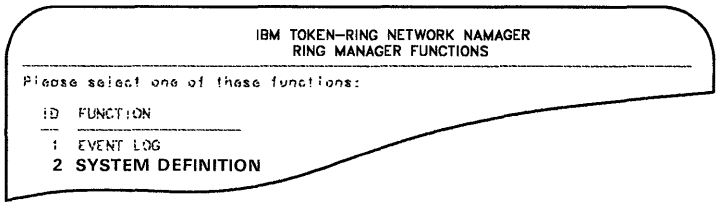
Description

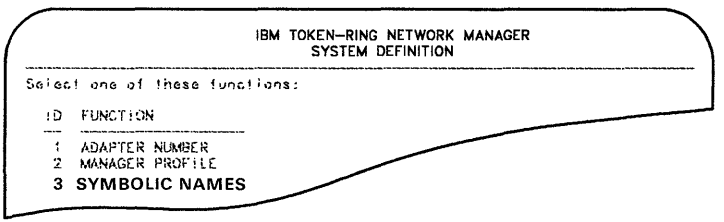
Press F7 (Find) to:

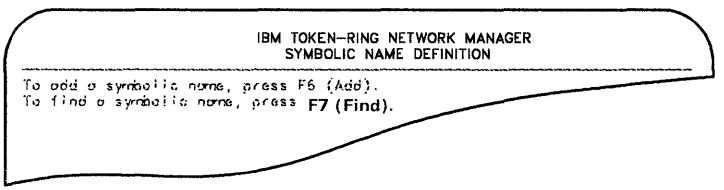
- Check whether a symbolic name has already been used
- Request additional information about a symbolic name you are about to delete
- Display a symbolic name that you are considering changing
- Find the symbolic name assigned to a particular adapter address
- Find the adapter address of a particular symbolic name.

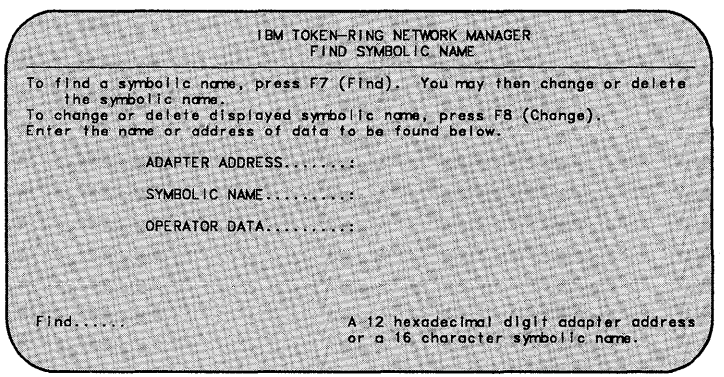
Panel Sequence











Instructions

1 On the **Find Symbolic Name** panel, fill in the appropriate information and press F7 (Find).

Consult the Help panel if you are unsure of how to fill in the field.

2 The Network Manager displays the information about the symbolic name you requested.

To find another symbolic name, type over the previous name you requested and press F7 (Find).

To change the symbolic name, press F8 (Change) and the **Change Symbolic Name** panel is displayed.

To delete the symbolic name, press F8 (Change) and follow the instructions on the panel for deleting.

3 To return to the **Symbolic Names** panel, press F2 (Quit).

To return to the **Ring Manager Functions** panel, press F4 (Return).

Change

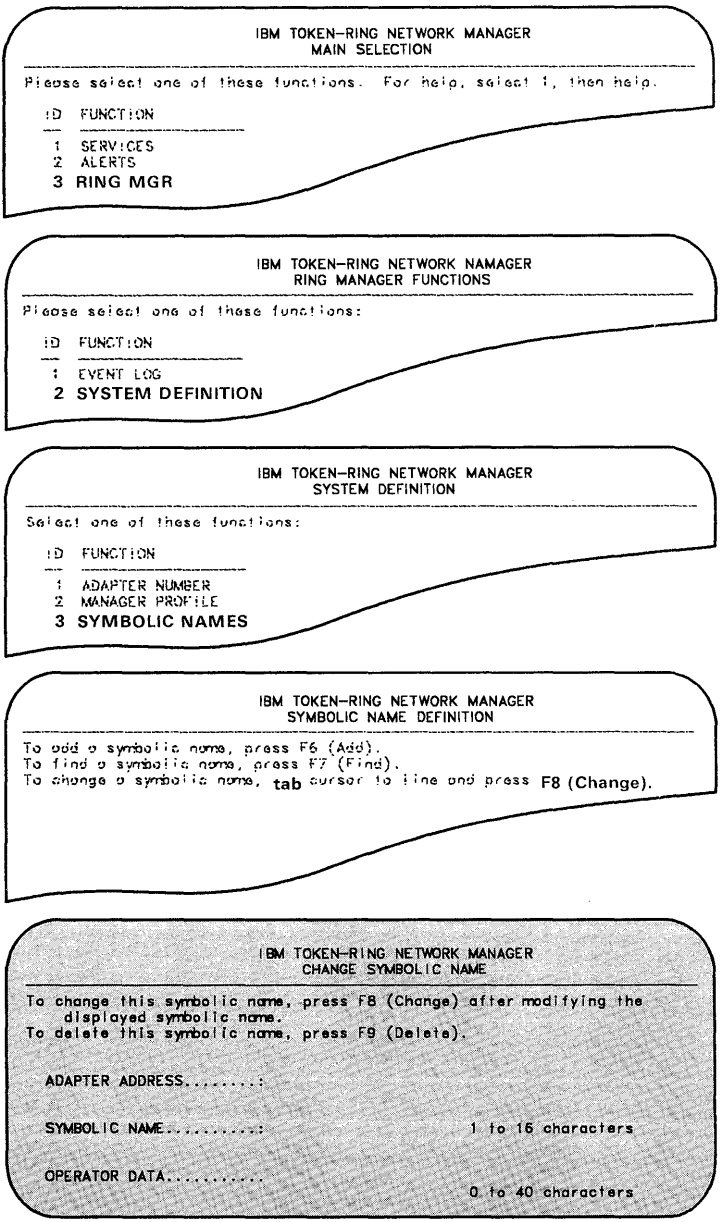
Description

Press F8 (Change) to:

- Change a symbolic name assigned to an adapter address
- Delete a symbolic name.

The Network Manager allows you to change symbolic names, but note that changing the symbolic name assigned to a hexadecimal address affects event log reports. See 2-27 for more information.

Panel Sequence



Instructions

1 On the **Find Symbolic Name** panel, fill in the fields with either the hexadecimal address or the symbolic name of an adapter whose symbolic name is to be changed.

2 On the **Change Symbolic Name** panel, type the new symbolic name in the field next to "Symbolic Name" and press F8 (Change).

Consult the Help panel if you are unsure of how to fill in the field.

3 To delete the symbolic name from this panel, press F9 (Delete) and then F9 again to confirm that you want to delete this name.

To return to the **Find Symbolic Name** panel, press F2 (Quit).

To return to the **Symbolic Names** panel, press F4 (Return).

Delete

Description

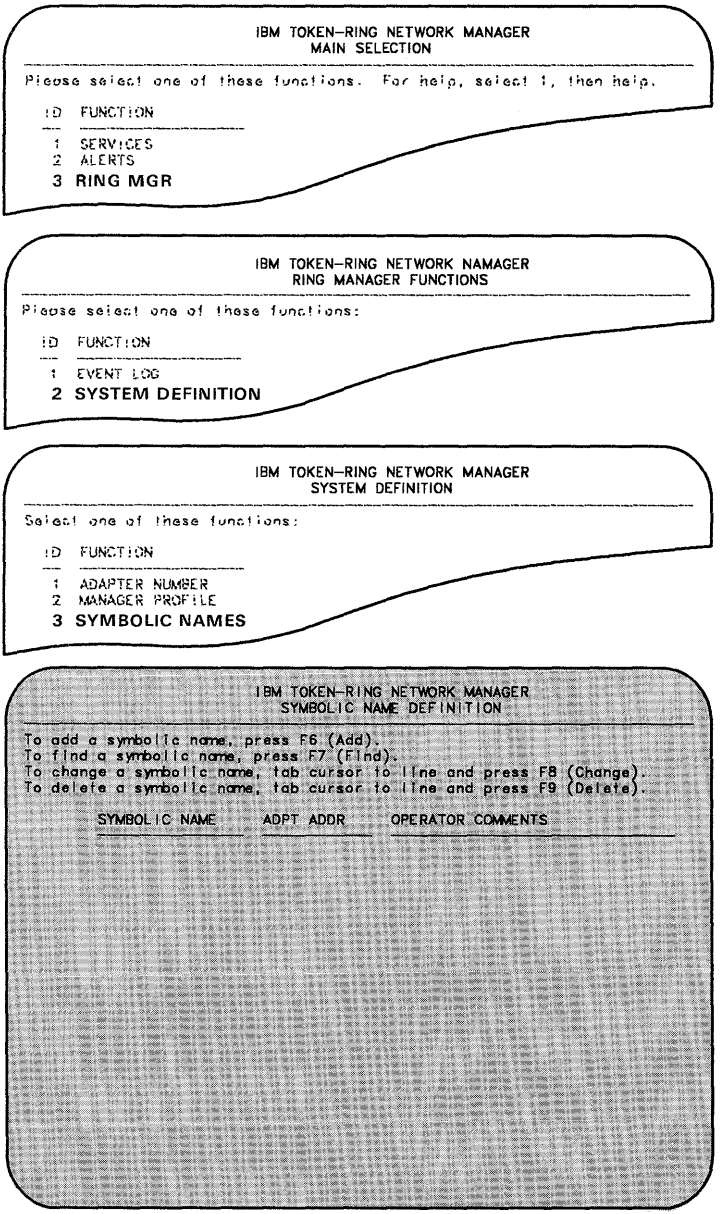
If you delete a symbolic name, you will not be able to use that name to retrieve data associated with that name from files such as the event log. You will be able retrieve the data using the adapter address.

Press F9 (Delete) to delete a symbolic name that:

- You no longer need or want to use
- You want to assign to another adapter
- Belongs to an adapter that will never be active on the ring again.

If you are certain which symbolic name you wish to delete, use the following procedure. If you are not certain, you may request that the Network Manager find a particular symbolic name and hexadecimal address so that you can delete it. See page 3-47.

Panel Sequence



Instructions

1 Use PgUp and PgDn to scroll through the panels (if there are more than one). Use the Home or End key to display the top or the bottom of the information.

2 On the **Symbolic Names** panel, use the tab key to position the cursor at the symbolic name you want to delete and press F9 (Delete). Press F9 again to confirm that you wish to delete this symbolic name.

3 To return to the **System Definition** panel, press F2 (Quit).

To return to the **Ring Manager Functions** panel, press F4 (Return).

Security

Description

Choose "Security" to:

- Set a password when you first install the Network Manager
- Change the password.

Instructions

For additional information, see page 2-20.

Log Options

Description

Choose "Log Options" to indicate that you want the event log:

- To contain notification of NAUN changes (changes in the configuration of the ring)
- To omit NAUN changes to save space in the log or to make error messages easier to recognize.

The configuration of the network changes constantly as adapters attach to and remove themselves from the ring.

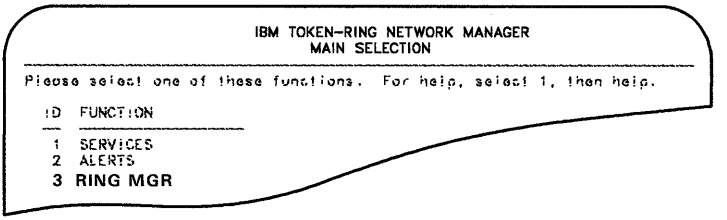
Each adapter has two neighboring adapters: a Nearest Active Upstream Neighbor (NAUN) and a Nearest Active Downstream Neighbor (NADN). The NAUN immediately precedes the adapter in the data path and the NADN immediately follows the adapter in the data path. When an adapter joins or leaves the ring, its NAUN and NADN change.

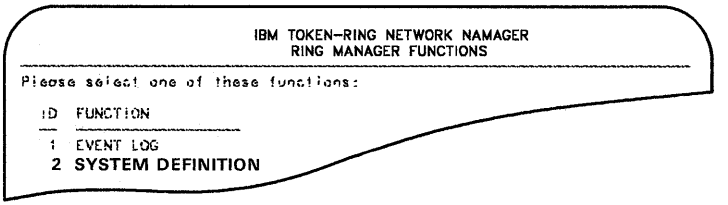
By selecting "yes" or "no" on the **Log Options** panel, you choose whether you want changes in the configuration of the ring to be logged.

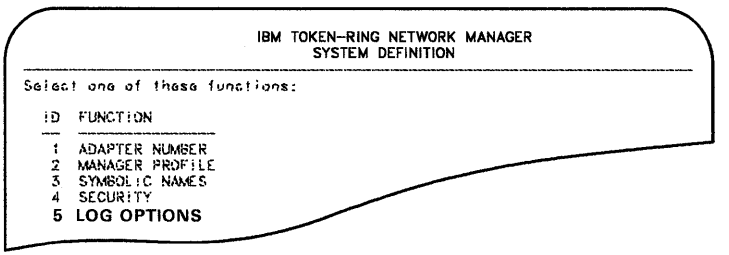
If the setting is "no" on the **Log Options** panel, changes will not be recorded in the event log. This is the normal setting.

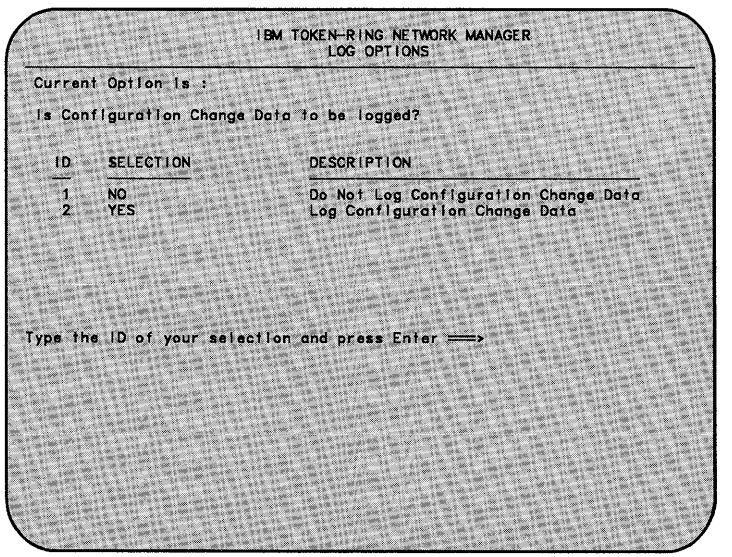
If the setting is "yes," changes will be recorded in the event log and you can see the changes by displaying or printing an event log report. The event log will fill up more quickly if the setting is "yes."

Panel Sequence









Instructions

1 From the **Log Options** panel, type the ID number of your selection and press **Enter**.

For information about the options, consult the Help panel.

2 To return to the **System Definition** panel, press F2 (Quit).

To return to the **Ring Manager Functions** panel, press F4 (Return).

Adapter Functions

Description

Choose "Adapter Functions" to use any of the following functions:

- Adapter Profile
- Adapter Removal
- Ring Test
- Traffic
- Soft Error Conditions.

This section describes each function and suggests when to use it.

Adapter Profile

Description

This function gives you the following information about any adapter active on the ring. (Use the **Manager Profile** function if you need information about the Network Manager's adapter. See page 2-24.)

