

March 1984

This document covers late changes and important user information for the MicroVAX I system. This information is not included elsewhere in the *MicroVAX I Owner's Manual*.

MicroVAX I Owner's Manual Release Notes

READ FIRST

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Preface

This document describes changes to the MicroVAX I system that have been made since the first versions of the *MicroVAX I Owner's Manual* were printed (document number EK-KD32A-OM-001). It is important that you **read this document first** before using your MicroVAX I system. The information in this document supersedes the corresponding information in the *Owner's Manual*.

Please use the postage-paid READER'S COMMENTS form on the last page of this document to provide us with your critical evaluation of the *MicroVAX I Owner's Manual* and assist us in preparing future documentation.

The *MicroVAX I Owner's Manual* is divided into the following parts:

- Installation
- Operation
- Troubleshooting
- Diagnostics
- Removal and Replacement
- System Configuration

Each of these parts contains one or more chapters. The following pages provide information on any changes to the chapters. The new information for each chapter is indented and printed in **boldface type** to help you find the changed information easily.

Installation

The Installation section of the *Owner's Manual* contains Chapters 1 through 5. These chapters describe how to unpack, install, connect, and test the system.

Note: You must read this information before attempting to install the system.

Chapter 1: Installation Preparation

This chapter covers checking the shipment, ensuring the site has been prepared, and determining the type of system to be installed.

- **Two central processing units (CPUs) are now available for the MicroVAX I system. The KD32-AA CPU contains microcode to handle F_ and G_floating point instructions. The KD32-AB CPU handles F_ and D_floating point instructions. Consequently, the system unit labels on the outside of the shipping carton, which identify the type of system unit you've received, have been changed (page 1-11). A floor standing (or table top) system unit with the KD32-AA CPU is identified by the number 610QH, 610QJ, or 610QK. A floor standing (or table top) system unit with the KD32-AB CPU is identified by the number 610QP, 610QR, or 610QS. Start at Chapter 2 in the *Owner's Manual* to install a floor standing or table top system.**

A rack mounted system unit with the KD32-AA CPU is identified by the number 610QA, 610QB, or 610QC. A rack mounted system unit with the KD32-AB CPU is identified by the number 610QD, 610QE, or 610QF. Start at Chapter 3 in the

Owner's Manual to install a rack mounted system.

Chapter 2: Installing a Floor Standing or Table Top Version

This chapter describes unpacking and installing a floor standing system unit, and the optional table top conversion.

- **There are two smaller boxes inside the system unit shipping carton (step 2, page 2-3). One box contains the Owner's Manual, the diagnostic diskettes, and two blank diskettes. The other box contains the system unit to terminal cable, two screwdrivers, the alternate configuration patch panel, a G7272 bus grant continuity card, labels for the diskette drives, and the following items which are used in the optional table top conversion: four feet, four screws, a filler strip, and a new front control panel label.**
- **If you perform the optional table top conversion, this is an important addition to step 11 on page 2-13: after you remove the pedestal from the system unit, be sure to replace the two front and two rear screws that held the pedestal on. These four screws hold the covers together.**
- **Do NOT do steps 14 and 15 on pages 2-17 and 2-18.**

Chapter 3: Installing a Rack Mounted System Unit

This chapter describes unpacking and installing a rack mounted system unit.

- **Do NOT do steps 5 and 6 on pages 3-6 and 3-7.**

Chapter 4: Installing the Terminal

This chapter describes unpacking and installing a VT100 terminal.

There are no changes to this chapter.

Chapter 5: Connecting and Testing Your MicroVAX I System

This chapter describes connecting and testing the system.

- Step 2 on page 5-3 describes how to connect the cable from the console terminal to the CPU patch panel on the back of the MicroVAX I system unit. The description is correct; however, the connector on the CPU patch panel is **NOT** labeled A0. (It's the only connector on the CPU patch panel.)
- Page 5-18 describes the Microverify messages that are displayed when you power on your MicroVAX I system for the first time. You may also see these messages:

```
00000000 03
```

```
ATTEMPTING RESTART
```

```
RESTART FAILED
```

```
ATTEMPTING BOOTSTRAP
```

```
%BOOT-F-ERROR, No valid boot device  
is present in the configuration
```

or

```
%BOOT-F-ERROR, None of the bootable  
devices contain a program image
```

If you see these messages, your system is fine. Continue with the testing procedure as described on pages 5-18 through 5-25.

Operation

This part of the *Owner's Manual* contains Chapters 6 and 7. These chapters describe how to operate the system.

Chapter 6: Operating the MicroVAX I System

This chapter describes the system's front panel controls and indicators, and how to operate the fixed disk and diskette drives.

- **Pressing the Restart button on the front control panel causes the MicroVAX I system to reboot (page 6-5).** To reboot means to copy an image of the system software into memory again to restart computer operation. The description of the Restart button in the manual is correct. The important point is that with all software currently sold by DIGITAL for the MicroVAX I, the effect of pressing the Restart button is always to reboot the system.
- **The fixed disk drive in your system unit does not need to be formatted before it is used for the first time (page 6-18).** The fixed disk installed in your system unit is formatted for you at the factory. You will only need to format a fixed disk if you replace the fixed disk in your system unit with a new one (see step 21 on page 18-35).

Chapter 7: Console Interface

This chapter describes the console commands, the console messages, and the console halt codes.

There are no changes to this chapter.

Troubleshooting

This part contains Chapter 8 and describes the procedures you can carry out to isolate a problem and decide what to do next.

Chapter 8: Troubleshooting

This chapter describes the Microverify LEDs and contains the troubleshooting flowchart.

- **The troubleshooting flowchart has been revised (pages 8-5 to 8-16). Please remove and discard Chapter 8 in your manual (pages 8-1 to 8-16), and replace it with the new Chapter 8 located at the end of these Release Notes.**

Diagnostics

This part describes the MicroVAX I diagnostic system.

Chapter 9: Diagnostics Overview

This chapter describes the three levels of diagnostics procedures.

There are no changes to this chapter.

Chapter 10: Microverify

This chapter describes Microverify which is a test that runs automatically when the system is powered on.

There are no changes to this chapter.

Chapter 11: Macroverify

This chapter describes Macroverify which is a quick, high-level test you can run using the first diagnostic diskette.

- A new line of information has been added to Macroverify (page 11-3). After the header, a sentence is displayed identifying the microcode and hardware revision levels of the system, and whether the system supports F_ and G_, or F_ and D_ floating point data types.
- The testing of the DEQNA Ethernet controller performed by Macroverify has been expanded. If a DEQNA is configured and installed properly, Macroverify displays the DEQNA's station address in the "Comments" column following the **TEST SUCCEEDED** message. (See pages 11-5 and 11-9 for Macroverify examples.) The DEQNA's station address is used to uniquely identify the MicroVAX I for downline load operations.

Chapter 12: CPU Diagnostic

This chapter describes the CPU diagnostic which is a test designed to verify that the CPU is functioning properly.

There are no changes to this chapter.

Chapter 13: Memory Diagnostic

This chapter describes the Memory diagnostic which is a test to verify that the memory modules are functioning properly.

- If you hold the CTRL (control) key down and press the C key at the same time, while the

Memory diagnostic is running, the diagnostic halts and a message is displayed followed by a return to the command prompt: EHXMS> (page 13-15). The message is: "Testing aborted by ^C during pass m, n error(s) detected." The value m represents the pass number, for example, pass 1, and n is the number of errors detected, for example, 0 errors detected.

- A message relating how much time each pass will take has been added to the Memory diagnostic (pages 13-16, 13-17). The message is displayed following the memory map summary and reads: "Each complete pass of this diagnostic will take approximately x minutes. Disabling parity testing (via DISABLE PARITY) would reduce this to y minutes."