- Its adapter address
- Its symbolic name (if one has been assigned)
- Its ring ID (always "0000")
- Its Nearest Active Upstream Neighbor (NAUN)
- The microcode level of its adapter card
- Its product ID
- Its group address (if one has been assigned)
- A list of its functional addresses

Functional addresses and function names

Functional addresses indicate the adapter's function, such as "Active Monitor." An adapter may have up to 31 functional addresses. For more information about functional addresses, see the *IBM Token-Ring Network Architecture Reference* or the *IBM Token-Ring Network Technical Reference.* Possible function names and addresses are listed below:

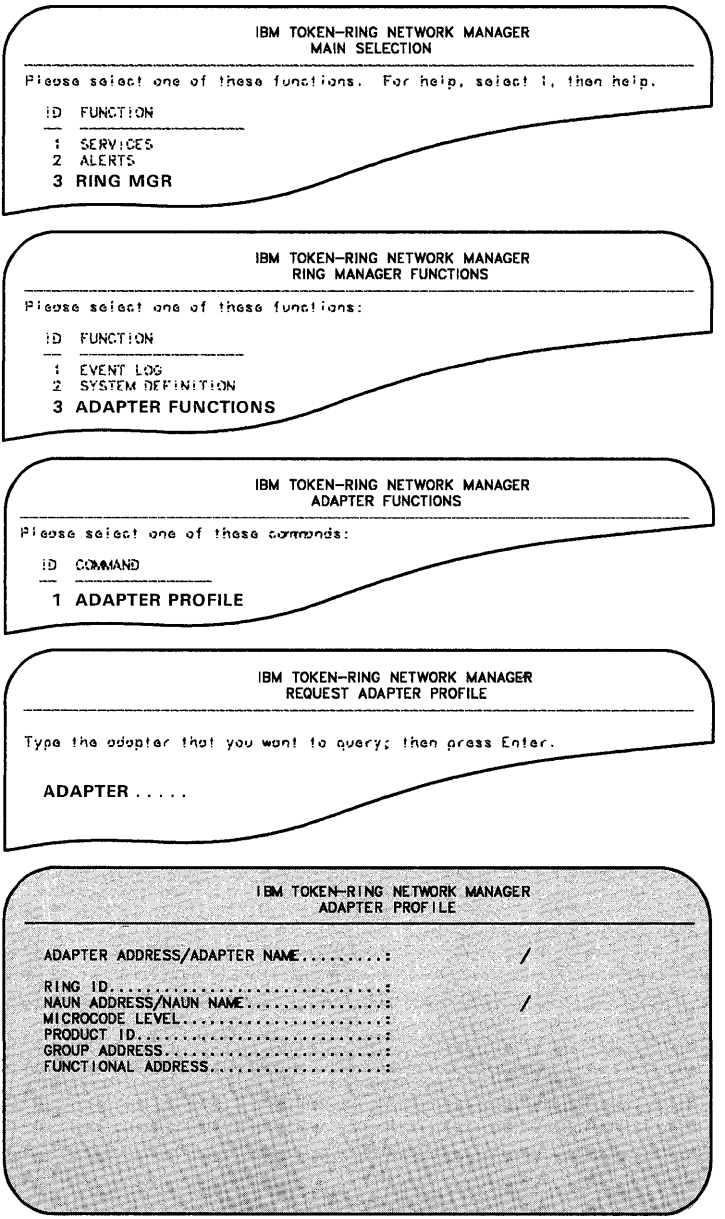
Function name	Functional address
Active monitor	X'00000001'
Ring parameter server	X'00000002'
Network server heartbeat	X'00000004'
Ring error monitor	X'00000008'
Configuration report server	X'00000010'
Synchronous bandwidth manager	X'00000020'
Locate - directory server	X'00000040'
Message interface	X'00000080'
Bridge	X'00000100'
IMPL server	X'00000200'
Ring authorization	X'00000400'
LAN gateway	X'00000800'
Ring wiring concentrator	X'00001000'
(User defined)	X'00008000' to X'40000000'

Functional name and address of Network Manager's adapter

If an adapter has the combination of names and addresses listed below, you can assume it is a Network Manager's adapter.

Function name	Functional address
Ring error monitor	X'00000008'
Configuration report server	X'00000010'

Panel Sequence



Instructions

1 On the **Request Adapter Profile** panel, fill in the appropriate hexadecimal address or symbolic name and press **Enter**.

To erase the field next to "Adapter," press F5 (Redisplay).

2 Use the PgUp and PgDn keys to scroll through the panels (if there are more than one). Use the Home or End key to display the top or the bottom of the information.

3 To request information about another adapter, on the **Adapter Profile** panel press F2 (Quit) and repeat step 1.

To return to the **Adapter Functions** panel from the **Adapter Profile** panel, press F2 (Quit). On the **Request Adapter Profile** panel press F2 (Quit).

To return to the **Ring Manager Functions** panel from the **Adapter Profile** panel, press F4 (Return).

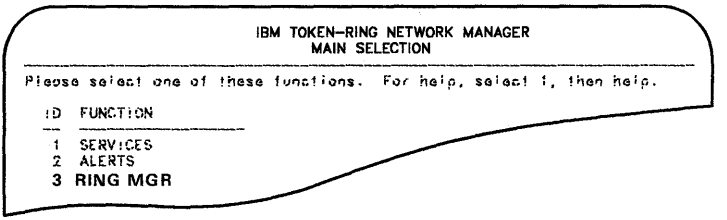
Adapter Removal

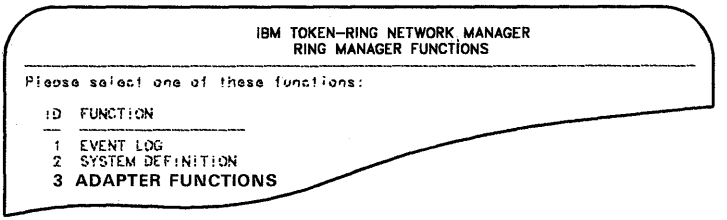
Description

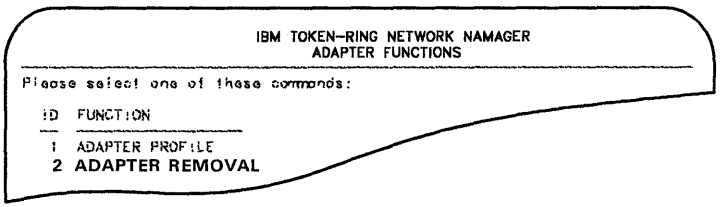
Choose "Adapter Removal" to:

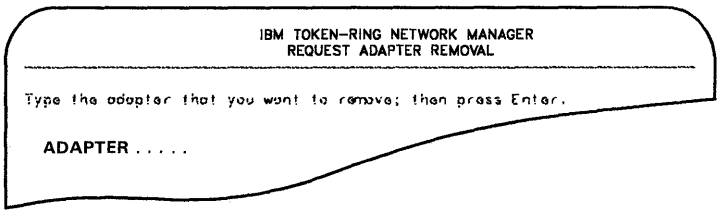
- Take an adapter that is causing excessive errors off the ring
- Take an adapter off the ring to check whether it is the cause of slow ring performance.

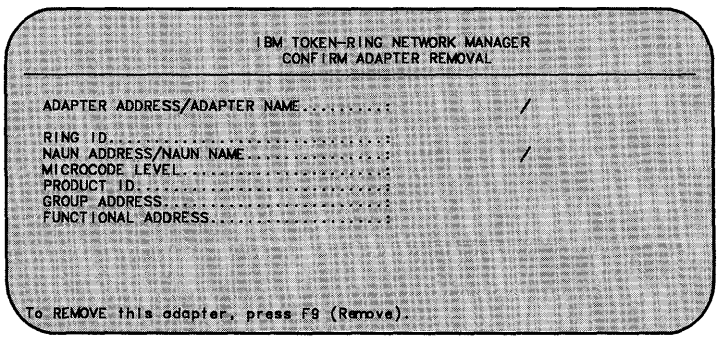
Panel Sequence











Instructions

1 On the **Request Adapter Removal** panel, fill in the field with the hexadecimal address or symbolic name of the adapter you want to remove.

The Network Manager will provide information about the adapter to allow you to check that you have chosen the correct adapter.

For information about functional addresses, see page 3-62.

2 Use the PgUp and PgDn keys to scroll through the panels (if there are more than one). Use the Home or End key to display the top or the bottom of the information.

To erase the field next to "Adapter," press F5 (Redisplay).

3 On the **Confirm Adapter Removal** panel, press F9 (Remove) to remove this adapter.

4 On the **Confirm Adapter Removal** panel:

To remove another adapter, press F2 (Quit) to return to the **Request Adapter Removal** panel. Repeat step 1.

To return to the **Adapter Functions** panel, press F2 (Quit). On the **Request Adapter Removal** panel, press F2 (Quit).

To return to the **Ring Manager Functions** panel, press F4 (Return).

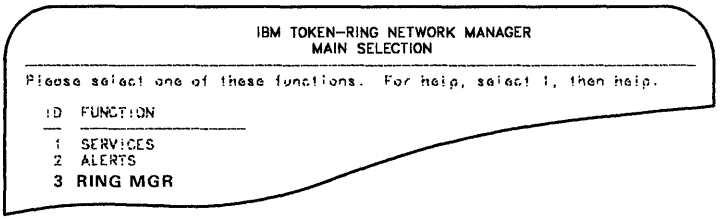
Ring Test

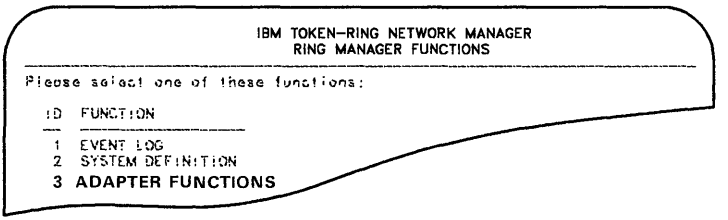
Description

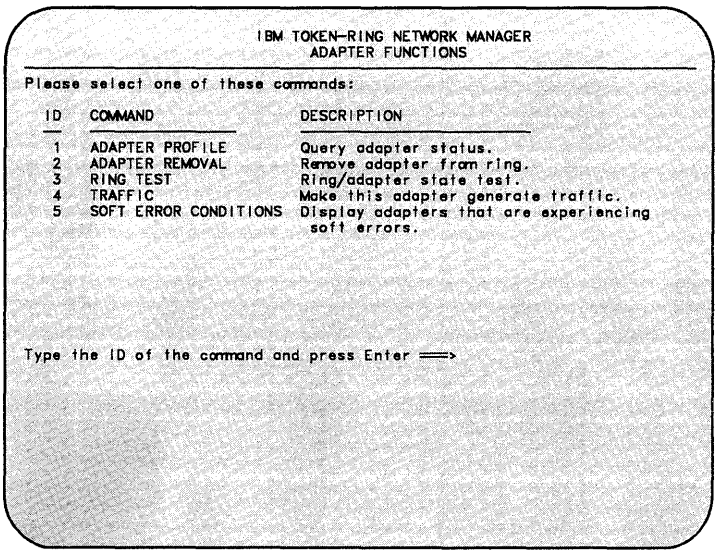
Choose "Ring Test" to:

- Check whether the Network Manager's adapter can communicate with the ring after you have installed the Network Manager
- Determine whether the ring can transfer data after you have attempted to resolve a problem.

Panel Sequence







Instructions

1 On the **Adapter Functions** panel, type the ID number for the "Ring Test" and press **Enter.**

You will receive a message on your screen indicating whether the two-part test was completed successfully or failed. If the test succeeded, you will receive the message "Operation complete." Go to step 3.

If the test failed, you will receive the message "Operation failed." Continue with step 2.

2 If the test failed, you may receive an alert soon after. If you do, check **Alerts** for information about the possible source of the problem.

If you do not receive an alert, check Appendix A for information about how to respond to each of the messages listed below. These are recorded in the event log.

DFIPD017 Ring test 1 failed - test stopped
DFIPD019 Ring test 2 failed - test complete

3 To return to the **Ring Manager Functions** panel, press either F2 (Quit) or F4 (Return).

Traffic

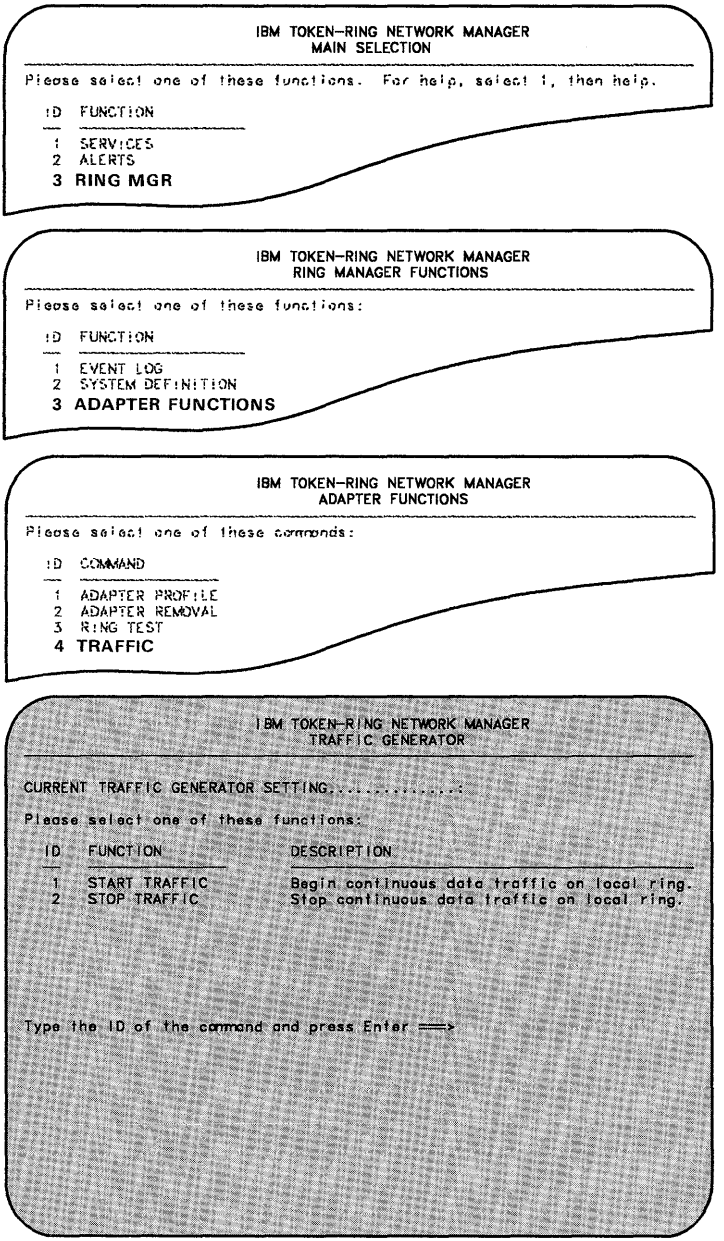
Description

The Network Manager allows you to create traffic (a continuous stream of data frames) on the ring to assist you in troubleshooting.

Choose "Traffic" to:

- Send test messages on the ring during troubleshooting
- Check whether the ring can transfer data after you have attempted to resolve a problem
- Test the ring after you have installed the Network Manager

Panel Sequence



Instructions

1 The **Traffic** panel indicates the current setting: started or stopped. If you wish to change the setting, type the ID number of your selection and press **Enter**.

2 To return to the **Adapter Functions** panel, press F2 (Quit).

To return to the **Ring Manager Functions** panel, press F4 (Return).

Soft Error Conditions

Description

The Network Manager allows you to determine the adapters that may be harming the ring's performance by displaying a list of adapters that are experiencing soft errors at the time of the request.

Choose "Soft Error Conditions":

- When the **Recommended Actions for Selected Alert** panel indicates that you should use this function
- When the *IBM Token-Ring Network Problem Determination Guide* indicates that you should use this function.

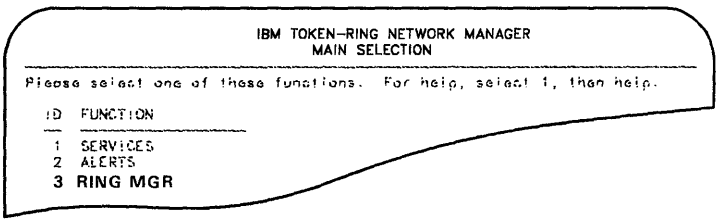
Using this function, you may request an adapter profile or an adapter removal. However, if the ring is experiencing soft errors, you may need to request the profile or the removal more than once before the Network Manager is able to respond.

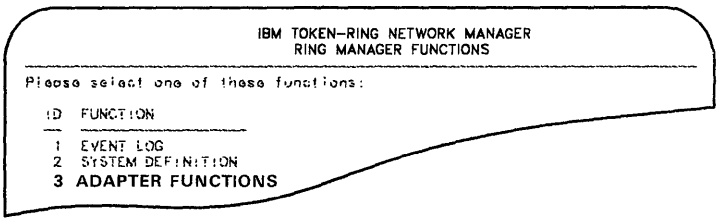
If you try again to remove an adapter and receive the message "Adapter not found on ring," the Network Manager has already removed the adapter (even though you may have received the message "Operation failed" after a previous attempt).

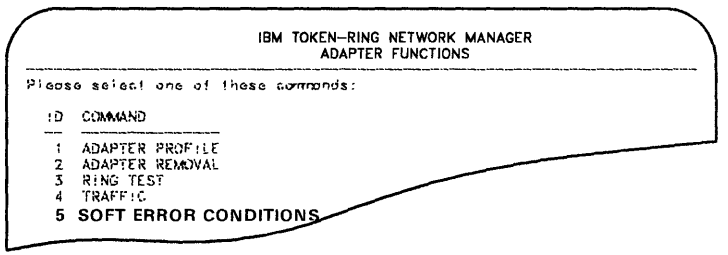
The **Soft Error Conditions** displays a list of adapters that are experiencing soft errors.

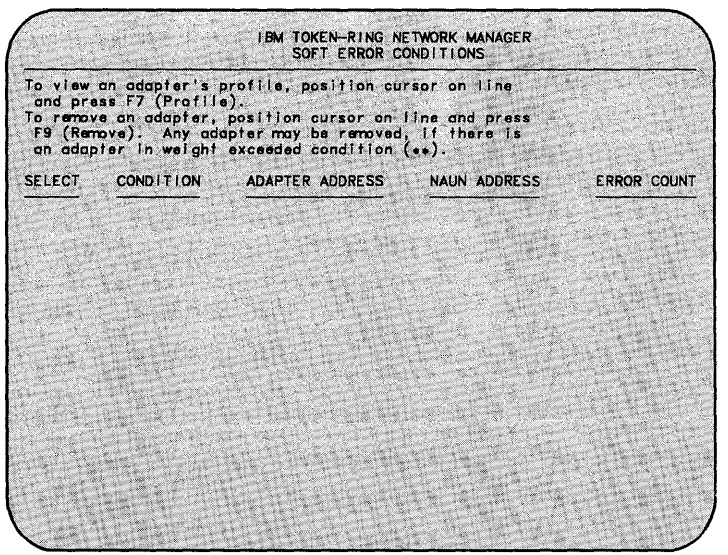
Adapters that are in the *pre-weight exceeded* condition have a single asterisk (*) in the "Condition" column. Adapters that are in the *weight exceeded* condition have double asterisks (**) in the "Condition" column. Weight is a measure of the number of soft errors the adapter is experiencing. As the weight approaches a predefined level, it is in pre-weight exceeded condition.