The values of x and y are determined by how much memory is installed. Each 256 Kb of memory takes about 12 minutes to test with parity enabled, and about 7 minutes to test with parity disabled. Parity is enabled by default. To disable parity, type the command DISABLE PARITY after the EHXMS> prompt before you begin the Memory diagnostic with the START command.

If you run the Memory diagnostic with parity disabled, the message displayed following the memory map summary reads: "Each complete pass of this diagnostic will take approximately z minutes." The value z will be 7 minutes for each 256 Kb of installed memory. For example, to test 1024 Kb of memory takes 28 minutes for each pass with parity disabled.

Note: The Memory diagnostic performs some basic parity testing, even with parity disabled. With

parity enabled, the Memory diagnostic performs extensive parity testing.

Chapter 14: DZV11 Diagnostic

This chapter describes the diagnostic test that verifies the operation of the DZV11, a four-channel asynchronous serial interface.

- **The only loopback connector required for the DZV11 diagnostic is the H329 (page 14-1).**
- **There are now five different sections of testing provided by the DZV11 diagnostic (page 14-3).** The sections listed in **bold** below are new or changed; the internal and staggered sections have remained as they are described on page 14-4.
 - Internal, tests 1 through 19; use the command RUN EHXDZ
 - **Modem, test 20 (requires H329);** use the command RUN EHXDZ/SECTION=MODEM
 - Staggered, tests 20 and 21; use the command RUN EHXDZ/SECTION=STAGGERED
 - **All, tests 1 through 21 (requires H329);** use the command RUN EHXDZ/SECTION=ALL
 - **Echo, test 22;** use the command RUN EHXDZ/SECTION=ECHO

For descriptions of these tests, see pages 14-10 to 14-12.

- **The External section (tests 22 and 23) which requires the H325 test connector, has been deleted from the DZV11 diagnostic. The Echo test, currently documented as test 24, is now test 22 (pages 14-9 and 14-12).**
- **When you run the Echo test (pages 14-9 to 14-10), the VDS header is displayed, followed by this new message:**

THIS TEST REQUIRES A TERMINAL CONNECTED TO A DZV11 CHANNEL

After you receive this message, attach your test terminal to one of the DZV11 channels at the rear patch panel assembly. You are next prompted for channel number, character size in bits, number of stop bits, parity, and baud rate. After you answer these prompts on the console terminal, this message appears on the test terminal:

**EACH CHARACTER YOU ENTER WILL BE
ECHOED THROUGH THE DZV11. ENTER A
CONTROL-Z TO STOP THE TEST.**

Now, all characters you type at the test terminal are echoed at that terminal. Pressing CTRL-Z ends the test and produces the following message on the console terminal:

**CONTROL-Z RECEIVED FROM CHANNEL
NUMBER X**

where **X** is the number of the DZV11 channel that the test terminal is connected to.

Chapter 15: DLVJ1 Diagnostic

This chapter describes the diagnostic test that verifies the operation of the DLVJ1, another four-channel asynchronous serial interface option available for the MicroVAX I.

- **There are now four sections of testing provided by the DLVJ1 diagnostic (page 15-5).**
 - **Register, tests 1, 2, and 4; use the command RUN EHXDL**
 - **Loopback, tests 3, 5, 6, 7, and 8 (requires H3270 test connector); use the command**

RUN EHXDL/SECTION = LOOPBACK

- **All, tests 1 through 8 (requires H3270);** use the command RUN EHXDL/SECTION = ALL
- **Echo, test 9 (requires test terminal);** use the command RUN EHXDL/SECTION = ECHO

For descriptions of these tests, see pages 15-5 and 15-6.

- **Test 9, the Multichannel Full Speed Data Loopback test (page 15-6), is now part of test 6, the Full Speed Data Loopback Test. A new test, named the Echo test, is now test 9. The Echo test requires a test terminal to be connected to one of the DLVJ1 channels.**
- **When you run the Echo test (not currently documented), the VDS header is displayed, followed by this new message:**

**THIS TEST REQUIRES A TERMINAL
CONNECTED TO A DLVJ1 CHANNEL**

After you receive this message, attach your test terminal to one of the DLVJ1 channels at the rear patch panel assembly. You are next prompted for the channel number. After you answer this prompt on the console terminal, this message appears on the test terminal:

**EACH CHARACTER YOU ENTER WILL BE
ECHOED THROUGH THE DLVJ1. ENTER A
CONTROL-Z TO STOP THE TEST.**

Now, all characters you type at the test terminal are echoed at that terminal. Pressing CTRL-Z ends the test and produces the following message on the console terminal:

**CONTROL-Z RECEIVED FROM CHANNEL
NUMBER X**

where **X** is the number of the DLVJ1 channel that the test terminal is connected to.

Chapter 16: Storage Subsystem Diagnostic

This chapter describes the diagnostic tests that verify the RQDX1 controller and the disk and diskette drives are operating properly.

- **A new prompt has been added to both the exerciser and formatter portions of the storage subsystem diagnostic (pages 16-5 to 16-9).** After you have attached the RQDX1 controller and the appropriate drives, selected the drive units to be exercised or formatted and entered the run command, the program header is displayed. **The program header is followed by a warning that the diagnostic destroys user data on the drives being tested or formatted, and the question: "Do you wish to continue? [(No), Yes]."**

There is a "Do you wish to continue?" question for each drive that you attached and selected. The (No) response is in parentheses because it is the default. If you simply press RETURN in response to the WARNING prompt, the diagnostic is canceled and you are returned to the DS> prompt. You may also type the letter "n" or the word "no" to cancel the diagnostic.

To continue the diagnostic after the WARNING prompt, type a "y" or the word "yes" in response to the prompt and press RETURN.

If you are running the exerciser portion of the diagnostic, answering NO to the "Do you wish to continue?" question for any drive that you

attached and selected cancels the entire diagnostic and returns you to the DS> prompt.

If you continue the exerciser diagnostic by answering yes to all the "Do you wish to continue?" questions, a message displays stating that the exerciser has started. This is followed by a chart showing the number of bytes read and written, and the number of soft and hard errors for each drive tested. After the chart is displayed, the "...End of run..." message appears.

Note: You can have the exerciser portion of the diagnostic perform read-only testing of a disk or diskettes by write-protecting the media **before** you run the exerciser. To write-protect the fixed disk, press the write protect button on the system front panel so that it latches in (see page 6-6 of the *Owner's Manual*). To write-protect a diskette, place a write-protect tab over the notch in the diskette jacket (see page 6-11 of the *Owner's Manual*). No user data on the disk or diskette being tested is destroyed, and you will not see the "Do you wish to continue?" prompt.

The formatter portion of the storage subsystem diagnostic **always destroys all data** on the disk. (**Note:** Only the fixed disk can be formatted. Diskettes are formatted correctly by DIGITAL for the MicroVAX I before they are shipped to you).

If you are running the formatter portion of the diagnostic and you answer yes to the "Do you wish to continue?" question, the next information displayed is the version number of the diagnostic. This is followed by a prompt for today's date, and a prompt for the serial number of the disk. Enter a non-zero, eight digit number for the disk serial number. After you answer these prompts, the mes-

sage "Format Begun" is displayed, and the formatting begins.

When the disk has been formatted, the message "Format complete" is displayed, followed by a series of informational messages about the results of the formatting. For example, information is provided about the number of blocks on the disk that were revectorred, and the number of bad blocks found. After these messages, the "...End of run..." message appears.