Panel Sequence









Instructions

1 To see the adapter profile of an adapter on the list, position the cursor on the appropriate line in the list and press F7 (Profile). (You may use the "Adapter Profile" function to find a symbolic name.)

The **Adapter Profile** panel will be displayed. To return to the **Soft Error Conditions** panel, press F2 (Quit).

2 To remove an adapter on the list from the ring, position the cursor on the appropriate line in the list and press F9 (Remove).

Note: You may remove an adapter only if there is an adapter first on the list that is in the weight exceeded condition (as indicated by ** in the "Condition" column). You cannot remove the Network Manager's adapter from this panel.

3 The **Confirm Adapter Removal** will be displayed. Press F9 (Delete) to confirm your decision to remove the adapter.

After an adapter has been removed, it may stay on the Soft Error Conditions panel for several minutes, but refreshing the panel after a few seconds should show that the Error Count is decreasing for the adapter. If it is not decreasing, the adapter may have been reinserted on the ring.

To return to the **Soft Error Conditions** panel, press F2 (Quit).

To return to the **Adapter Functions** panel, press F4 (Return).

4 To refresh the list of adapters on the panel (in case new entries have been added since you displayed this panel), press F5 (Refresh).

5 To return to the **Adapter Functions** panel, press F2 (Quit).

6 To return to the **Ring Manager Functions** panel, press F4 (Return).

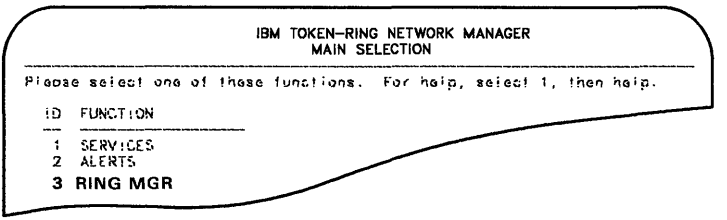
Path Test

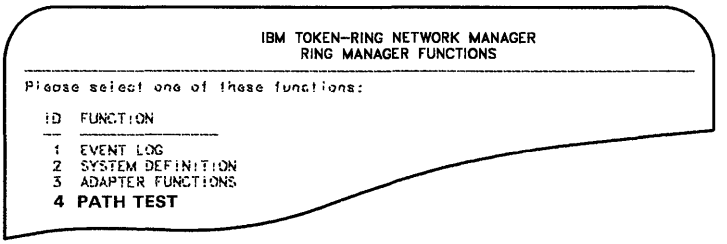
Description

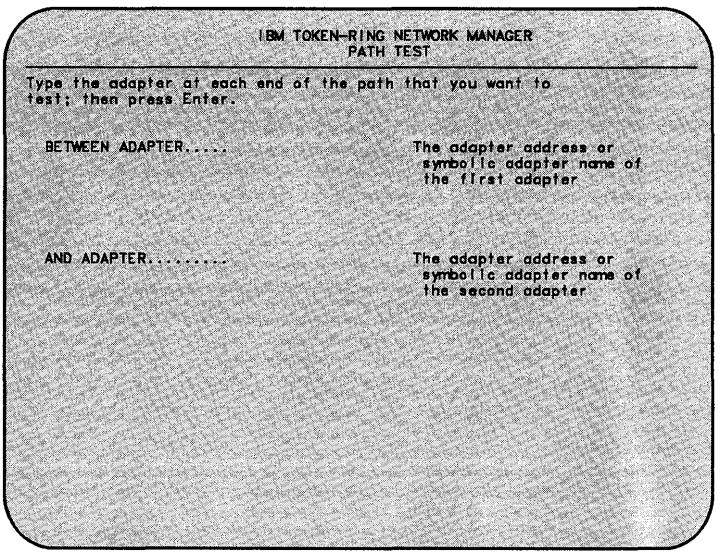
Choose "Path Test" to check the path between two adapters if one reports that it is unable to send messages to the other.

If the path test fails, you may receive an alert soon after. Go to **Alerts** for information about the possible cause of the failure.

Panel Sequence







Instructions

1 On the **Path Test** panel, fill in the fields with the information for the two adapters at either end of the path you are checking and press **Enter.**

If one of the adapters you have listed encounters an error, you receive an error message and the cursor is positioned under the adapter that has the error condition.

2 To test the path between two different adapters, type over the previous information with the new adapter information. If you wish, you may press F5 (Redisplay) to erase the previous information. Return to step 1.

3 To return to the **Ring Manager Functions** panel, press either F2 (Quit) or F4 (Return).

Ring Configuration

Description

Choose "Ring Configuration" to:

- Display or print a list of active adapters on the ring in upstream order
- Obtain a list that allows you to determine the NAUN (Nearest Active Upstream Neighbor) of the active adapters on the ring at the time of request
- Learn the symbolic names of the active adapters on the ring
- See the functional and group addresses for each adapter on the ring.

Information provided

The Network Manager provides the following information for each adapter:

- Its ring ID (always "0000")
- Its adapter address
- Its symbolic name (if one has been assigned)
- Its group address (if one has been assigned)
- A list of its functional addresses.

Functional addresses and function names

Functional addresses indicate the adapter's function, such as "Active Monitor." An adapter may have up to 31 functional addresses. For more information about functional addresses, see the *IBM Token-Ring Network Architecture Reference* or the *IBM Token-Ring Network Technical Reference.* Possible function names and addresses are listed below:

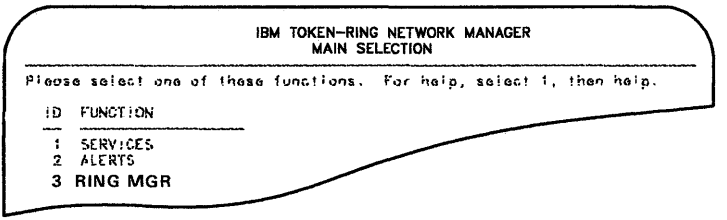
Function name	**Functional address**
Active monitor	X'00000001'
Ring parameter server	X'00000002'
Network server heartbeat	X'00000004'
Ring error monitor	X'00000008'
Configuration report server	X'00000010'
Synchronous bandwidth manager	X'00000020'
Locate - directory server	X'00000040'
Message interface	X'00000080'
Bridge	X'00000100'
IMPL server	X'00000200'
Ring authorization	X'00000400'
LAN gateway	X'00000800'
Ring wiring concentrator	X'00001000'
(User defined)	X'00008000' to X'40000000'

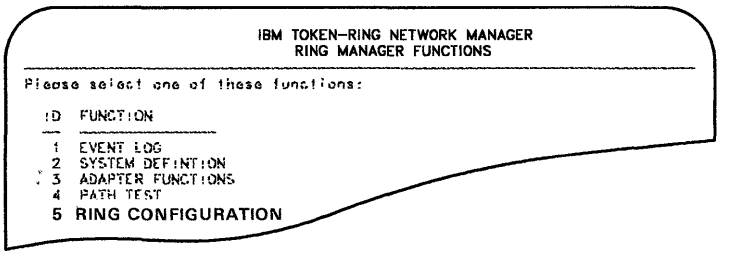
Functional name and address of Network Manager's adapter

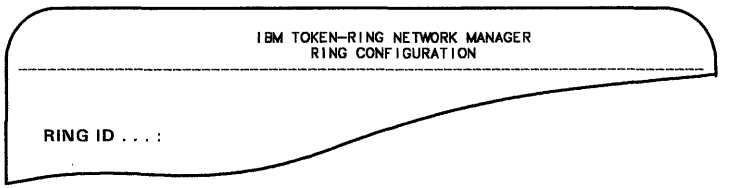
If an adapter has the combination of names and addresses listed below, you can assume it is a Network Manager's adapter.

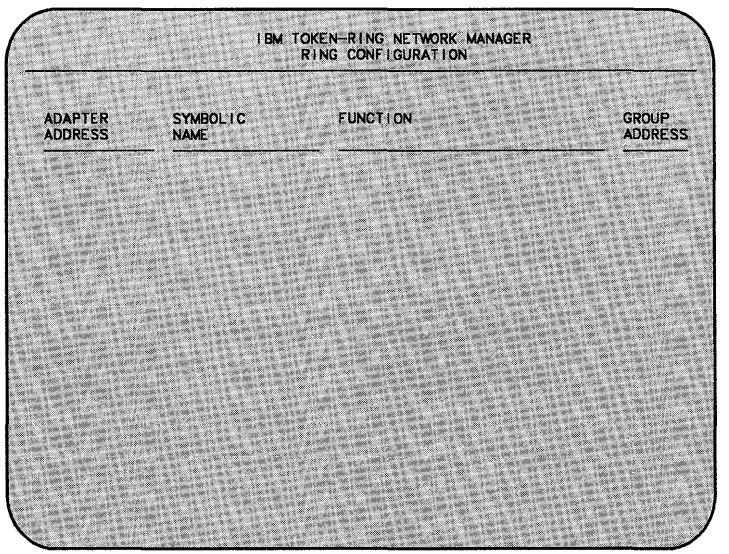
Function name	Functional address
Ring error monitor	X'00000008'
Configuration report server	X'00000010'

Panel Sequence









Instructions

1 On the **Request Ring Configuration** panel, you do not need to do anything except press **Enter**.

The **Ring Configuration** panel displays the entire configuration of the active adapters on the ring in upstream order.

The first adapter on the list is the Network Manager's adapter. The second adapter on the list is the first adapter's NAUN. The third adapter on the list is the second adapter's NAUN and so on.

2 Use the PgUp and PgDn keys to scroll through the panels (if there are more than one). Use the Home or End key to display the top or the bottom of the information.

3 To request a printout of the configuration, press F6 (Print).

To cancel your request for a printout, press F6 (Print) again. Messages are displayed at the bottom of the screen to tell you whether your request is active or canceled.

The ring configuration will not be printed until you press F2 (Quit) or F4 (Return).

4 To return to the **Request Ring Configuration** panel to request another ring configuration, press F2 (Quit).

To return to the **Ring Manager Functions** panel, press F4 (Return).

Soft Error Logging

Description

Choose "Soft Error Logging" to change the level of detail of the information that is logged about soft errors on the ring.

The soft error reporter function of the Network Manager provides information regarding soft errors occurring on the ring. Regardless of the level of logging you specify, the reporter notifies you with an alert when the ring is experiencing an unacceptable number of soft errors. If you specify "Full" or "Limited" soft error logging, the Network Manager logs the individual soft error reports that caused the alert. From these reports, you can tell what kind of soft errors the ring is experiencing.

Normally, it is not necessary to know what kind of soft errors are occurring. For problem determination, you need only the information that accompanies the alert, not the detailed information from the individual reports.

A *soft error* is an error on the network that temporarily harms the ring's performance. It causes the data to be transmitted on the ring more than once to be received correctly. A ring can automatically recover from a soft error. You may choose among four options:

- *Full soft error logging*: All soft error reports from all adapters on the ring are logged. The following messages are logged only when this option is selected.

  DFIPD102 W Ring errors increasing
  DFIPD104 I Recovered error counters
  DFIPD108 W Ring poll failure
  DFIPD109 W Ring monitor error - ring recovered
  DFIPD190 W Invalid message length
  DFIPD191 W Duplicate data in message
  DFIPD192 W Missing data in message
  DFIPD224 I New ring monitor

Use this option only when you need to know what kinds of soft errors are being experienced on the entire ring.

- *Limited soft error logging*: Only those soft error reports from any adapter(s) accumulating soft errors exceeding a predefined level are logged. With this option, the Network Manager also logs soft error reports from the adapters on both sides of the adapter(s).

  Use this option only when you need to know what kinds of soft errors are being experienced by adapters in areas of the ring where large numbers of soft errors are occurring.

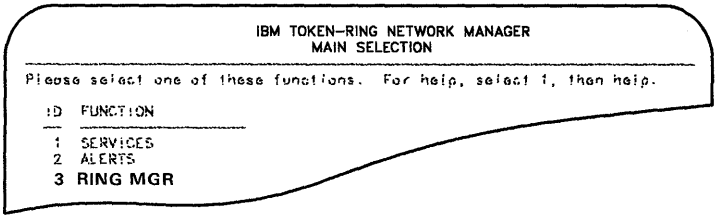
- *No soft error logging*: No individual soft error reports are logged. This is the default value for this function.

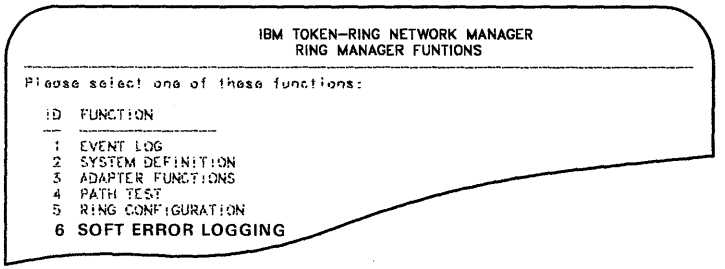
  This is the normal setting for soft error logging. This option allows you to receive alerts necessary for most troubleshooting, but not log all the soft error reports that caused the alerts.

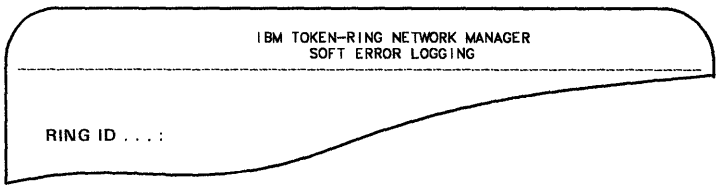
- *Reset soft error logging*: The internal counters for soft error reporting are returned to 0. This option updates the error logging mode to *No soft error logging*.

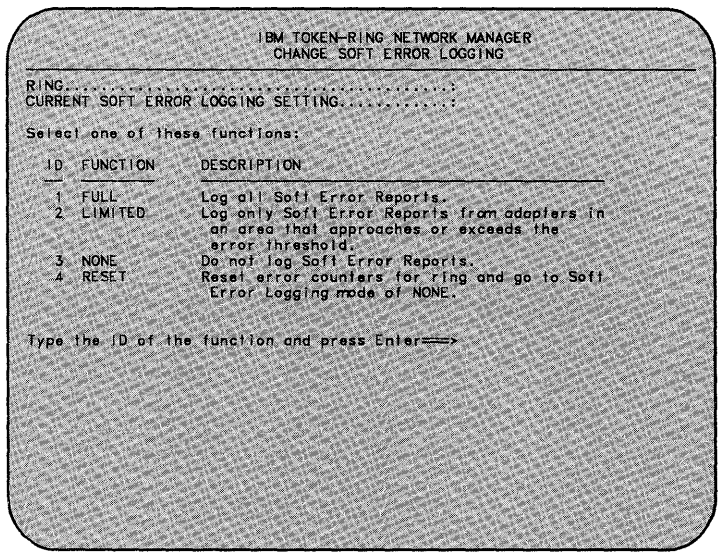
  Reset soft error logging if you want to erase the counters for soft errors that have occurred up to now. This would be appropriate if a change (such as removing an adapter) had been made to the ring as a result of a soft error condition. Choose "Reset" if you have received the alert "LAN Manager error reporter failed."

Panel Sequence









Instructions

1 On the **Soft Error Logging** panel, you do not need to do anything except press **Enter**.

2 On the **Change Soft Error Logging** panel, type the ID of the kind of error logging you need and press **Enter**. See the Help panel for a description of each kind.

3 To return to the **Soft Error Logging** panel, press F2 (Quit).

To return to the **Ring Manager Functions** panel, press F4 (Return).

Shutdown (from Ring Manager Functions)

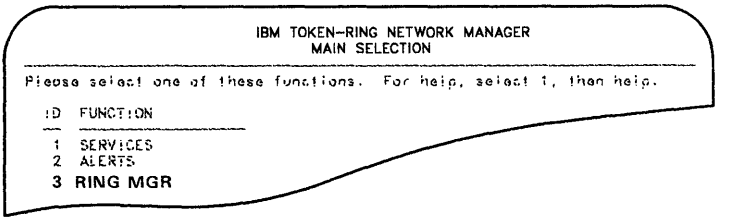
Description

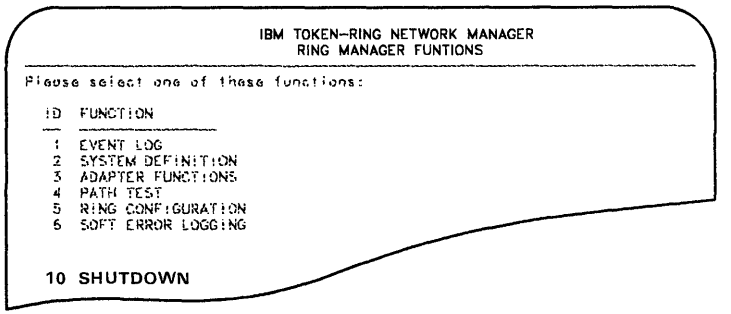
Select "Shutdown" if you wish to return to DOS.

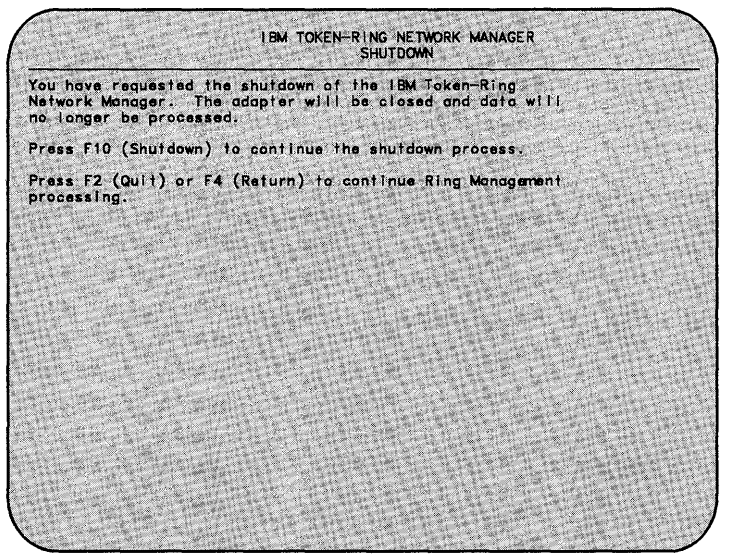
Selecting "Shutdown" from this panel will not immediately return you to DOS. You will also need to shut down the **Alerts** functions before you choose "Shutdown" at the **Services** panel to return to DOS.

If you intend to return to the **Ring Manager Functions** before you stop the Network Manager, follow the instructions in the next section to "Exit" the **Ring Manager Functions** rather than "Shutdown."

Panel Sequence







Instructions

1 On the **Ring Manager Functions** panel, type the ID number for "Shutdown" and press **Enter**.

2 On the **Shutdown** panel, press F10 (Shutdown) to confirm that you want to shut down.

Otherwise, press F2 (Quit) or F4 (Return) to return to the **Main Selection** panel.

3 On the **Main Selection** panel, select "Services" to return to DOS. (See page 3-11.)

Exit (Ring Manager Functions)

Description

Select "Exit" to return to the **Main Selection** panel and leave the **Ring Manager Functions** active to monitor the ring.

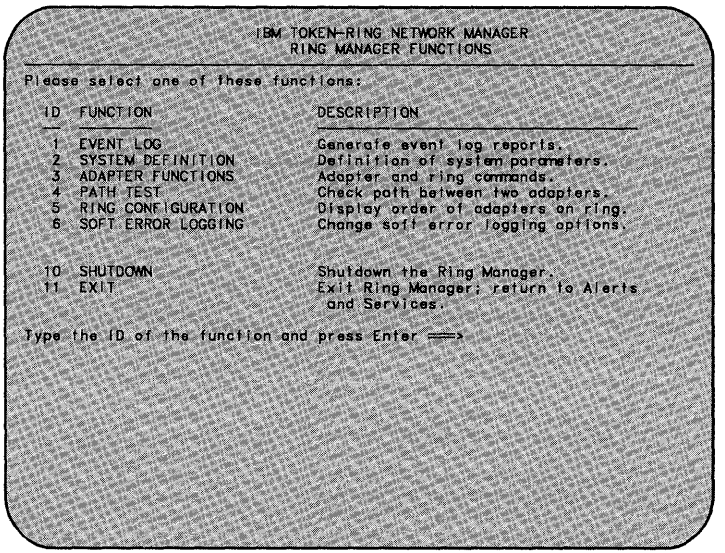
Note: The next time you select "Ring Mgr" from the **Main Selection** panel, you will be asked for the password (if you have established a password).

You may choose to return to the **Main Selection** panel by pressing Scroll Lock. The next time you select "Ring Mgr" from the **Main Selection** panel, you will not be required to type the password (regardless of whether you have established a password).

If you choose to return to DOS, follow the instructions on page 3-90.

After you have selected "Exit" and pressed Enter, the **Main Selection** panel is displayed. From here you can select "Services," "Alerts," or return to "Ring Manager."

Panel Sequence



Instructions

1 On the **Ring Manager Functions** panel, type the ID number to "Exit" the Network Manager and press **Enter**.

2 On the **Main Selection**, type the ID number of the function you wish to use.

Chapter 4. Basic Troubleshooting

This chapter includes some hints about using the Network Manager to find problems on the ring. For detailed procedures, see the *IBM Token-Ring Network Problem Determination Guide.* To investigate problems between adapters that cannot communicate, use the procedure in this chapter on page 4-4. Included are suggestions to help solve problems that:

- Are currently occurring
- Have occurred prior to troubleshooting
- Exist between two adapters that cannot communicate.

Problems Occurring Currently

The following are some suggestions for analyzing problems that either have been reported by someone using an adapter on the ring or by an alert indication on a Ring Manager Functions panel.

Check the ring status in the upper left corner of any Ring Manager Functions panel. If the ring status is

Beaconing, go to **Alerts** and look for the most recent beaconing alert (DFIPD202-204). Record the message number for that alert (found under the description on the Details for Selected Alert panel). Follow the recommended actions for that alert.

Soft Error, go to **Alerts** and look for the most recent alert with the short description "Error limit exceeded." Go to the panel with details for that alert. Using the text message information, follow the instructions for message DFIPD101, in Appendix A of this manual.

Wire Fault or **Adapter Closed** go to **Alerts** and look for the most recent alert. Record the message number for that alert (found under the description on the Details for Selected Alert panel). Follow the recommended actions for that alert.

Data Lost wait for the ring status to change. Follow the action for the new ring status.

Normal, request an adapter profile for the adapter that has the problem to see if the adapter is still active on the ring. (It is helpful to know whether it is active as you continue troubleshooting.) Use the problem determination procedures in the documentation for the application program that the adapter is running.

Problems that Occurred Previously

Go to **Alerts** and check for an alert that occurred prior to the time of the problem. If you see the alert(s):

Error limit exceeded, check the event log for the adapter that is indicated in the alert message. Check to see if the message "Ring errors decreasing" was logged for that adapter.

If it was not logged before the time of the problem, then the ring was still experiencing excessive soft errors that may have caused the problem.

If it was logged, continue searching for alerts that indicate the source of the problem.

Ring not working, check the event long for the message "Ring recovered" or "Ring recovered - adapter removed."

If these messages were not logged before the time of the problem, then beaconing was the cause of the problem.

If these messages were logged, check to see if the adapter reporting the problem was removed.

If it was removed, then that adapter was the cause of the problem.

If it was not removed, continue to look for the problem.

If none of the alerts listed above occurred, look at the event log.

If no messages were logged at the time of the problem, then the IBM Token-Ring Ring Network Manager was not aware of the problem.

Problems between Two Adapters That Cannot Communicate

Use the following procedure when you have no indication of hardware errors, no beaconing messages, nor an unusual level of soft errors.

Before you begin, start the Network Manager. (The Network Manager must be on the ring with the adapters that cannot communicate.)

Using the "Adapter Profile" function, verify that each adapter is active on the ring.

If both are active, begin with step 1 of the following procedure.

Otherwise, begin with step 6 on page 4-6.

1 Run a "Path Test" between the two adapters.

If the test was successful, continue with step 2.

Otherwise, go to step 4.

2 Check the application programs that are running in each adapter to see whether they have been correctly configured and are using the correct addresses and symbolic names.

If the configuration, addresses, and names are correct, this procedure has failed to locate the problem. Contact your network administrator.

Otherwise, continue with step 3.

3 Correct the error and retry the operation that failed, then return to this step.

If the operation no longer fails, you do not need to continue with this procedure. You have recovered from the problem.

Otherwise, this procedure has failed to locate the problem. Contact your network administrator.

4 Run all of the diagnostics available on one adapter.

If the diagnostics indicate an error, correct the problem.

Otherwise, continue with step 5.

5 Run all of the diagnostics available on the other adapter.

If the diagnostics indicate an error, correct the problem.

Otherwise, this procedure has failed to locate the problem. Contact your network administrator and your software supplier.

6 Make sure that the adapter that was not active on the ring during the request for an adapter profile has been made active. Restart its application program or start the Network Manager on that adapter. Verify that the correct adapter address is being used.

7 Request an adapter profile for the adapter that was previously not active on the ring.

If it is now active, you have recovered from the problem and do not need to continue with this procedure.

Otherwise, continue with step 8.

8 Run all of the adapter diagnostics available on the adapter that remains not active on the ring.

If the diagnostics indicate an error, correct the problem.

Otherwise, this procedure has failed to locate the problem. Contact your network administrator and your software supplier.

Appendix A. Messages

You may encounter three types of messages while running the Network Manager. They include:

I: Information

An information message tells you about non-critical activity on the ring.

W: Warning

A warning message indicates a potential problem on the ring.

E: Error

An error message is more serious than a warning message and tells you about a problem on the ring.

Messages may be displayed in three ways:

- On the *message line*: Messages that are displayed here cause a beep to sound and contain only the message number and a written description.

- As an *alert*: An alert, a special type of message, appears as an "AL" on the bottom line of the screen. These also cause a beep to sound and are recorded in the event log (with the exception of alert DFIPD990). (To see a description of the alert, you need to press Scroll Lock to return to the **Main Selection** panel and then select "Alerts.")

- In the *event log*: Messages that are not displayed on message line on the screen are recorded in the event log and in the alerts file with the date, time, and any additional data associated with the message, such as

ring ID or adapter address. All alerts are recorded in the event log with the exception of alert DFIPD990.

All of the Network Manager messages are listed below by message ID number. Any additional data that may accompany the message (or alert), a brief explanation of the message meaning, and suggestions for action to take are included.

The terms *First Adapter* and *Second Adapter* indicate the adapter that detected the error and its NAUN (Nearest Active Upstream Neighbor) or NADN (Nearest Active Downstream Neighbor).

DCJSS801 E Invalid key depressed. Please try again.

Meaning: You have pressed a key that is not defined for use with this panel.

Action: Press a valid key to continue.

DCJSS828 E Invalid response.

Meaning: You have not responded correctly to the condition indicated.

Action: Try another response.

DCJSS871 E Target file already exists.

Meaning: The file indicated by the name displayed already exists in the target directory.

Action: Choose one of the following responses:

- To stop the operation, type "A" for Abort.
- To try again, change diskettes or change the name of the file (indicated by the displayed name) and type "R" for Retry.
- To overwrite the existing file, type "I" for Ignore.

DCJSS872 E Target file full.

Meaning: All of the space in the target file has been used. A new file needs to be created or some records need to be deleted.

Action: Choose one of the following responses:

- To stop the operation, type "A" for Abort.
- To try again, change diskettes and type "R" for Retry.

DCJSS873 E Target disk full.

Meaning: All of the space on the target diskette has been used. The contents of the file indicated by the name displayed must be started on another diskette.

Action: Choose one of the following responses:

- To stop the operation, type "A" for Abort.
- To try again, change diskettes and type "R" for Retry.

DCJSS874 E Target disk is write-protected.

Meaning: The diskette has a write-protect seal on it or it does not have a write notch.

Action: Choose one of the following responses:

- To stop the operation, type "A" for Abort.
- To try again, change diskettes or remove the write-protect seal from the current diskette and type "R" for Retry.

DCJSS875 E Target drive not ready.

Meaning: The file indicated by the name displayed cannot be copied to the target drive.

Action: Choose one of the following responses:

- To stop the operation, type "A" for Abort.
- To try again, insert a diskette in the target drive, close the drive door, and type "R" for Retry.

DCJSS876 E Printer out of paper.

Meaning: The file indicated by the name displayed cannot be printed until the printer is loaded with paper.

Action: Choose one of the following responses:

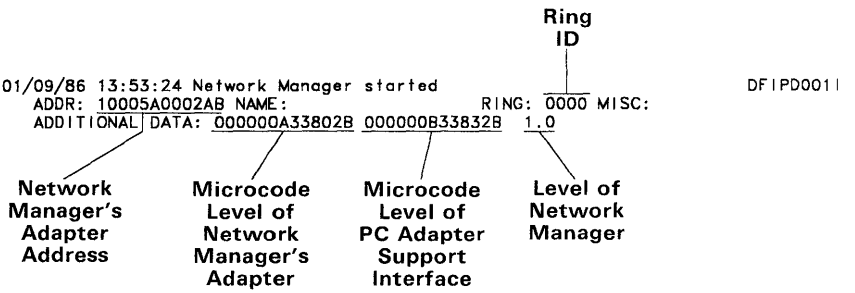
- To stop the operation, type "A" for Abort.
- To try again, load the printer with paper and type "R" for Retry.

DFIPD001 I Network Manager started

Meaning: The Network Manager has begun initialization. This message is recorded in the event log.

Action: None required.

Data:



DFIPD002 I Operation in progress, please wait

Meaning: The program is performing an operation that you requested. This message is not recorded in the event log.

Action: None required.

DFIPD006 I Operation completed successfully

Meaning: The operation you requested has been completed. This message is not recorded in the event log.

Action: None required.

Meaning: The operation you requested has failed. This message is not recorded in the event log.

Action: Try the following actions in response to this message:

1. Retry the operation that failed.
2. Check any alerts that occurred at the same time and follow the recommended actions for the most recent alert or for the alert that occurred closest to the time this message was received.
3. Examine the event log for messages that occurred at the same time that you received the "Operation failed" message. Check for:
   Beaconing messages (DFIPD200-205)
   Data frame messages (DFIPD190-192)
   Ring error messages (DFIPD101-109).

DFIPD010 I Full soft error logging enabled

Meaning: Full soft error logging has been started by selecting that option from the Change Soft Error Logging panel. This message is recorded in the event log.

Action: None required.

Data:

```
01/10/86 15:17:52 Full soft error logging enabled          DFIPD010I
   RING: 0000                                    MISC:
```

Ring ID

DFIPD011 I Soft error logging disabled

Meaning: Neither full nor limited soft error logging is in effect. This message is recorded in the event log.

Action: None required.

Data:

```
01/10/86 17:02:17 Soft error logging disabled              DFIPD011I
   RING: 0000                                    MISC:
```

Ring ID

DFIPD012 I Limited soft error logging enabled

Meaning: Limited soft error logging has been started. This message is recorded in the event log.

Action: None required.

Data:

```
01/10/86 17:02:12 Limited soft error logging enabled          DFIPD012I
   RING: 0000                                          MISC:
```

Ring ID

Meaning: Reset soft error logging has been chosen from the Change Soft Error Logging panel.

When this message is displayed, if the ring status is **Soft Error** it will change to **Normal**. This message is recorded in the event log.

Action: None required.

Data:

```
01/10/86 17:02:16 Error counters reset                    DFIPD014I
   RING: 0000                                    MISC:
```

Ring ID

Meaning: The Network Manager could not complete ring test 1. This message is recorded in the event log.

Action: Try to run the test again. If it fails again, continue with these instructions.

If the ring status is **Normal** run the Adapter Diagnostics described in Chapter 3 of the *IBM Token-Ring Network PC Adapter Guide to Operations.* If you have the *IBM Token-Ring Network PC Adapter Hardware Maintenance and Service* manual and diskette, use the advanced diagnostics instead. If the diagnostics indicate that the adapter is operating correctly, contact the place where you purchased your adapter.

If the ring status is not **Normal** record the ring status. If you came from the problem determination procedures in the *IBM Token-Ring Network Problem Determination Guide*, return to the step that sent you here. Otherwise, go to Chapter 2 of the *Problem Determination Guide*, "Preparing for Problem Determination." Use the ring status as the symptom.

Data:

```
01/10/86 15:17:52 Ring test 1 failed - test stopped          DFIPD017E
   RING: 0000
         |
        Ring
         ID
```

DFIPD019 E Ring test 2 failed - test complete

Meaning: Ring test 2 failed to send a message around the ring. The Adapter Support Interface or one of the adapters on the ring is failing to send the message properly.

This message is recorded in the event log.

Action: Try to run the test again. If it fails again, continue with these instructions.

If the ring status is **Normal** run the Adapter Diagnostics described in Chapter 3 of the *IBM Token-Ring Network PC Adapter Guide to Operations.* If you have the *IBM Token-Ring Network PC Adapter Hardware Maintenance and Service* manual and diskette, use the advanced diagnostics instead. If the diagnostics indicate that the adapter is operating correctly, contact the place where you purchased your adapter.

If the ring status is not **Normal** record the ring status. If you came from the problem determination procedures in the *IBM Token-Ring Network Problem Determination Guide*, return to the step that sent you here. Otherwise, go to Chapter 2 of the *Problem Determination Guide*, "Preparing for Problem Determination." Use the ring status as the symptom.

Data:

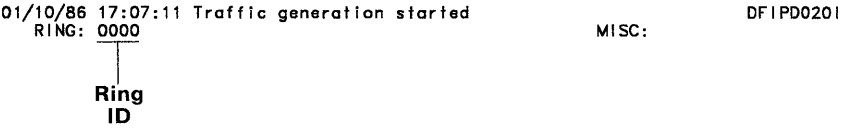
```
01/10/86 15:17:53 Ring test 2 failed – test complete          DFIPD019E
   RING: 0000
         |
        Ring
         ID
```

DFIPD020 I Traffic generation started

Meaning: Start traffic has been selected from the Traffic Generator panel. The Network Manager is generating continuous traffic on the ring in the form of test messages. This message is recorded in the event log.

Action: None required.

Data:

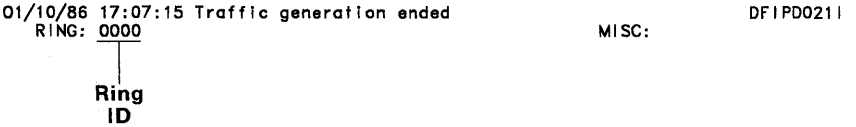


DFIPD021 I Traffic generation ended

Meaning: Stop traffic has been selected from the Traffic Generator panel. The Network Manager has stopped generating continuous traffic on the ring in the form of test messages. This message is recorded in the event log.