Chapter 17: DEQNA Diagnostic

This chapter describes the diagnostic test that verifies the operation of the DEQNA, an Ethernet to Q22 bus adapter that allows the MicroVAX I system to communicate over the Ethernet.

There are no changes to this chapter.

Removal and Replacement

This part contains Chapter 18 and describes removing and replacing the field replaceable units (FRUs).

Chapter 18: FRU Removal and Replacement

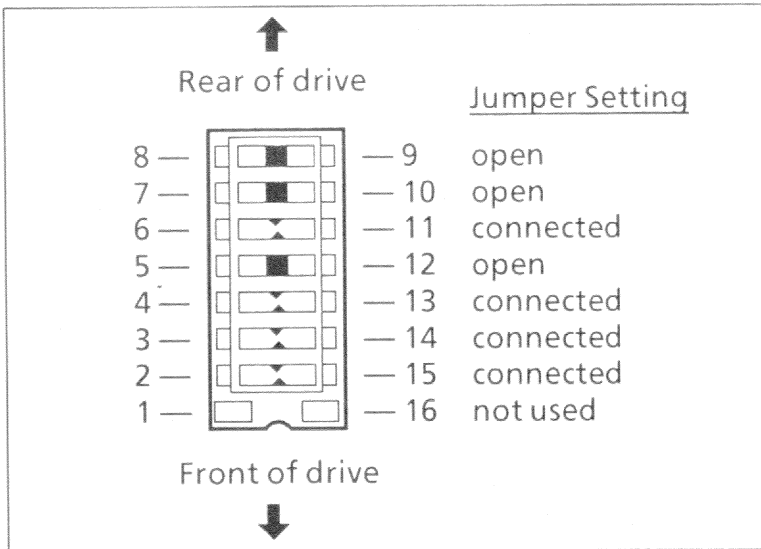
This chapter contains instructions for removing and replacing these FRUs: patch panels, Q22 bus modules, disk drives, diskette drives, backplane assembly, signal distribution board, power supply, cooling fans, control panel.

- **The documentation states that slot 3 in the Q22 bus backplane must be reserved and fitted only with the bus grant continuity card, G7272 (pages 18-19, 18-22). This is no longer necessary. You may now change the placement of**

the modules in your system backplane so that the first memory module is located in slot 3. **Note:** Slot 3 may only be occupied by a memory module.

- The drawings of the MicroVAX I backplane indicate that the data path module is located in the first backplane slot (pages 18-20, 18-21, and 18-23). This is not correct. The memory controller module must always be located in the first slot, and the data path module in the second slot.
- The setting shown for the RD51 DIP shunt pack is incorrect (page 18-32). The correct setting is shown below:

RD51 DIP Shunt Pack, page 18-32



System Configuration

This part contains Chapters 19 through 23 and describes how to configure and install the options that may be added as part of your MicroVAX I system.

Chapter 19: Configuring the KD32-AA CPU

This chapter describes the normal configuration of the CPU and how to change it if necessary.

- **Two central processing units (CPUs) are now available for the MicroVAX I system.** The KD32-AA CPU contains microcode to handle F_ and G_floating point instructions. The KD32-AB CPU handles F_ and D_floating point instructions (page 19-1).
- **The module number for the DAP module that handles F_ and G_floating point is M7135. The module number for the DAP module that handles D_ and F_floating point is M7135-YA (page 19-1).**
- **Switch number 1 of the option switches, previously documented as reserved, now controls which devices are searched during bootstrap (pages 19-1 to 19-6, and 19-10).** When the system is powered on, or when the Restart button on the front panel is pressed, the CPU gets itself started by running a bootstrap program. The bootstrap searches the various devices attached to the system to locate the main software that runs the computer. This main software is often referred to as the system image.

When switch number 1 is set off, which is the default, the following devices (if present) are searched in the order listed here until a system

image is found: diskette drives, disk drive, MRV11 PROM, and DEQNA.

When switch number 1 is set on, the CPU bypasses the disk and diskettes and searches only the MRV11 PROM and the DEQNA for a system image. This switch setting would be useful, for example, if you always wanted the system image to be provided by a host computer over the Ethernet.

- **As described in the change for Chapter 6, the effect of pressing the Restart button is always to reboot the system (page 19-8).**
- **If you are changing the settings of the option switches, it is best not to use a pencil to push the switches, as the pencil point tends to break off (pages 19-13 to 19-15).**

Chapter 20: Options for the MicroVAX I System

This chapter describes the nine options that are currently available for the MicroVAX I.

There are no changes to this chapter.

Chapter 21: Configuration Guidelines

This chapter describes how to determine if there is enough power and space in your system to add an option, and if so, which slot in the backplane the option module should go in.

- **It is no longer necessary to keep slot 3 reserved (pages 21-3, 21-18 to 21-23).** The first memory module may now be inserted in slot 3, allowing an advisable maximum memory of 2.5 Mb. **Note:** Slot 3 may only be occupied by a memory module.

- Use the value 4.0 (not 2.0) for the KD32-AA or KD32-AB CPU ac bus load (pages 21-9, 21-11, 21-13, 21-14, 21-15, 21-16).
- The DEQNA option for the MicroVAX I has a 1 x 4 size patch panel, not 2 x 3 (pages 21-11, 21-15).
- At this time, it is not possible to have both an RQDX1 controller module and a DLVJ1 communications module in a MicroVAX I system (pages 21-17 to 21-21). This is because the current version of the RQDX1 controller must be placed in the last-used slot of the backplane. This is the slot that the DLVJ1 must occupy. So for the near future, a MicroVAX I system may be configured with the RQDX1, or the DLVJ1, but not both.

Chapter 22: Configuring Option Modules

This chapter describes how to configure the option modules that are available as add-ons to the MicroVAX I system.

- If you are changing the settings of switches on the option modules, it is best not to use a pencil to push the switches, as the pencil point tends to break off (pages 22-29 to 22-33).
- The drawings of the MicroVAX I backplane on page 22-40 indicate that the data path module is in the first backplane slot. This is not correct. The memory controller module must always be in the first slot, and the data path module in the second slot.
- If you install a memory module in slot 3, it is not necessary to remove jumpers W1 and W2 (page 22-49).

Chapter 23: Installing Option Modules

This chapter describes how to install the option modules that are available as add-ons to the MicroVAX I system.

- **The drawing of the DEQNA patch panel in Figure 23-1 is incorrect (page 23-3). The DEQNA option has a 1 x 4 size patch panel. However, the internal cable to the module is still connected as shown.**
- **The section titled "Test Procedures" describes how to run Macroverify (page 23-7). Step 3 of these procedures shows the information displayed after Microverify runs. You should actually see: 00000000 FF (not 00000000 3F).**
- **The procedure to check a DLVJ1 you just installed has changed slightly (pages 23-11 to 23-13). First, install the H3270 loopback connectors as described on pages 23-11 and 23-12. Next, bootstrap the Diagnostic Supervisor as described on page 23-12. Then type these commands:**

```
DS>SET FLAG QUICK
DS>ATTACH DLVJ1 HUB TTA 776500 300 8 1 NO NO
DS>SELECT TTA
DS>RUN EHXDL/SECTION = ALL
```

The rest of the DLVJ1 diagnostic test description on pages 23-12 and 23-13 is correct.

- **The procedure to check a DZV11 you just installed has changed slightly (pages 23-13 to 23-16). First, install the H329 loopback connector as described on page 23-15. Next, bootstrap the Diagnostic Supervisor as described on page 23-15. Then type these commands:**


```
DS>SET FLAG QUICK
DS>ATTACH DZV11 HUB TTA 760100 300
DS>SELECT TTA
DS>RUN EHxDZ/SECTION = ALL
```

The rest of the DZV11 diagnostic test description on page 23-16 is correct.

- The command to bootstrap the Diagnostic Supervisor in order to run the DZV11 diagnostic did not get printed (page 23-14). The command that should be in red ink following the >>> console mode prompt is:

```
B/10 DUA1
```

- As documented in the change for Chapter 16, a new prompt has been added to the exerciser and formatter portions of the storage subsystem diagnostic (pages 23-19 to 23-21). After you have entered the run command, the next information displayed is a warning that the test destroys user data, and the question, "Do you wish to continue? [(No), Yes]." For detailed information about this prompt and how to answer it, please see the description on pages 11 through 13 of this document.

Chapter 8

Troubleshooting

This chapter provides information for troubleshooting the MicroVAX I system. Using this information, and the information in the next two parts, "Diagnostics," and "FRU Removal and Replacement," you can isolate and rectify a fault.

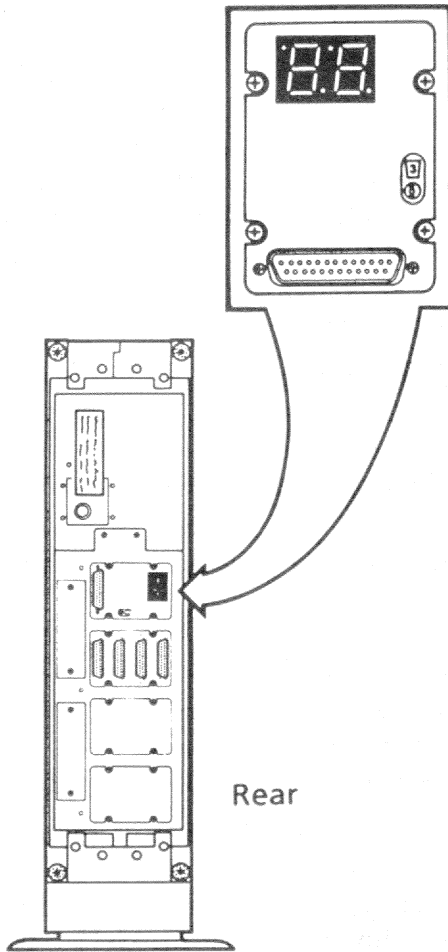
Note: This chapter is intended primarily for DIGITAL Field Service personnel. You can diagnose a problem yourself, using the information in this chapter, or call Field Service to diagnose and repair a problem for you.

Troubleshooting the MicroVAX I System

The MicroVAX I system has an internal self-test called Microverify which helps isolate failures. Microverify runs automatically when power is applied to the system. It may be specifically run by issuing the TEST console command; see "Console Interface," Chapter 7.

Microverify provides the first level of troubleshooting. If Microverify detects a fault, an LED display on the CPU patch panel and on the DAP module isolates the fault to either the DAP or MCT. Figures 8-1 and 8-2 illustrate the location of the LEDs. Table 8-1 lists the meaning of the LED codes.

Macroverify should be used as the primary troubleshooting diagnostic to isolate problems to a field replaceable unit (FRU) whenever possible. Resort to individual device diagnostics only if Macroverify fails to identify the failing FRU. Figure 8-3 is a flowchart of the troubleshooting sequence.



Rear

Note: The MicroVAX I system uses only the low order display digit.

If an error code appears in the display, the same error code appears in the LEDs on the DAP module (part number M7135, or M7135-YA).

Figure 8-1. CPU Patch Panel LEDs

Note: The error code displayed in the LEDs matches the error code on the rear patch panel.

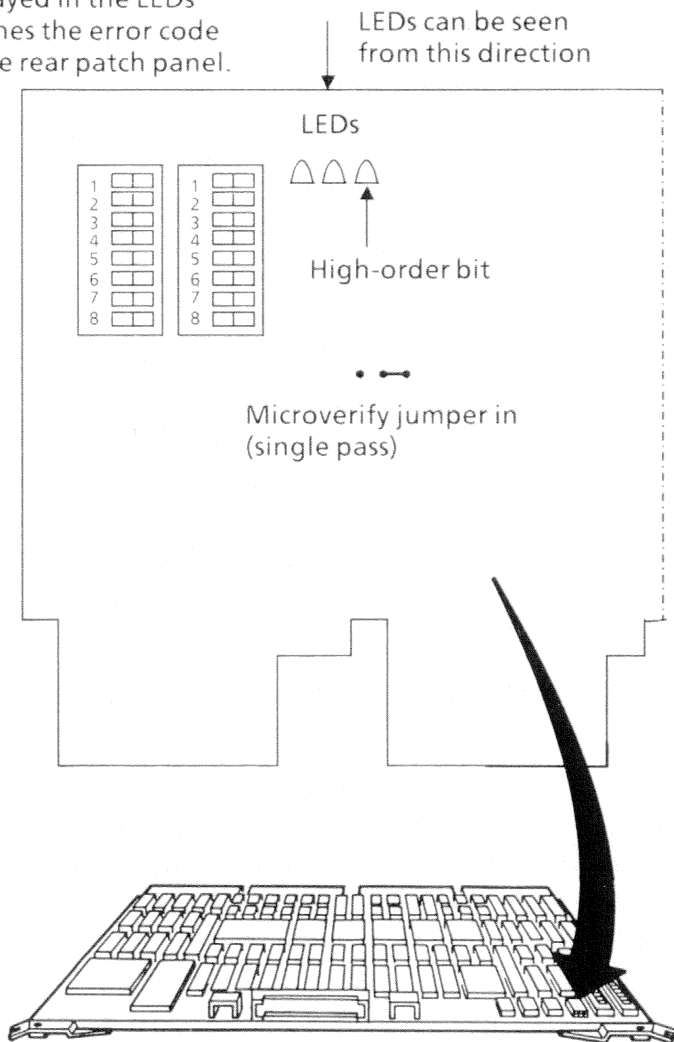


Figure 8-2. Data Path Module LEDs

Table 8-1. LED Coding

Display Panel	DAP Module	Meaning
7	on,on,on	Failed quick DAP microsequencer test. Error on DAP board.
6	on,on,off	Error on DAP board.
5	on,off,on	Error on MCT board.
4	on,off,off	Undetermined error on DAP, MCT, or over-the-top connector.
3	off,on,on	Microverify worked as expected, but bad memory was found, or there is a problem with the Q22 bus control logic on the MCT board.
2	off,on,off	No bootstrap device found.
1	off,off,on	Unable to bootstrap from device (media fault).
.	off,off,off	Transfer to secondary bootstrap image. (Primary bootstrap completed successfully.)

Note: A number displayed in the LEDs or rear patch panel is a valid error code only when the CPU enters console halt mode because of a failure. The system is in console halt mode when the system prompt is three angle brackets: >>>.

Note: You should always power down the system before removing or replacing parts.