Action: None required.

Data:



DFIPD030 W Data loss started

Meaning: The Network Manager has minimum buffer space available. It is no longer logging messages for full soft error logging, soft error alerts, or NAUN changes. This message is recorded in the event log.

Action: On the Change Soft Error Logging panel, select no soft error logging and on the Log Option panel, select No.

DFIPD031 W Data loss stopped

Meaning: The Network Manager has resumed logging messages for full soft error logging, soft error alerts, and NAUN changes. This message is recorded in the event log.

Action: None is required.

DFIPD032 I Soft error and NAUN change logging was stopped

Meaning: The Network Manager has minimum buffer space available. It is no longer logging messages for full soft error logging and NAUN changes. Soft error alerts are still logged. This message is recorded in the event log.

Action: None is required.

DFIPD033 I Soft error and NAUN change logging was restarted

Meaning: The Network Manager has resumed logging messages for full soft error logging and NAUN changes. This message is recorded in the event log.

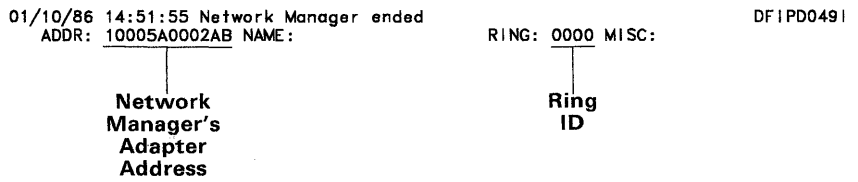
Action: None is required.

DFIPD049 I Network Manager ended

Meaning: Shutdown was selected from the Ring Manager Functions panel, causing the Ring Manager Functions to end. This message is recorded in the event log.

Action: None required.

Data:



DFIPD050 E DOS level incorrect - 3.2 or higher required

Meaning: You are using an unacceptable level of DOS. This message is not recorded in the event log.

Action: Replace DOS with DOS level 3.2 or higher.

DFIPD051 E Insufficient free memory to load program

Meaning: The computer you are using is not equipped with enough memory to run the Network Manager. This message is not recorded in the event log.

Action: Run the Network Manager in a computer that has at least 440 KB of free memory. Your computer may have memory of 512 KB, but if you have memory-resident extras, such as print spoolers or a program such as "Sidekick," you may not have enough room for the Network Manager.

DFIPD080 I No files are available for the report

Meaning: The buffer space allotted for files to create an event log report or a ring configuration report is full. A maximum of five files can be used to create reports. In other words, if you have enough disk space, you can have four files in the print queue and one file being reviewed. This message is not recorded in the event log.

Action: Make sure the printer is powered on to print the queue of files in the buffer space. Retry the Print command after the current report has printed.

DFIPD081 E File not found (two-digit file number)

Meaning: The Network Manager file needed to perform the requested operation has not been loaded into the computer. This message is not recorded in the event log.

Action: If you are using an IBM Personal Computer with two diskette drives, make sure the correct diskette is in the diskette drive.

Regardless of the type of IBM Personal Computer you are using, check the directory of files against the list of files in Appendix B to ensure that all the files have been copied on your working diskette(s) or fixed disk. If the missing file is also missing from the Network Manager diskettes that you purchased, call the place where you purchased the Network Manager.

DFIPD082 E Drive not ready

Meaning: The diskette drive is not ready. The diskette drive door may not be closed. This message is not recorded in the event log.

Action: Close the diskette drive door and press **Enter**. Check your IBM Personal Computer *Guide to Operations* if you need additional information about the drive.

DFIPD083 E File full

Meaning: All available space on the target file has been used. No data can be added.

Action: To add new information to the file, delete some existing data. This message is not recorded in the event log.

Meaning: The number of soft errors has exceeded the allowable limit. This may cause a noticeable decrease in the ring's performance. This message is an alert and is recorded in the event log.

Action: Record the ring status and the two addresses given in the data section of the message.

1. Select Soft Error Conditions from the Adapter Functions panel.

   You may need to attempt operations on this panel more than once before the Network Manager is able to respond since the ring is experiencing soft errors.

2. Record the addresses for each of the adapters (and their NAUNs) that have one or two asterisks. To find their symbolic names, use F7 (Profile).

3. Use the F9 (Remove) key to remove all of the flagged adapters from the ring. Start with the last adapter with one or two asterisks on the list.

4. After all the flagged adapters have been removed, observe the ring status indication at the top left corner of your screen. It should change to **Normal** after 30 seconds to a minute.

   Note: It may take 20-30 seconds after the status has returned to **Normal** for the adapters to be removed from the table. Press F5 (Refresh) to see which adapters are still in the table.

   If the status does not change to **Normal**, return the removed adapters to the ring (by restarting the application programs they were running) and go to the *IBM Token-Ring Network Problem Determination Guide.*

If the status changes to **Normal** and then returns to **Soft Error** within six minutes, return the removed adapters to the ring (by restarting the application programs they were running) and go to the *IBM Token-Ring Network Problem Determination Guide.*

If the status changes to **Normal** and remains **Normal** for at least six minutes, continue with the next step.

5. Using the addresses recorded in step 2 on page A-20, return one of the removed adapters to the ring (by restarting the application program it was running).

6. Observe the ring status indication.

   If the status changes to **Soft Error** within six minutes, record the address of the adapter you just returned to the ring. Remove it from the ring.

   If the status remains **Normal** for at least six minutes, continue with the next step.

7. If all of the removed adapters have been returned to the ring, go the step 8.

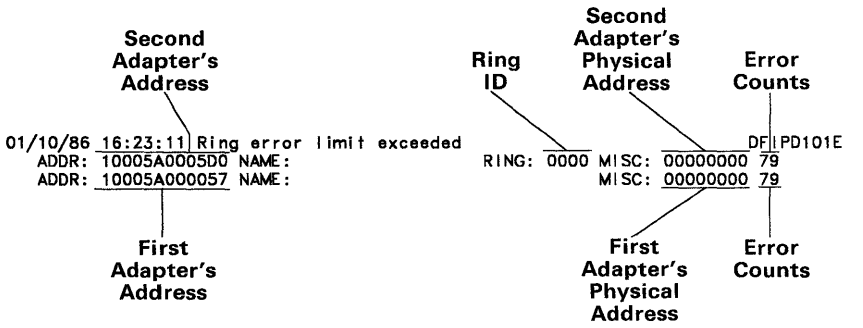
   Otherwise, return the next adapter to the ring and go to step 6.

8. If any adapter adapter addresses were recorded in step 6, go to the *IBM Token-Ring Network Problem Determination Guide* using a symptom of "Soft Errors on a Lobe."

   If no addresses were recorded in step 6, the problems have disappeared. No further actions are required.

Data:

The figure below illustrates how the information appears in the event log. If you are looking at the Details for Selected Alert panel, the first 4-digit number is the Ring ID. The rest of the data is displayed in the same order as that in the event log. If no symbolic name is available, a space of 16 characters is displayed instead. Each adapter address in the data begins a new line.

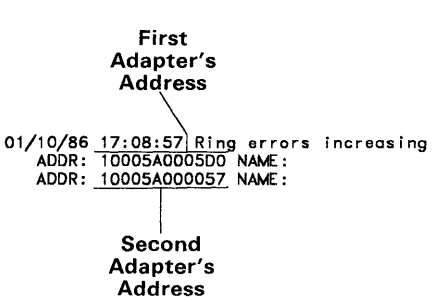


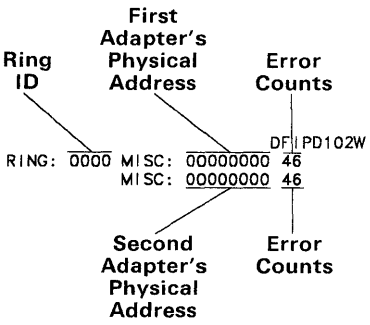
Note: If the data for the first adapter is not available, the single line of data that appears here is for the second adapter.

Meaning: Adapters on the ring are detecting soft errors and the number is approaching an unacceptable level. You see this message only when you have selected full soft error logging from the Change Soft Error Logging panel. This message is recorded in the event log.

Action: None required.

Data:



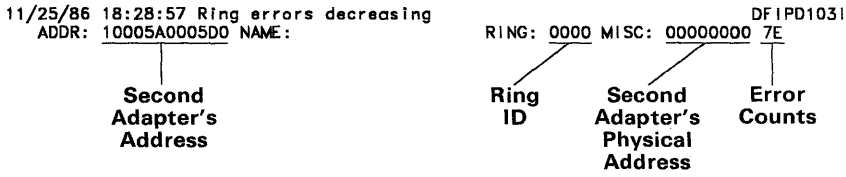


Note: If the data for the first adapter is not available, the single line of data that appears here is for the second adapter.

Meaning: The rate of soft errors is decreasing. The source of the soft errors may have been removed. This message is recorded in the event log.

Action: None required.

Data:



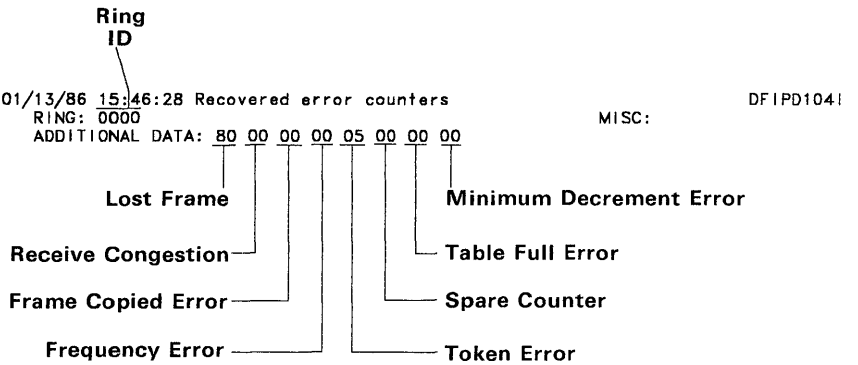
Note: If the data for the first adapter is not available, the single line of data that appears here is for the second adapter.

Meaning: The number of non-isolating errors has exceeded the reporting limit (for one or more of the eight counters listed above in "Data" section). The source is unknown. You see this message only when you have selected full soft error logging from the Change Soft Error Logging panel.

Sometimes you see this message during normal operation since adapter insertions are considered non-isolating errors. This message is recorded in the event log.

Action: None required.

Data:

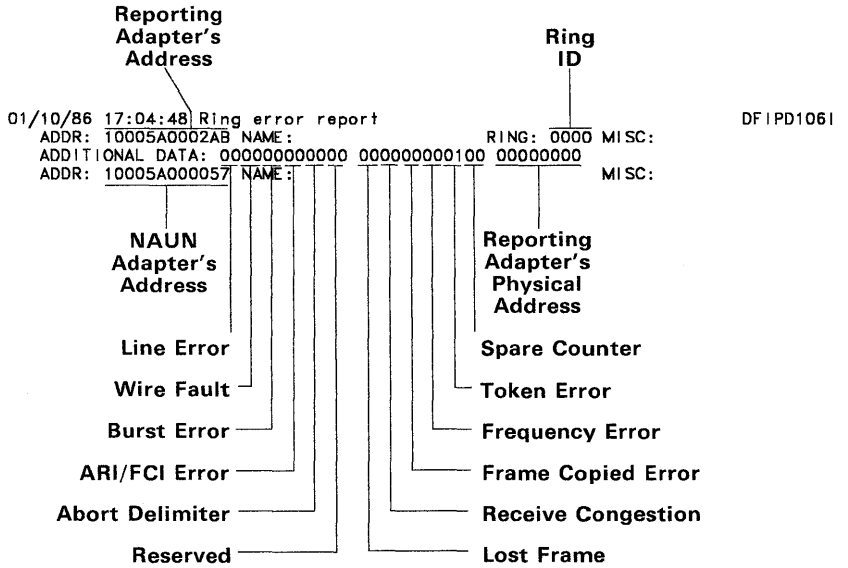


Note: See the *IBM Token-Ring Network Technical Reference* for information about these fields.

Meaning: A soft error has been detected. This message can be expected as a normal function of the ring. You see this message only when you have selected full or limited soft error logging from the Change Soft Error Logging panel. This message is recorded in the event log.

Action: None required.

Data:



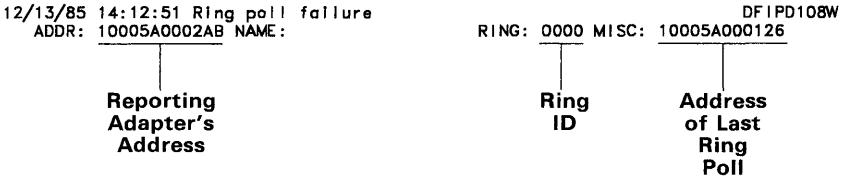
Note: See the *IBM Token-Ring Network Technical Reference* for information about these fields.

DFIPD108 W Ring poll failure

Meaning: The ring poll process has encountered an error and recovery has taken place. You see this message only when you have selected full soft error logging from the Change Soft Error Logging panel. This message is recorded in the event log.

Action: None required.

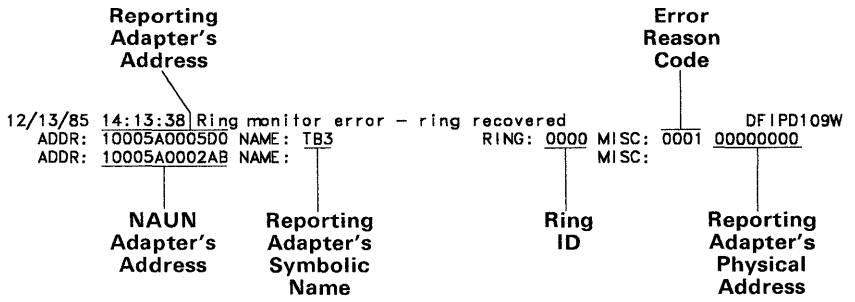
Data:



Meaning: The ring recovered after a ring monitor error occurred. You see this message only when you have selected full soft error logging from the Change Soft Error Logging panel. This message is recorded in the event log.

Action: None required.

Data:



DFIPD120 E Error reporter failed, processing continues

Meaning: The soft error reporter function of the Network Manager has failed and the Network Manager is continuing to process other information. This message is an alert and is recorded in the event log.

Action:

1. Select the reset option from the Change Soft Error Logging panel. If this message reoccurs, continue with step 2. Otherwise, you may stop here.

2. Shut down the Network Manager and return to DOS.

3. Restart the computer (press and hold Ctrl and Alt and then press Del).

4. Start the Network Manager by typing DFIRINGM and pressing **Enter**.

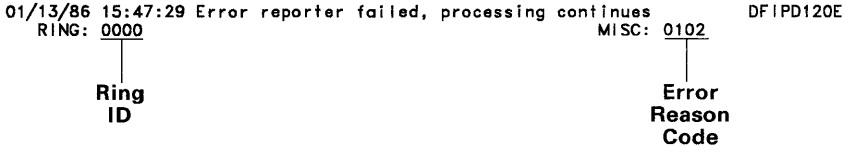
5. If the message continues to be displayed, run the Adapter Diagnostics supplied with the *IBM Token-Ring Network PC Adapter Guide to Operations.* If you have the *IBM Token-Ring Network PC Adapter Hardware Maintenance and Service* manual and diskette, use the advanced diagnostics instead.

6. If the message continues to be displayed, recopy the files for the working diskette(s) or fixed disk. See Chapter 2 of this manual.

7. If the problem is still not corrected, record the data section of the message and call the place where you purchased the Network Manager.

Data:

The figure below illustrates how the information appears in the event log. If you are looking at the Details for Selected Alert panel, the first 4-digit number is the Ring ID. The rest of the data is displayed in the same order as that in the event log.



DFIPD140 I Only adapter on ring

Meaning: The Network Manager detects that this is the only active adapter on the ring. This message is recorded in the event log.

Action: If other devices are known to be active on the ring, go to the *IBM Token-Ring Network Problem Determination Guide.* Otherwise, no action is required.

DFIPD141 I Additional adapter(s) on ring

Meaning: The Network Manager detects that at least one other adapter on the ring has become active. This message is recorded in the event log.

Action: None required.

DFIPD150 E Invalid key pressed, please try again

Meaning: A key that is not defined for the current panel has been pressed. This message is not recorded in the event log.

Action: Select a key that has been defined.

DFIPD151 I Press F9 to confirm DELETE operation

Meaning: You see this message when you delete either an alert or a symbolic name. This message is not recorded in the event log.

Action: Press F9 if you choose to delete the item from the file. Otherwise press any other F key or the Enter key and data will not be deleted.

DFIPD153 I Invalid selection, please try again

Meaning: You see this message when you have attempted to perform a function that is not available from this panel. This message is not recorded in the event log.

Action: Select a function that is listed on the panel.

DFIPD154 I Requested function not available

Meaning: You see this message when you have attempted to perform a function from the Ring Manager Functions or Limited Ring Manager Functions panels.

The Network Manager is not able to load the appropriate file or files from the diskette or fixed disk. This message is not recorded in the event log.

Action: If you are using diskettes, check that the correct diskette is in the correct diskette drive and that the diskette drive doors are closed.