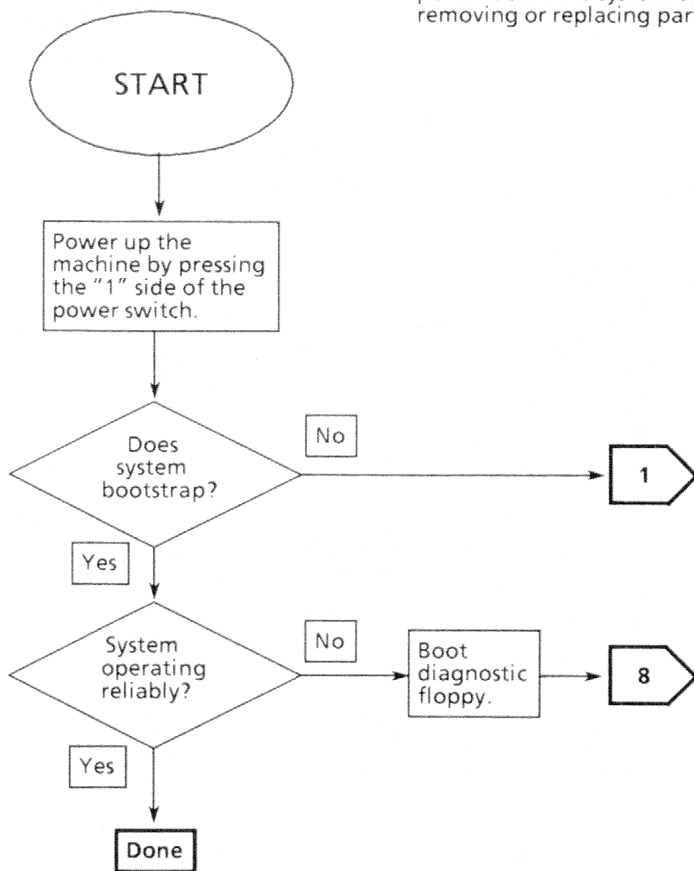


Figure 8-3. Troubleshooting Flowchart (1 of 13)

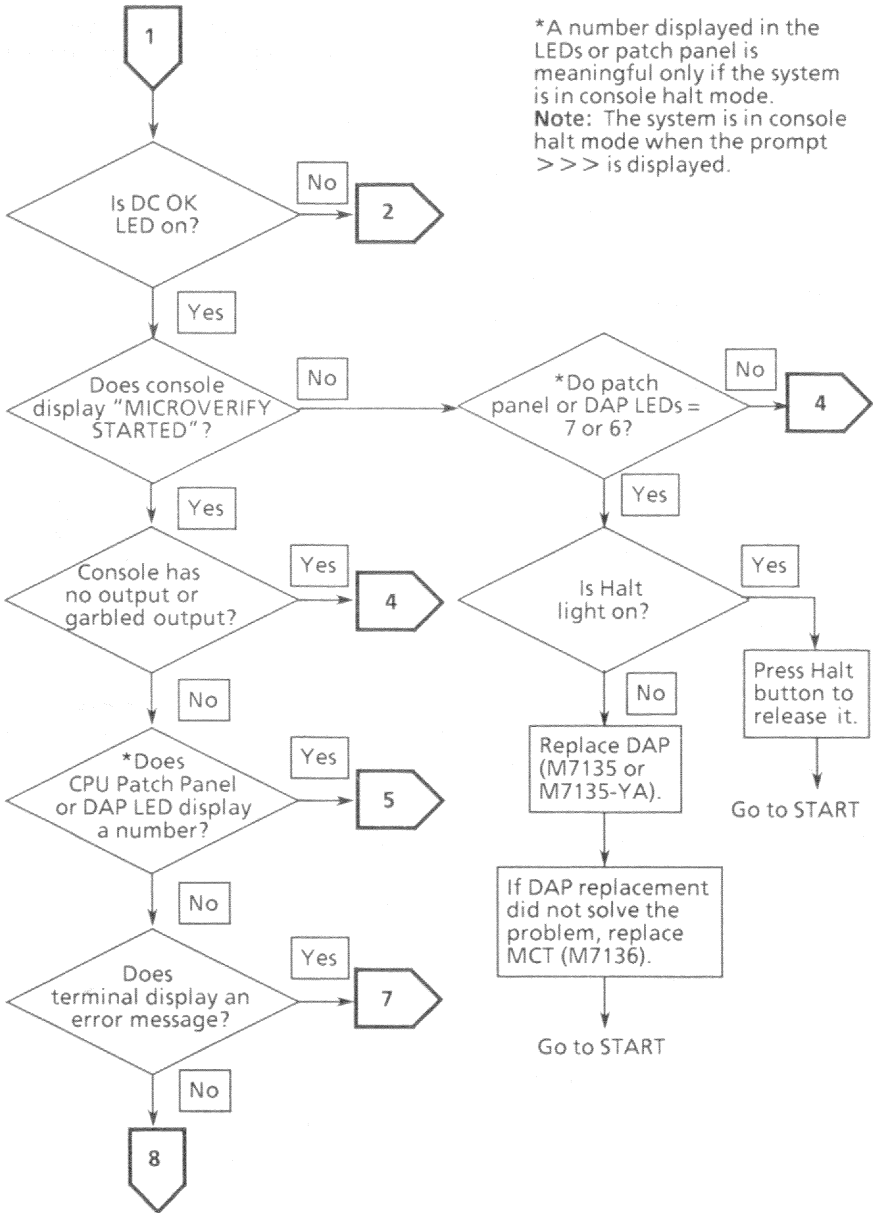


Figure 8-3. Troubleshooting Flowchart (2 of 13)

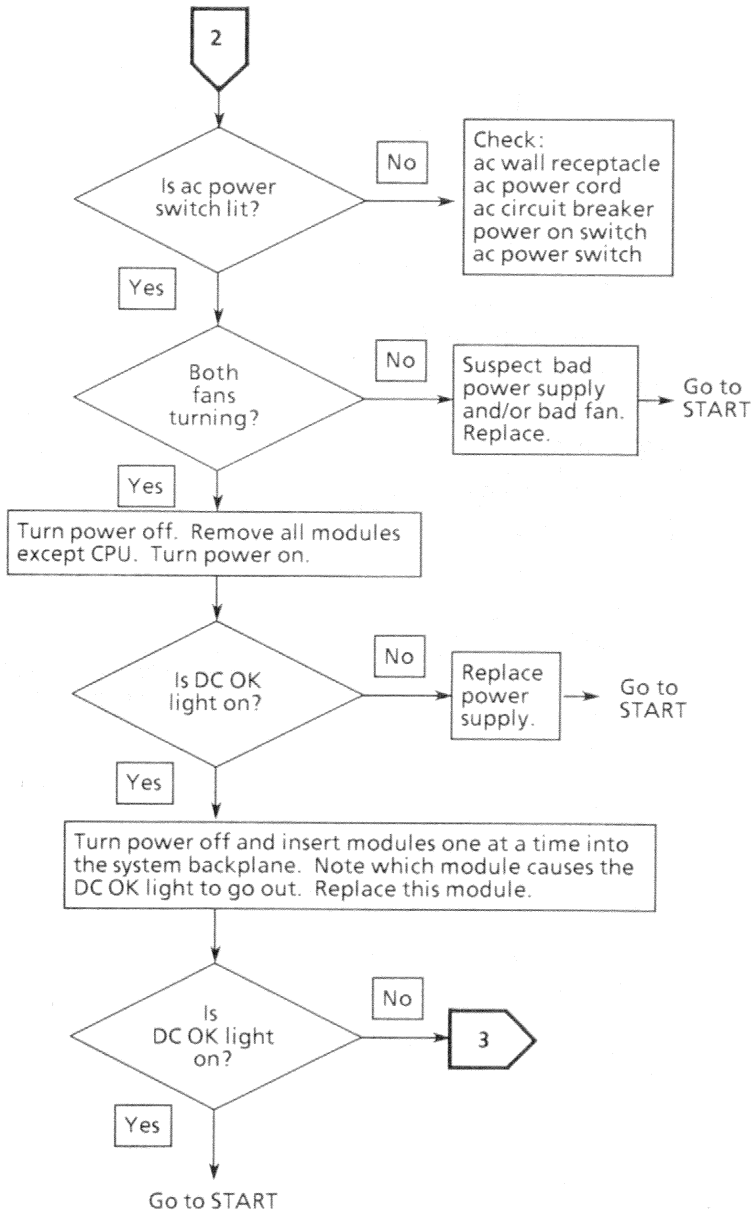


Figure 8-3. Troubleshooting Flowchart (3 of 13)

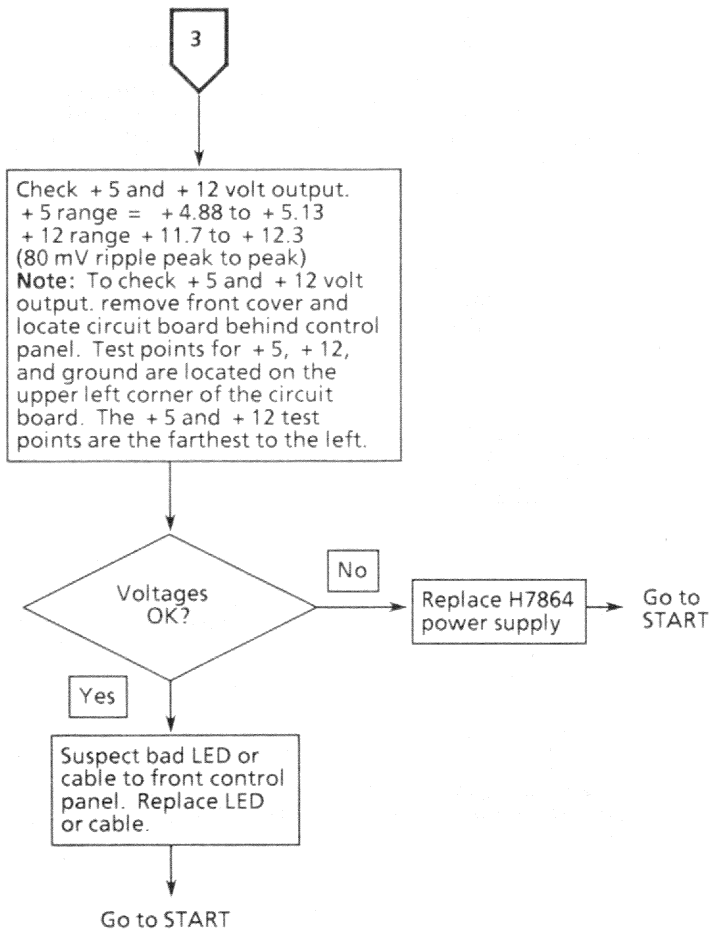


Figure 8-3. Troubleshooting Flowchart (4 of 13)

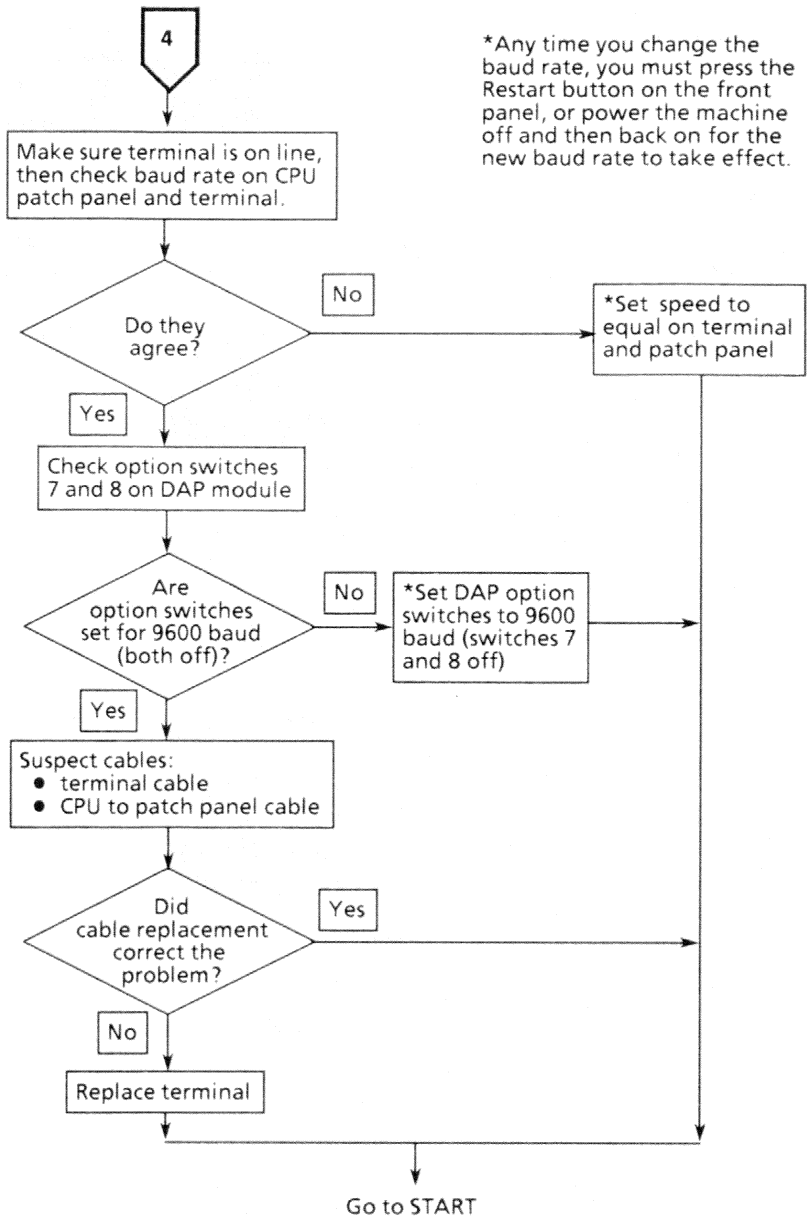


Figure 8-3. Troubleshooting Flowchart (5 of 13)