Otherwise, do the following:

1. Shut down the Network Manager and return to DOS.
2. Restart the computer (press and hold Ctrl and Alt and then press Del).
3. Start the Network Manager by typing DFIRINGM and pressing **Enter**.
4. If the message continues to be displayed, recopy the files for the working diskette(s) or fixed disk. See Chapter 2 of this manual.
5. If the problem is still not corrected, record the data section of the message and ring status and call the place where you purchased the Network Manager.

DFIPD155 E Cursor must be on a line with data

Meaning: The cursor needs to be positioned on a line with data for the operation to be performed. This message is not recorded in the event log.

Action: Move the cursor with the tab key.

DFIPD156 I No symbolic names have been defined

Meaning: You see this message if you choose to find a name in the symbolic names file and no symbolic names have been assigned yet. This message is not recorded in the event log.

Action: Define symbolic names from the Symbolic Names Definition panel.

DFIPD160 E Page Up not allowed - top of list

Meaning: The top of the file or the list is currently displayed. This message is not recorded in the event log.

Action: None required.

DFIPD161 E Page Down not allowed - bottom of list

Meaning: The bottom of the file or the list is currently displayed. This message is not recorded in the event log.

Action: None required.

Meaning: The length of a message received by the Network Manager is incorrect. You see this message only when you have selected full soft error logging from the Change Soft Error Logging panel. This message is recorded in the event log.

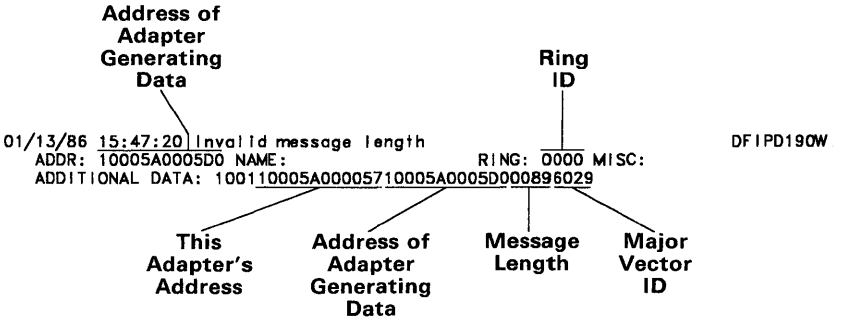
Action: Determine which adapter is generating the message from the adapter address in the data section of the message.

Run the Adapter Diagnostics on the adapter generating the data section of the message, as described in Chapter 3 of the *IBM Token-Ring Network PC Adapter Guide to Operations*. If you have the *IBM Token-Ring Network PC Adapter Hardware Maintenance and Service* manual and diskette, use the advanced diagnostics instead.

If the diagnostics indicate that the adapter generating the message is operating correctly, run the diagnostics on the Network Manager's adapter. If the diagnostics indicate that the Network Manager's adapter is operating correctly and you still get this message, do the following:

1. Shut down the Network Manager and return to DOS.
2. Restart the computer (press and hold Ctrl and Alt and then press Del).
3. Start the Network Manager by typing DFIRINGM and pressing **Enter**.
4. If the message is logged repeatedly, recopy the files for the working diskette(s) or fixed disk. See Chapter 2 of this manual.
5. If the problem is still not corrected, record the data section of the message and call the place where you purchased your adapter.

Data:


Address of Adapter Generating Data
Ring ID
01/13/86 15:47:20 Invalid message length
DFIPD190W
ADDR: 10005A0005D0 NAME:
RING: 0000 MISC:
ADDITIONAL DATA: 1001 10005A000057 10005A0005D0 0089 6029
This Adapter's Address
Address of Adapter Generating Data
Message Length
Major Vector ID

Meaning: Duplicate data is detected in a message received by the Network Manager You see this message only when you have selected full soft error logging from the Change Soft Error Logging panel. This message is recorded in the event log.

Action: Determine which adapter is generating the message from the adapter address in the data section of the message.

Run the Adapter Diagnostics on the adapter generating the data section of the message, as described in Chapter 3 of the *IBM Token-Ring Network PC Adapter Guide to Operations*. If you have the *IBM Token-Ring Network PC Adapter Hardware Maintenance and Service* manual and diskette, use the advanced diagnostics instead.

If the diagnostics indicate that the adapter generating the message is okay, run the diagnostics on the Network Manager's adapter. If the diagnostics indicate that the Network Manager's adapter is okay, and you still get this message contact the place where you purchased the adapter.

1. Shut down the Network Manager and return to DOS.

2. Restart the computer (press and hold Ctrl and Alt and then press Del).

3. Start the Network Manager by typing DFIRINGM and pressing **Enter**.

4. If the message is logged repeatedly, recopy the files for the working diskette(s) or fixed disk. See Chapter 2 of this manual.

5. If the problem is still not corrected, record the data section of the message and call your service supplier, and see Appendix D.

Data:

Address of Adapter Generating Duplicate Data

Ring ID

```
01/13/86 15:47:29 Duplicate data in message                                DFIPD191W
   ADDR: 10005A0005D0 NAME:                               RING: 0000 MISC:
   ADDITIONAL DATA: 100110005A00005710005A0005D000226029082D
```

This Adapter's Address

Address of Adapter Generating Duplicate Data

Message Length

Major Vector ID

Subvector ID

Meaning: Required data is missing in a message received by the Network Manager. You see this message only when you have selected full soft error logging from the Change Soft Error Logging panel. This message is recorded in the event log.

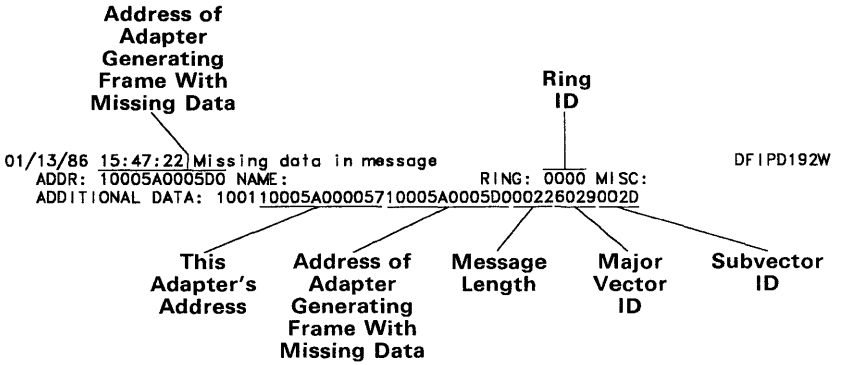
Action: Determine which adapter is generating the message from the adapter address in the data section of the message.

Run the Adapter Diagnostics on the adapter generating the message, as described in Chapter 3 of the *IBM Token-Ring Network PC Adapter Guide to Operations.* If you have the *IBM Token-Ring Network PC Adapter Hardware Maintenance and Service* manual and diskette, use the advanced diagnostics instead.

If the diagnostics indicate that the adapter generating the message is okay, run the diagnostics on the Network Manager's adapter. If the diagnostics indicate that the Network Manager's adapter is okay and you still get this message, do the following:

1. Shut down the Network Manager and return to DOS.
2. Restart the computer (press and hold Ctrl and Alt and then press Del).
3. Start the Network Manager by typing DFIRINGM and pressing **Enter**.
4. If the message is logged repeatedly, recopy the files for the working diskette(s) or fixed disk. See Chapter 2 of this manual.
5. If the problem is still not corrected, record the data section of the message, and call the place you purchased your adapter.

Data:


Address of Adapter Generating Frame With Missing Data
Ring ID
01/13/86 15:47:22 Missing data in message
DFIPD192W
ADDR: 10005A0005D0 NAME:
RING: 0000 MISC:
ADDITIONAL DATA: 1001 10005A000057 10005A0005D0 0002 26 02 9002D
This Adapter's Address
Address of Adapter Generating Frame With Missing Data
Message Length
Major Vector ID
Subvector ID

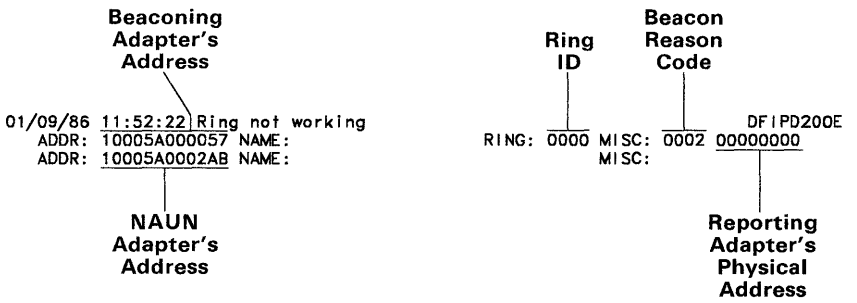
Meaning: The Network Manager has determined that the ring is beaconing. Recovery may take a few minutes. If the Network Manager was already running, automatic recovery is in progress. If the Network Manager was not already running, automatic recovery has failed.

When this message is logged, the ring status is **Beaconing.** This message is recorded in the event log.

Action: If the Network Manager was already running when the error occurred then, wait at least one minute and observe the ring status. If the ring status changes, wait for a subsequent message and follow the actions for that message.

If the Network Manager was not already running, when the error occurred information provided on panel DFIPINZ2, should have been used to perform error recovery.

Data:

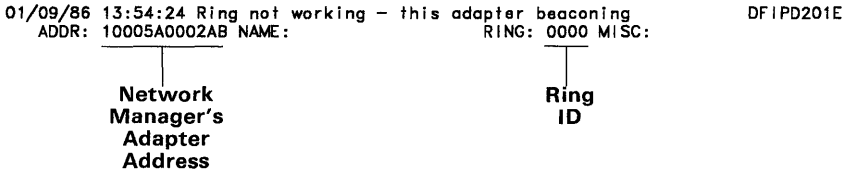


Meaning: The Network Manager has determined that its own adapter is beaconing.

When this message is logged, the ring status is **Beaconing**. This message is recorded in the event log.

Action: Wait for a subsequent message and follow the instructions for that message.

Data:



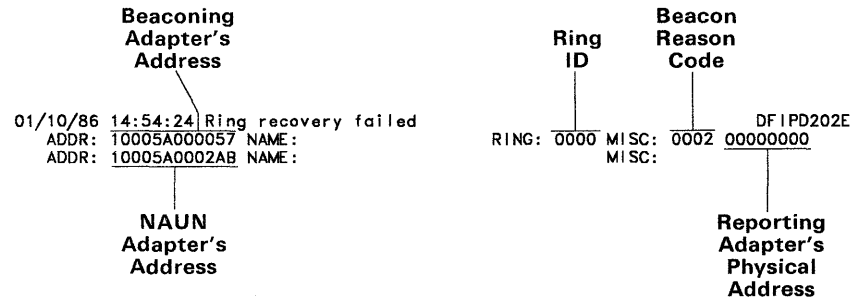
Meaning: The ring is unable to recover automatically from the problem. When this message is logged, the ring status is **Beaconing**. This message is an alert and is recorded in the event log.

Action: Manual recovery is required. Record the ring status and the data that is displayed with this message.

If you came from the problem determination procedures in the *IBM Token-Ring Network Problem Determination Guide*, return to the step that sent you here. If you did not, go to Chapter 2 of the *Problem Determination Guide*, "Preparing for Problem Determination."

Data:

The figure below illustrates how the information appears in the event log. If you are looking at the Details for Selected Alert panel, the first 4-digit number is the Ring ID. The rest of the data is displayed in the same order as that in the event log. If no symbolic name is available, a space of 16 characters is displayed instead. Each adapter address in the data begins a new line.



Meaning: The ring has recovered and is operating normally. When this message is logged, the ring status is **Normal** or **Soft Error**. This message is recorded in the event log.

Action: If you came from the problem determination procedures in the *IBM Token-Ring Network Problem Determination Guide*, record the ring status and the data section of the message and return to the step that sent you here. Otherwise, no action is required.

Data:

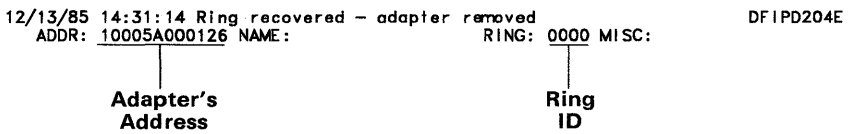
```
01/10/86 14:51:15 Ring recovered                          DFIPD203I
   RING: 0000                                    MISC:
         |
        Ring
        ID
```

Meaning: The ring has recovered, but an adapter in the fault domain indicated in message DFIPD202 has been removed (either manually or by the auto-removal process). This message indicates that there may be a fault on the lobe. When this message is logged, the ring status is **Normal** or **Soft Error**. This message is an alert and is recorded in the event log.

Action: If you came from the problem determination procedures in the *IBM Token-Ring Network Problem Determination Guide*, record the ring status and the data section of the message and return to the step that sent you here. Otherwise, using the data section of the message, go to the device with the adapter address indicated. Follow the instructions given in the documentation for the application program that device is using to remedy the error.

Data:

The figure below illustrates how the information appears in the event log. If you are looking at the Details for Selected Alert panel, the first 4-digit number is the Ring ID. The rest of the data is displayed in the same order as that in the event log. If no symbolic name is available, a space of 16 characters is displayed instead. Each adapter address in the data begins a new line.

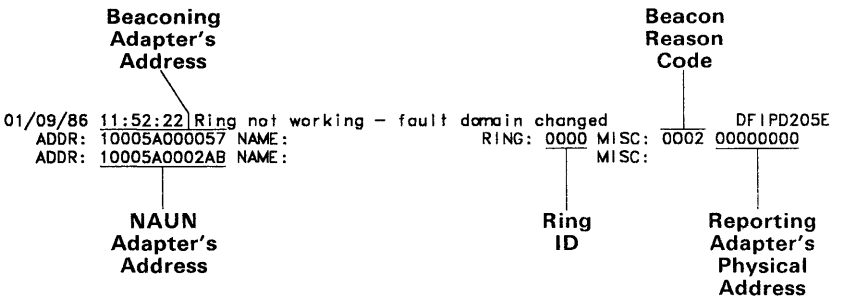


DFIPD205 E Ring not working - fault domain changed

Meaning: The fault domain has changed as a result of manual recovery. This message is recorded in the event log.

Action: None required.

Data:

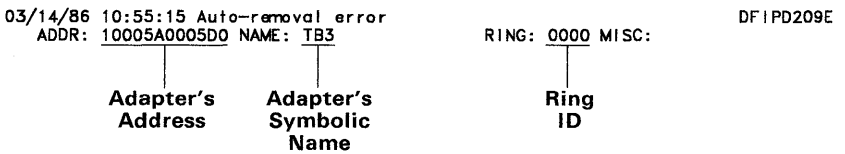


Meaning: The Network Manager has automatically removed its own adapter from the ring. This message is an alert and is recorded in the event log.

Action: If you came from the problem determination procedures in the *IBM Token-Ring Network Problem Determination Guide*, return to the step that sent you here. Otherwise, record the data section of the message and go to Chapter 2 of the *Problem Determination Guide*, "Preparing for Problem Determination."

Data:

The figure below illustrates how the information appears in the event log. If you are looking at the Details for Selected Alert panel, the first 4-digit number is the Ring ID. The rest of the data is displayed in the same order as that in the event log. If no symbolic name is available, a space of 16 characters is displayed instead. Each adapter address in the data begins a new line.

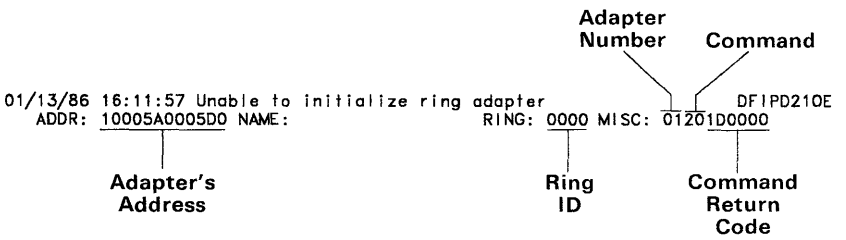


Meaning: The Network Manager's adapter did not respond to the Network Manager's attempt to initialize the adapter. This message is recorded in the event log.

Action: Run the Adapter Diagnostics described in Chapter 3 of the *IBM Token-Ring Network PC Adapter Guide to Operations*. If you have the *IBM Token-Ring Network PC Adapter Hardware Maintenance and Service* manual and diskette, use the advanced diagnostics instead. If the diagnostics indicate that the adapter is okay and you still get this message, record the data section of the message and contact the place you purchased your adapter.

If the command in the data section of the message is 1D, the adapter number has been specified incorrectly. Use the Adapter Number function to correct the adapter number.

Data:



Note: The "MISC" data may appear on the next line instead.

Meaning: The Network Manager's adapter did not respond to the Network Manager's attempt to open the adapter. The adapter detected an error when the Network Manager attempted to open it. This message is recorded in the event log.

Action: If the return code is 07 or FF, perform step 1 only. Otherwise, start with step 2 and continue to the end of the procedure.

1. When the return code is 07 or FF, record the data section of the message. If you came here from the problem determination procedures in the *IBM Token-Ring Network Problem Determination Guide*, return to the step that sent you here. If you did not, go to Chapter 2 of the *Problem Determination Guide*, "Preparing for Problem Determination."