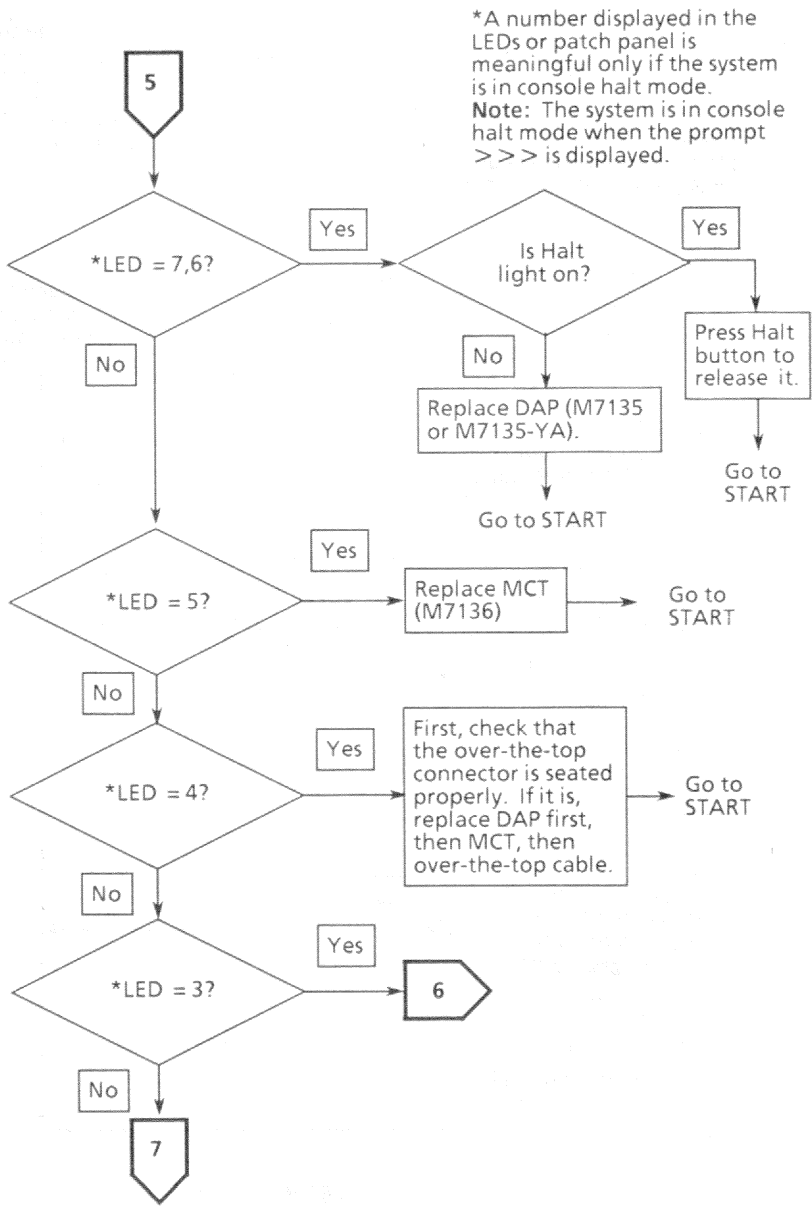


Figure 8-3. Troubleshooting Flowchart (6 of 13)

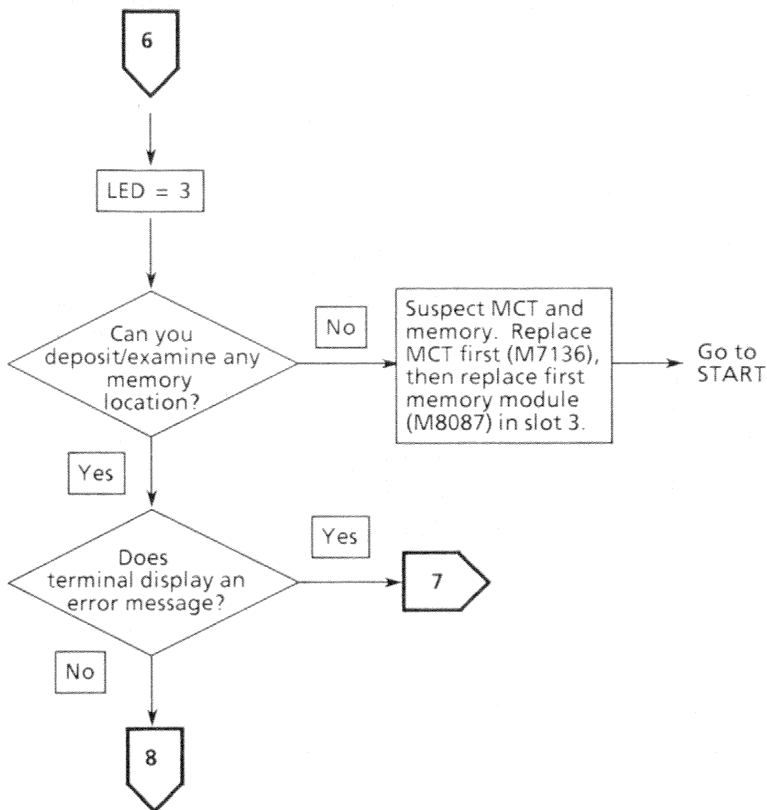


Figure 8-3. Troubleshooting Flowchart (7 of 13)

*A number displayed in the LEDs or patch panel is meaningful only if the system is in console halt mode.
Note: The system is in console halt mode when the prompt >>> is displayed.

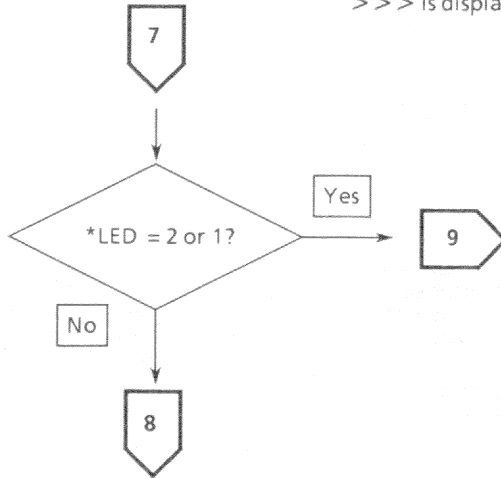


Figure 8-3. Troubleshooting Flowchart (8 of 13)

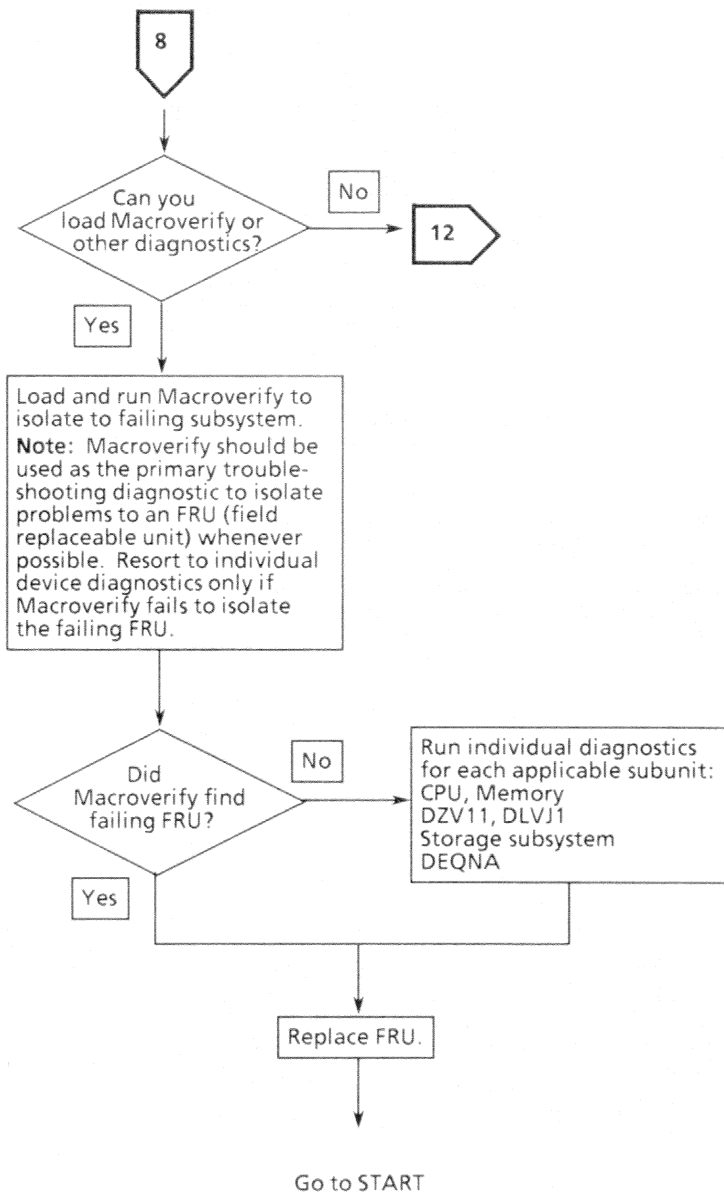


Figure 8-3. Troubleshooting Flowchart (9 of 13)