2. When the return code is other than 07 or FF, shut down the Network Manager and return to DOS.

3. Restart the computer (press and hold Ctrl and Alt and then press Del).

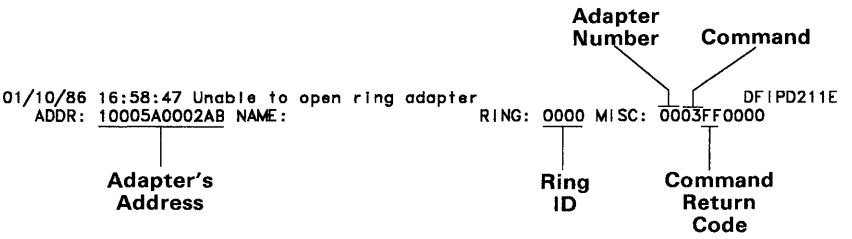
4. Start the Network Manager by typing DFIRINGM and pressing **Enter**.

5. If the message continues to be displayed, run the Adapter Diagnostics supplied with the *IBM Token-Ring Network PC Adapter Guide to Operations.* If you have the *IBM Token-Ring Network PC Adapter Hardware Maintenance and Service* manual and diskette, use the advanced diagnostics instead.

6. If the message continues to be displayed, recopy the files for the working diskette(s) or fixed disk. See Chapter 2 of this manual.

7. If the problem is still not corrected, record the data section of the message and call the place you purchased your adapter.

Data:



Note: The "MISC" data may appear on the next line instead.

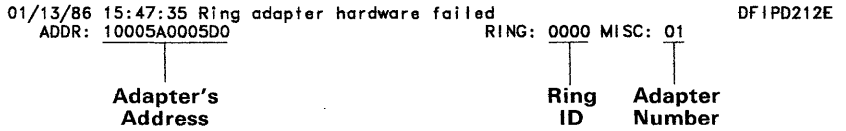
DFIPD212 E Ring adapter hardware failed

Meaning: The Network Manager's adapter hardware failed. This message is an alert and is recorded in the event log.

Action: Run the Adapter Diagnostics described in Chapter 3 of the *IBM Token-Ring Network PC Adapter Guide to Operations*. If you have the *IBM Token-Ring Network PC Adapter Hardware Maintenance and Service* manual and diskette, use the advanced diagnostics instead. If the diagnostics indicate that the adapter is okay and you still get this message, record the data section of the message and contact the place you purchased your adapter.

Data:

The figure below illustrates how the information appears in the event log. If you are looking at the Details for Selected Alert panel, the first 4-digit number is the Ring ID. The rest of the data is displayed in the same order as that in the event log. If no symbolic name is available, a space of 16 characters is displayed instead. Each adapter address in the data begins a new line.



Note: The "MISC" data may appear on the next line instead.

Meaning: The Adapter Support Interface code failed. This message is an alert and is recorded in the event log.

Action:

1. Shut down the Network Manager and return to DOS.

2. Restart the computer (press and hold Ctrl and Alt and then press Del).

3. Start the Network Manager by typing DFIRINGM and pressing **Enter**.

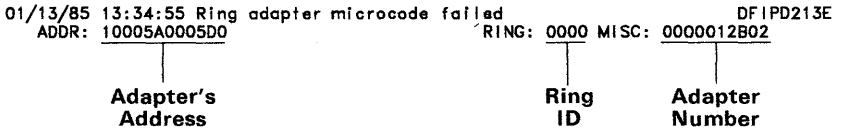
4. If the message continues to be displayed, run the Adapter Diagnostics supplied with the *IBM Token-Ring Network PC Adapter Guide to Operations*. If you have the *IBM Token-Ring Network PC Adapter Hardware Maintenance and Service* manual and diskette, use the advanced diagnostics instead.

5. If the message continues to be displayed, recopy the files for the working diskette(s) or fixed disk. See Chapter 2 of this manual.

6. If the problem is still not corrected, record the data section of the message and call the place where purchased the adapter.

Data:

The figure below illustrates how the information appears in the event log. If you are looking at the Details for Selected Alert panel, the first 4-digit number is the Ring ID. The rest of the data is displayed in the same order as that in the event log. If no symbolic name is available, a space of 16 characters is displayed instead. Each adapter address in the data begins a new line.



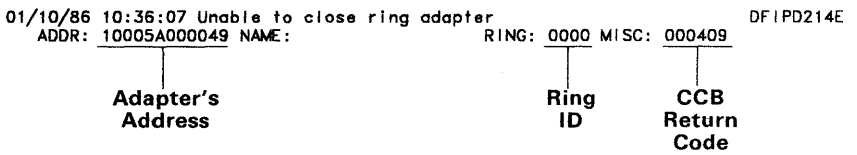
Note: The "MISC" data may appear on the next line instead.

Meaning: The Network Manager's adapter did not correctly respond to the Network Manager's attempt to close the adapter. This message is recorded in the event log.

Action: Run the Adapter Diagnostics described in Chapter 3 of the *IBM Token-Ring Network PC Adapter Guide to Operations*. If you have the *IBM Token-Ring Network PC Adapter Hardware Maintenance and Service* manual and diskette, use the advanced diagnostics instead. If the diagnostics indicate that the adapter is okay and you still get this message, do the following:

1. Shut down the Network Manager and return to DOS.
2. Restart the computer (press and hold Ctrl and Alt and then press Del).
3. Start the Network Manager by typing DFIRINGM and pressing **Enter**.
4. If the message continues to be displayed, recopy the files for the working diskette(s) or fixed disk. See Chapter 2 of this manual.
5. If the problem is still not corrected, record the data section of the message and call the place where you purchased the adapter.

Data:



Note: The "MISC" data may appear on the next line instead.

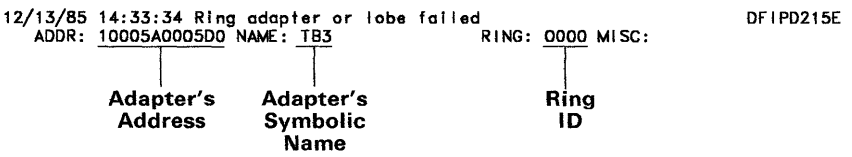
DFIPD215 E Ring adapter or lobe failed

Meaning: A wire fault has caused this adapter or lobe to fail. When this message is logged, the ring status is **Wire Fault.** This message is an alert and is recorded in the event log.

Action: If you came from the problem determination procedures in the *IBM Token-Ring Problem Determination Guide*, return to the step that sent you here. If you did not, go to Chapter 2 of the *Problem Determination Guide*, "Preparing for Problem Determination."

Data:

The figure below illustrates how the information appears in the event log. If you are looking at the Details for Selected Alert panel, the first 4-digit number is the Ring ID. The rest of the data is displayed in the same order as that in the event log. If no symbolic name is available, a space of 16 characters is displayed instead. Each adapter address in the data begins a new line.

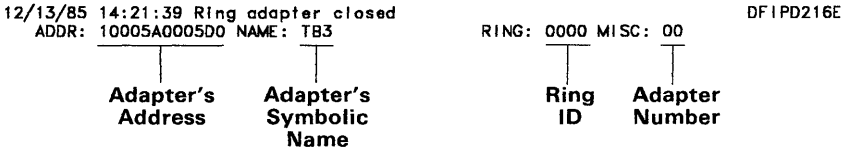


DFIPD216 I Ring adapter closed

Meaning: You have chosen to end the Network Manager. When this message is displayed, the ring status is **Adapter Closed.** This message is recorded in the event log.

Action: None required.

Data:



Note: The "MISC" data may appear on the next line instead.

Meaning: This adapter is experiencing a problem during initialization. This message is not recorded in the event log.

Action:

1. Press **Enter** to continue to the Limited Ring Manager Functions panel.

2. Check the event log for the following messages and perform the actions for those messages.

   DFIPD210
   DFIPD211
   DFIPD213
   DFIPD230

Meaning: The ring is beaconing while this adapter is trying to become active. This message is not recorded in the event log.

Action:

1. Select Retry from the Initialization panel (DFIPINZ2).

2. If this message is displayed again, select retry one more time.

3. If this message is still displayed, copy the fault domain from the panel DFIPINZ2 and go to Chapter 2 of *IBM Token-Ring Network Problem Determination Guide*, "Preparing for Problem Determination."

DFIPD219 E Adapter not found, press ENTER to continue

Meaning: The Network Manager cannot find its own adapter or its adapter code. This is an initialization error. This message is not recorded in the event log.

Action:

1. Press **Enter** to see the Limited Ring Manager Functions panel.

2. Select System Definition and then select Adapter Number to see what adapter (0 or 1) is being used by the Network Manager.

   If the switch on the adapter card does not correspond to the adapter number, change the adapter number, shut down the Network Manager, return to DOS, and restart the Network Manager. See page 2-16 for additional information.

   If the adapter number is correct, shut down the Network Manager, return to DOS, and check to be sure the file TOKREUI.COM is on your working diskette or fixed disk.

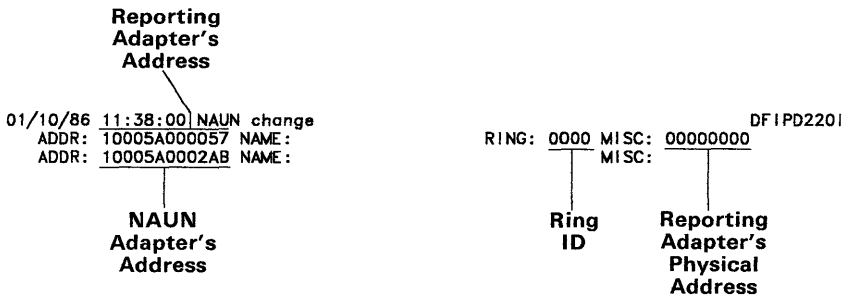
   If it is not present, copy it using the directions on page 2-12.

   If it is present, copy the file DFIRINGM.BAT from the distribution diskette to the working diskette or fixed disk and try the current operation again (the operation during which you received this message).

Meaning: You see this message if you have answered yes on the Log Configuration Change panel and an adapter joins or leaves the ring. This message is recorded in the event log.

Action: None required.

Data:



Meaning: The Network Manager's adapter has been removed from the ring. This message is an alert and is recorded in the event log.

Action: Consult your network administrator. Wait at least six minutes before you try again to become active on the ring.

Data:

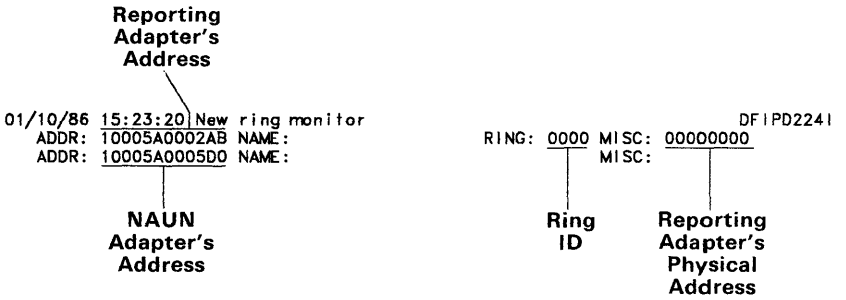
The figure below illustrates how the information appears in the event log. If you are looking at the Details for Selected Alert panel, the first 4-digit number is the Ring ID. The rest of the data is displayed in the same order as that in the event log. If no symbolic name is available, a space of 16 characters is displayed instead. Each adapter address in the data begins a new line.

DFIPD224 I New ring monitor

Meaning: A new ring monitor has become active on the ring. You see this message only if you have selected full soft error logging from the Change Soft Error Logging panel. This message is recorded in the event log.

Action: None required.

Data:

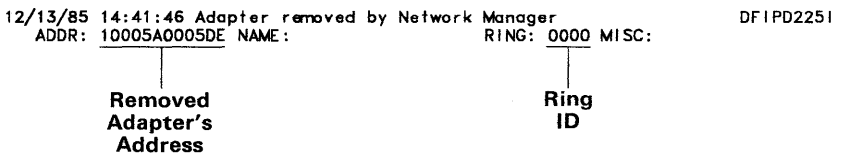


DFIPD225 I Adapter removed by Network Manager

Meaning: You have logically removed an adapter using the Network Manager. This message is recorded in the event log.

Action: None required.

Data:



DFIPD226 I Adapter closed; press F4 (RETURN) to exit

Meaning: You see this message when you are using any of the Ring Manager Functions that require communication with the ring when the Network Manager's adapter closes. This message is not recorded in the event log.

Action:

1. Press F4 to return to the Limited Ring Manager Functions panel.

2. Press Scroll Lock and choose Alerts from the Main Selection panel to see any alert indications of the cause of the failure.

   You may choose to select Event Log from the Limited Ring Manager Functions panel to examine the occurrence of this message in an event log report.

DFIPD227 I Adapter closed; limited function is available

Meaning: You see this message on the Limited Ring Manager Functions panel when the Network Manager's adapter has closed. This message is not recorded in the event log.

Action: Press Scroll Lock and choose Alerts from the Main Selection panel to see any alert indications of the cause of the failure.

You may choose to select Event Log from the Limited Ring Manager Functions panel to examine the occurrence of this message in an event log report.

DFIPD228 I Adapter removed; press F2 (QUIT) or F4 (RETURN)

Meaning: You see this message if you attempt to remove an adapter that has already been removed. This message is not recorded in the event log.

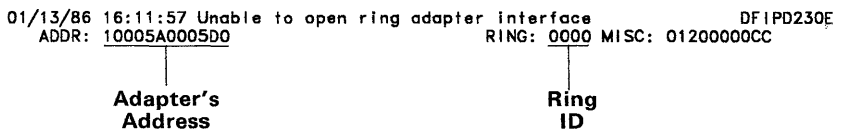
Action: Press F2 (Quit) or F4 (Return) to return to the Request Adapter Removal panel.

Meaning: The Adapter Support Interface code did not accept the open command from the Network Manager. This message is recorded in the event log.

Action: Run the Adapter Diagnostics described in Chapter 3 of the *IBM Token-Ring Network PC Adapter Guide to Operations.* If you have the *IBM Token-Ring Network PC Adapter Hardware Maintenance and Service* manual and diskette, leave this procedure and use the advanced diagnostics instead. If the diagnostics indicate that the adapter is okay and you still get this message, do the following.

1. Shut down the Network Manager and return to DOS.
2. Restart the computer (press and hold Ctrl and Alt and then press Del).
3. Start the Network Manager by typing DFIRINGM and pressing **Enter**.
4. If the message continues to be displayed, recopy the files for the working diskette(s) or fixed disk. See Chapter 2 of this manual.
5. If the problem is still not corrected, record the data section of the message and call the place where you purchased the adapter.

Data:



Meaning: The Adapter Support Interface code did not accept the close command from the Network Manager. This message is recorded in the event log.

Action: Run the Adapter Diagnostics described in Chapter 3 of the *IBM Token-Ring Network PC Adapter Guide to Operations.* If you have the *IBM Token-Ring Network PC Adapter Hardware Maintenance and Service* manual and diskette, use the advanced diagnostics instead. If the diagnostics indicate that the adapter is okay and you still get this message, do the following:

1. Shut down the Network Manager and return to DOS.

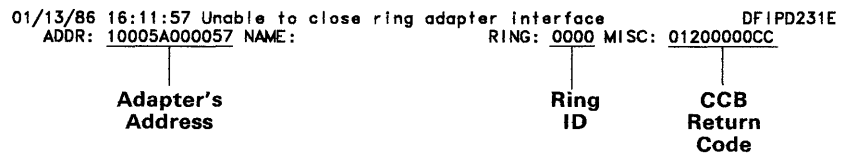
2. Restart the computer (press and hold Ctrl and Alt and then press Del).

3. Start the Network Manager by typing DFIRINGM and pressing **Enter**.

4. If the message continues to be displayed, recopy the files for the working diskette(s) or fixed disk. See Chapter 2 of this manual.

5. If the problem is still not corrected, record the data section of the message and call the place where you purchased your adapter.

Data:



DFIPD240 E Invalid adapter address

Meaning: The adapter address entered is either a functional address or a group address. If more than one adapter address has been entered on the panel, the cursor is positioned under the address in error. This message is not recorded in the event log.

Action: Check the address to be sure it is not a functional address or group address and try again.

If you are on the Add Symbolic Names panel make sure you have followed the rules for a symbolic name when you fill in the blank next to "Symbolic Name."

Refer to the Help panels for the rules.

DFIPD241 E Symbolic name not found

Meaning: You see this message if you have assigned symbolic names and then used a symbolic name that is not in the symbolic names file. If more than one symbolic name has been entered on the panel, the cursor is positioned under the name in error. This message is not recorded in the event log.

Action: On the Find Symbolic Name panel, give the adapter address of the adapter whose symbolic name you do not know.

DFIPD242 E Adapter address not found

Meaning: The adapter address you entered has not been assigned a symbolic name. If more than one adapter address has been entered on the panel, the cursor is positioned under the address in error. This message is not recorded in the event log.

Action: You may assign a symbolic name from the Add Symbolic Names panel.

DFIPD244 E Invalid symbolic name

Meaning: The symbolic name entered does not follow the rules for assigning symbolic names. This message is not recorded in the event log.

Action: Read the information on the Help panels about the rules for symbolic names and then try again.

DFIPD245 E This symbolic name already exists

Meaning: The symbolic name is already assigned to another adapter address. This message is not recorded in the event log.

Action: Choose another symbolic name and try again.

DFIPD246 E Symbolic name already exists for this adapter

Meaning: A symbolic name has already been assigned to the adapter. This message is not recorded in the event log.

Action: Using the adapter address, find the symbolic name for this adapter on the Find Symbolic Name panel.

DFIPD247 E Adapter not on ring or not responding

Meaning: The adapter with the address or symbolic name entered is either not active on the ring at the time of request or has no buffer space available to receive messages. This message is not recorded in the event log.

If more than one adapter has been specified on the panel, the cursor is positioned under the adapter that was not found.

Action: Check the adapter address and try again.

DFIPD248 E Source and target adapters must be different

Meaning: On the Path Test panel, you have entered identical addresses or names for the From and To adapters. This message is not recorded in the event log.

Action: Change one of the adapter addresses or symbolic names.

DFIPD260 E Incorrect password entered, please try again

Meaning: You have entered the wrong password. This message is not recorded in the event log.

Action: Type the password again on the Password panel.

DFIPD261 E Password attempts exceeded, press F2 (Quit)

Meaning: The password has been incorrectly entered three times. This message is not recorded in the event log.

Action: Start the Network Manager again with the correct password.

DFIPD262 E Invalid data, please try again

Meaning: The data entered is not valid for the current panel. This message is not recorded in the event log.

Action: Read the instructions on the panel and on the Help panel and try again.

DFIPD263 E Mandatory data is missing, please try again

Meaning: The data that is required to perform an operation is missing. This message is not recorded in the event log.

Action: Add the missing data and try again.

DFIPD264 I Data not deleted

Meaning: Either you have not confirmed a deletion or a problem with the Network Manager causes you to be unable to delete either a symbolic name or an alert. This message is not recorded in the event log.

Action: Retry, making sure that you confirm the deletion.

DFIPD265 I No records found

Meaning: No data exists in the event log that meets the conditions (such as time and date range) you specified when you requested the report. This message is not recorded in the event log.

Action: Consider changing the conditions you indicated on the Request Event Log Report panel.

DFIPD267 I The report will be printed when F2 (QUIT) or F4 (RETURN) pressed

Meaning: You have pressed F6 (Print) on the Event Log panel. The report will print after you press F2 (Quit) or F4 (Return). This message is not recorded in the event log.

Action: Press F2 (Quit) or F4 (Return) to print the report.

DFIPD268 I The report will NOT be printed

Meaning: You have pressed F6 (Print) to change the print request from "The report will be printed." This message is not recorded in the event log.

Action: None required.

DFIPD270 I Network Manager's adapter cannot be removed from this panel

Meaning: You cannot request an adapter removal for the Network Manager's adapter on this panel. This message is not recorded in the event log.

Action: If you are sure that you want to remove the Network Manager's adapter, go to the Request Adapter Removal panel.

DFIPD271 I Remove not allowed when top adapter is not weight exceeded

Meaning: You cannot request an adapter removal if the first adapter on the list does not have two asterisks next to it. This message is not recorded in the event log.

Action: Wait until the first adapter on the list has two asterisks next to it and request an adapter removal again.

DFIPD272 I Old password is incorrect, please try again

Meaning: The old password entered does not match the current password. If the Security function is not active, the "Old password" field should be left blank on the Change Operator Password panel. This message is not recorded in the event log.

Action: Enter the old password and the two new passwords.

DFIPD273 I New password format is incorrect, please try again

Meaning: The new passwords must be 6 to 8 characters long with no imbedded blanks. The valid characters are: letters "A" to "Z" and "a" to "z," numbers "0" to "9," and special characters @, $, %, and #. This message is not recorded in the event log.

Action: Enter the old password and the two new passwords.

DFIPD274 I New passwords do not match, please try again

Meaning: The two new password fields must match. The first new password is valid. The second does not match the first. This message is not recorded in the event log.

Action: Enter the old password and the two new passwords.

DFIPD275 I No adapters have accumulated error counts

Meaning: No adapters have accumulated enough soft errors to be reported at this time. The Soft Error Conditions panel will not contain any adapters.

Action: None is required.

DFIPD990 E

Meaning: This message has no text. The Network Manager is experiencing a critical internal error. This message is an alert, but is not recorded in the event log.

Action:

1. Make new copies of the diskettes that came with this kit. Use them instead of the copies you are currently using.

2. If the problem reoccurs, record the numbers next to the message ID and call the place where you purchased the Network Manager.

Appendix B. Directory List

Following is a list of files that are included on the two Network Manager diskettes contained in this package.

Network Manager Diskette 1

Name	*Extension*
DFIFAC0	EXE
DFIFSD0	EXE
DFIFRP0	EXE
DFIFCON	EXE
DFIFTOP	EXE
DFIFER0	EXE
AUTOEXEC	BAT
PCINST1	BAT
NMWS	PC1
DFICONFG	PC1
SYSTEXTN	COM
DCJTM	EXE
DCJDB	EXE
DCJSS	EXE
DCJOS	EXE
IWSKEYAT	SYS
IWSKEYXT	SYS
DCJDM	EXE
DCJR	MSG
DCJSS	PRO
ISPD	MSG
NMWS	BAT
DFIRINGM	BAT
DFICONFG	DAT
DFIALRT	EXE
DFIALCOM	DAT
DFIALGTF	TXT
DFIALPID	DAT
DFIALTYP	DAT

DFI	MSG
DFI	PRO
DFISYSTM	DAT
DFIRPMSG	DAT
DFILABEL	DAT
DFISFADF	DAT
DFIRSTAT	DAT
DFIPDPO	EXE
CFG	SYS
INSTALL1	BAT
HDINST1	BAT
ATINST1	BAT
DFITMC	EXE
RESETPW	BAT
DFIRPW	EXE

Network Manager Diskette 2

The files with extension "PAN" are in the subdirectory "Panels." *Name* *Extension*

DFIDISP	EXE
DFITMC	EXE
INSTALL2	BAT
PCINST2	BAT
HDINST2	BAT
ATINST2	BAT
PANELS	<DIR>
DFIPAC10	PAN
DFIPAC20	PAN
DFIPAC30	PAN
DFIPAC35	PAN
DFIPAC40	PAN
DFIPAC50	PAN
DFIPAC55	PAN
DFIPAC60	PAN
DFIPAM10	PAN
DFIPAM20	PAN
DFIPAM30	PAN
DFIPCO10	PAN
DFIPCP10	PAN
DFIPER10	PAN
DFIPER20	PAN
DFIPINZ0	PAN
DFIPINZ1	PAN
DFIPINZ2	PAN
DFIPCP20	PAN
DFIPPF10	PAN
DFIPRP10	PAN
DFIPRP20	PAN
DFIPSD10	PAN
DFIPSD40	PAN
DFIPSD70	PAN
DFIPSD71	PAN
DFIPSD75	PAN
DFIPSE10	PAN
DFIPSE20	PAN
DFIPSN10	PAN

DFIPSN20	PAN
DFIPSN30	PAN
DFIPSN40	PAN
DFIPTO10	PAN
DFIPTO20	PAN
DFIPTM10	PAN
DCJSSPA1	PAN
DCJSSPS1	PAN
DCJSSPI1	PAN
DCJSSPJ1	PAN
DFIHAC1A	PAN
DFIHAC10	PAN
DFIHAC20	PAN
DFIHAC30	PAN
DFIHAC40	PAN
DFIHAC50	PAN
DFIHAC60	PAN
DFIHAM1A	PAN
DFIHAM10	PAN
DFIHAM20	PAN
DFIHAM30	PAN
DFIHCO10	PAN
DFIHCP10	PAN
DFIHCP20	PAN
DFIHER10	PAN
DFIHER20	PAN
DFIHRP10	PAN
DFIHRP20	PAN
DFIHSD10	PAN
DFIHSD40	PAN
DFIHSD70	PAN
DFIHSD75	PAN
DFIHSE10	PAN
DFIHSE2A	PAN
DFIHSE20	PAN
DFIHSN10	PAN
DFIHSN20	PAN
DFIHSN30	PAN
DFIHSN40	PAN
DFIHSR10	PAN
DFIHSR20	PAN
DFIHSS1A	PAN
DFIHSS1B	PAN
DFIHSS1C	PAN

DFIHSS1D	PAN
DFIHSS10	PAN
DFIHTO10	PAN
DFIHTO20	PAN
DFIHSS1E	PAN
DFIHSS1F	PAN
DFIHSR2A	PAN
DFIHSR2B	PAN
DFIHSR2C	PAN
DFIHSR2D	PAN
DFIHSR2E	PAN
DFIHSR30	PAN
DFIHCP1A	PAN
DFIHINZ2	PAN
DFIHSD7A	PAN
DFIHAC3A	PAN
DFIHER2A	PAN
DFIHRP1A	PAN
DFIHTM10	PAN
DFIHMENU	PAN
DFIHAC5A	PAN
DFIHPF10	PAN
DFIPAM00	PAN
DFIPAC80	PAN
DFIHAC80	PAN
DFIPDSK0	PAN

Appendix C. Table of Functions

The three following tables indicate the page numbers of the instructions for each function of the Network Manager.

Services

Function	Task	Page
Intervention	Respond to error messages such as "Operator Intervention Required"	3-9
Shutdown	Return to DOS	3-11

Alerts

Function	Task	Page
F5 (Refresh)	Display new alerts to the list of alerts	3-28
F7 (Details)	Request description of an alert	3-20
F8 (Recommend)	Request suggestions for solving an alert	3-23
F9 (Delete)	Delete an alert from the alert file	3-26
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Ring Manager Functions

Function	Task	Page
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System Definition	Check or change the adapter number	2-16
	Request information about the Network Manager's adapter	2-24
	Add/find/change/display symbolic names	3-45
	Establish or change the operator password	2-20
	Specify whether to log configuration changes	3-57
Adapter Functions	Request information about adapters	3-61
	Remove an adapter from the network	3-65
	Conduct a ring test	3-68
	Start traffic on the ring	3-71
	Display adapters experiencing soft errors	3-74
Path Test	Test the data path between two adapters	3-78
Ring Configuration	Display or print order of active adapters on the ring	3-81
Soft Error Logging	Set or reset the mode in which errors are reported	3-86
Shutdown	Close **Ring Manager Functions** in order to return to DOS	3-90

Function	Task	Page
Exit	Leave **Ring Manager Functions** to go to **Alerts** or **Services**	3-93

Appendix D. Statement of Service

IBM will provide service for valid program-related defects in the IBM Token-Ring Network Manager to program licensees at no additional charge. Program service is available until December 31, 1987, or until after 90 days written notice by IBM that the service period has been terminated, whichever is sooner.

The way each licensee obtains access to program service depends on the marketing channel through which the license was obtained.

For example, in the United States and Puerto Rico, if the IBM Token-Ring Network Manager was obtained through:

- An authorized IBM Personal Computer dealer.

  Requests for program service should be made through the dealer.

- The IBM North/Central or IBM South/West Marketing Divisions.

  Requests for program service should be made through the service coordinator of the licensee's company.

  The service coordinator is a representative of the customer who serves as the interface between end users and the IBM support location for IBM licensed program defect support. The service coordinator is registered by the IBM branch office, under the terms of the Quantity Discount Agreement. The service coordinator's responsibilities include, but are not limited to, problem determination, problem source identification, submission of problem reports,

application of maintenance, and action on IBM support organization recommendations.

The service coordinator may call the IBM Support Center at any time, and will usually be called back within eight business hours. The IBM Support Center will contact the service coordinator Monday through Friday between 8 a.m. and 5 p.m., local customer time.

If the IBM Token-Ring Network Manager is obtained through transfer of license from another party under the conditions of the IBM Program License Agreement supplied with this product, the new licensee may obtain program service through the access arrangement provided for the original licensee.

When a license is transferred, if the original license was obtained through the IBM North/Central or IBM South/West Marketing Divisions, the previous licensee is responsible for contacting the IBM marketing representative to make arrangements to transfer service entitlement to the new licensee. The new licensee must also establish a qualified service coordinator to work with IBM central service.

IBM does not guarantee service results, or that the program will be error-free, or that all program defects will be corrected.

When a report of a defect in an unaltered portion of a supported release of the program is submitted, IBM will respond by issuing one of the following:

- Defect correction information, such as corrected documentation, corrected code, or notice of availability of corrected code
- A restriction notice
- A bypass.

Corrected code is provided on a cumulative basis on diskettes; no source code is provided. Only one copy of the corrections with supporting documentation will be

issued to the licensee, or the agent of the licensee reporting the defect. IBM will authorize various agents, such as IBM Personal Computer dealers and service coordinators of IBM North/Central and IBM South/West Marketing Division customers, to make and distribute a copy of the corrections, if needed, to each IBM Token-Ring Network Manager licensee that they serve.

The total number of copies of an update distributed to IBM Token-Ring Network Manager licensees within a customer's location may not exceed the number of copies of the IBM Token-Ring Network Manager licensed to the customer.

IBM does not plan to release updates of the IBM Token-Ring Network Manager code on a routine basis for preventive service purposes. However, should IBM determine that there is a general need for a preventive service update, it will be made available to all licensees through the same process used to distribute general IBM Token-Ring Network Manager updates.

Following the discontinuance of all program services, this program will be distributed on an "as is" basis, without warranty of any kind either express or implied.

Glossary

A

accessory. An IBM designation for a separately orderable part that (1) has no type number, (2) is for purchase only, and (3) does not receive normal IBM maintenance.

access unit. See multistation access unit.

active. Able to communicate on the network. An adapter is active if it is able to pass tokens on the network.

adapter. In the IBM Token-Ring Network, the circuit card within a communicating device, and its associated software, that enable the device to communicate over a local area network.

application program. A program written for or by a user that applies to the user's work.

attaching device. Any device that is physically connected to a network and can communicate over the network.

B

beacon. A frame sent by an adapter indicating a serious ring problem, such as a broken cable. An adapter is said to be *beaconing* if it is sending such a frame.

bridge. A device that links networks that use the same logical link protocols.

C

cable chart. A chart, prepared by the network planner, that indicates the location of patch cables connected to the IBM 8228 Multistation Access Unit.

component. Any part of a network other than an attaching device, such as an access unit.

D

device. An input/output unit such as a terminal, display, or printer. See attaching device.

distribution panel. A wiring board that provides a patch panel function and mounts in a rack.

downstream. On a ring network, the direction of data flow. Contrast with upstream.

drop. A cable that leads from a faceplate to the distribution panel in a wiring closet. When the IBM Cabling System is used with the IBM Token-Ring Network, a drop may form part of a *lobe.* See lobe.

E

equipment rack. A metal stand for mounting network components, such as distribution panels and IBM 8228 Multistation Access Units.

F

faceplate. A plate for connecting data and voice connectors to a cabling system. It may be wall mounted or surface mounted.

formatted diskette. A diskette that can be used by the computer to store data.

frame. The unit of transmission in some local area networks, including the IBM Token-Ring Network. It includes delimiters, control characters, information, and checking characters.

H

hard error. A error condition on a ring network that requires that the ring be reconfigured or that the source of the error be removed before the ring can resume reliable operation.

I

idles. Signals sent along a ring network when neither frames nor tokens are being transmitted.

L

lobe. In the IBM Token-Ring Network, the section of cable (which may consist of several segments) that attaches a device to an access unit.

lobe receptacle. An outlet on an access unit for connecting a lobe.

local area network. A network in which communications are limited to a moderate-sized geographic area such as a single office building, warehouse, or campus and which do not generally extend across public rights-of-way.

M

main ring path. The part of the ring made up of access units and the cables connecting them.

multistation access unit. In the IBM Token-Ring Network, a wiring concentrator that can connect up to eight lobes to a ring network.

N

NAUN. Nearest active upstream neighbor. For any given station on a ring network, the station that is sending data directly to it.

node. An endpoint of a link or a junction common to two or more links in a network.

P

patch cable. In the IBM Cabling System, a length of type 6 cable with data connectors on both ends.

R

read-only memory (ROM). A computer's storage area whose contents cannot be modified.

receptacle. See lobe receptacle.

remove. To take an attaching device off the ring.

repeater. In a ring network, a device that amplifies or regenerates data signals in order to extend the distance between attaching devices.

ring (network). A network configuration where a series of attaching devices are connected by unidirectional transmission links to form a closed path.

ring in. On an access unit, the receive or input receptacle.

ring error limit. In the Network Manager, the point at which the number of soft errors can make ring operation unreliable.

ring out. On an access unit, the transmit or output receptacle.

ring sequence. The order in which devices are attached on a ring network.

ring status. The condition of the ring.

S

segment. A section of cable between components or devices on the network. A segment may consist of a single patch cable, multiple patch cables connected together, or a combination of building cable and patch cables connected together.

server. A device on a network dedicated to specific functions.

soft error. An intermittent error on a network that causes data to have to be transmitted more than once to be received. A soft error does not, by itself, affect the network's overall reliability. If the number of soft errors reaches the ring error limit, reliability is affected.

star. A wiring arrangement in which an individual cable runs from each work area to a concentration point.

T

token. A sequence of bits passed from one device to another along the network. When the token has data appended to it, it becomes a *frame.*

token ring. A network with a ring topology that passes tokens from one attaching device to another.

U

upstream. On a ring network, the direction opposite to that of data flow. Contrast downstream.

W

wire fault. An error condition caused by a break in the wires or a short between the wires (or shield) in a segment of cable.

wiring closet. A room that contains one or more equipment racks and distribution panels that are used to connect cables together to form physical networks.

working diskette. A computer diskette to which files are copied from an original diskette for use in everyday operation.

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Reader's Comment Form

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