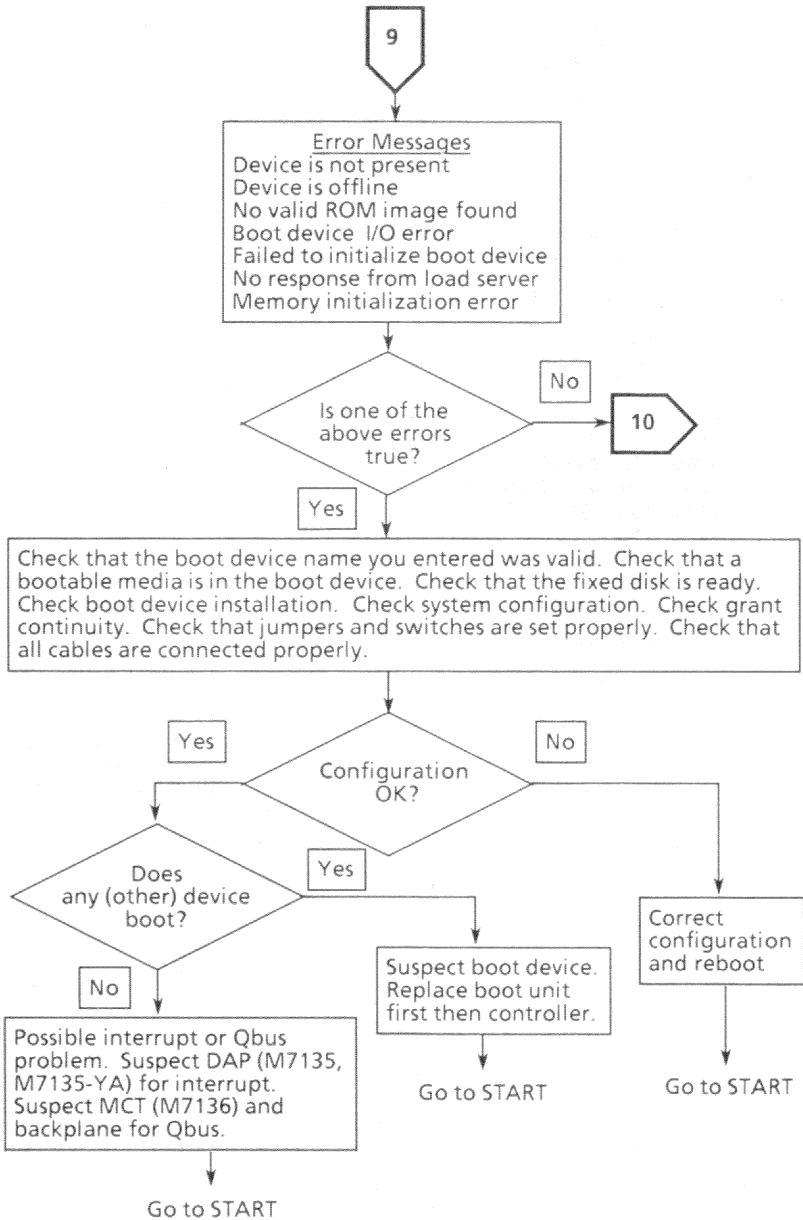


Figure 8-3. Troubleshooting Flowchart (10 of 13)

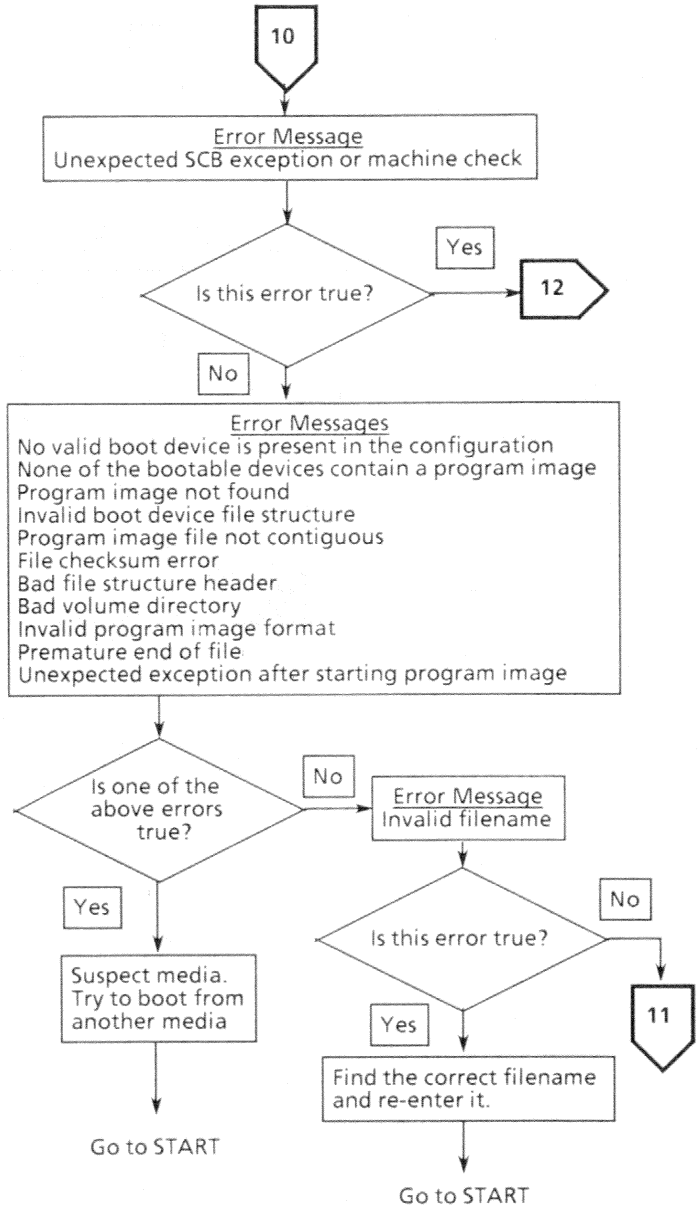


Figure 8-3. Troubleshooting Flowchart (11 of 13)

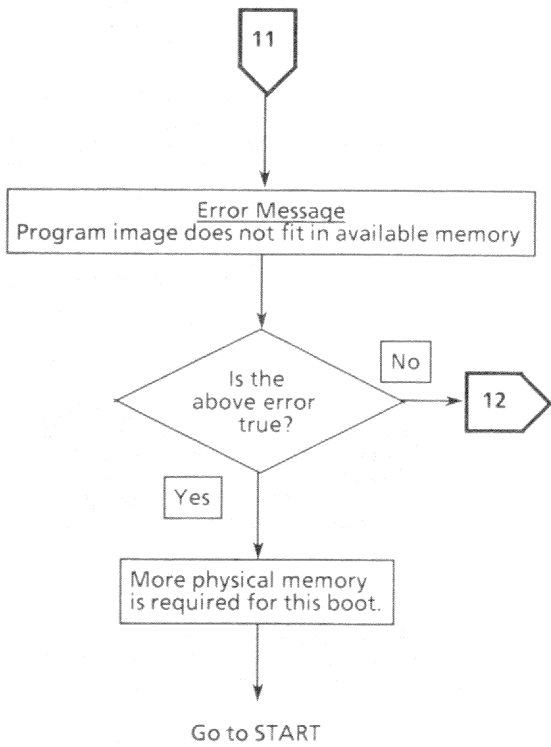


Figure 8-3. Troubleshooting Flowchart (12 of 13)

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Fatal system error, possibly caused by multiple failures.
Try to change failure symptom by removing subsystems.
First, try reducing system to the CPU, one memory module (M8087),
the RQDX1 controller (M8639), and the RX50.
Then follow the troubleshooting flowchart from the beginning.
If successful, replace the failing unit, and add back the removed
items one at a time.
Follow the troubleshooting flowchart for each item added back
to verify that there are no additional failing field replaceable
units (FRUs).

Figure 8-3. Troubleshooting Flowchart (13 of 13)

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