

Data General

**AViiON™ SYSTEM
DIAGNOSTICS**

FIELD GUIDE

043-000075-00

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SECTION 1

INTRODUCTION

This section describes the major features and documentation related to the AViiON™ System Diagnostics Model S0Z0AZN (DG Part Number 079-000100).

1.1 PRODUCT OVERVIEW

The AViiON System Diagnostics are a menu driven diagnostics and toolset system that allows you to test and/or verify the integrity of Reduced Instruction Set Computing (RISC) based systems. The diagnostics fully test and help isolate failing Field Replaceable Units (FRUs) in the system. The AViiON System Diagnostics are loaded after power-up tests and executable diagnostics are run on the system.

The AViiON System Diagnostics consist of five Main Menu selections:

1. **Acceptance Test** – This selection is for use mainly by the customer but can also be used by the field engineer. This 15 minute test verifies proper operation of a system at the time of installation or of a FRU that has been replaced. This tests all devices found in the system and displays status reports every minute. Section 3 of this Guide has Acceptance Test information.
2. **System Exerciser** – This selection is for use by the field engineer. This test also verifies proper operation of a system at installation or of a replaced FRU but can be run for any length of time. In addition, this selection allows the field engineer to customize the tests to be run. If a failing FRU is found, an error report is displayed. Otherwise, a general status report is displayed when you terminate the system exerciser test. Section 4 of this Guide has System Exerciser information.
3. **Tools** – This selection is for use by the customer and the field engineer. Tools allows you to perform maintenance functions on disk and tape media. Tools also allows you to run a network connection test and a PCB resume utility. If you have an AViiON single-user system such as an AViiON 300 series station, you can run graphics tests, a keyboard test, or a mouse test. If you have an AViiON multi-user system such as an AViiON 5000 or 6000, you can run terminal tests. Section 5 of this Guide has Tools information.
4. **Help** – This selection gives a brief description of the main menu selections.
5. **Exit to SCM** – This selection allows you to exit from the AViiON System Diagnostics and return to the SCM prompt.

Figure 1-1 is a flow representation of the AViiON System Diagnostics:

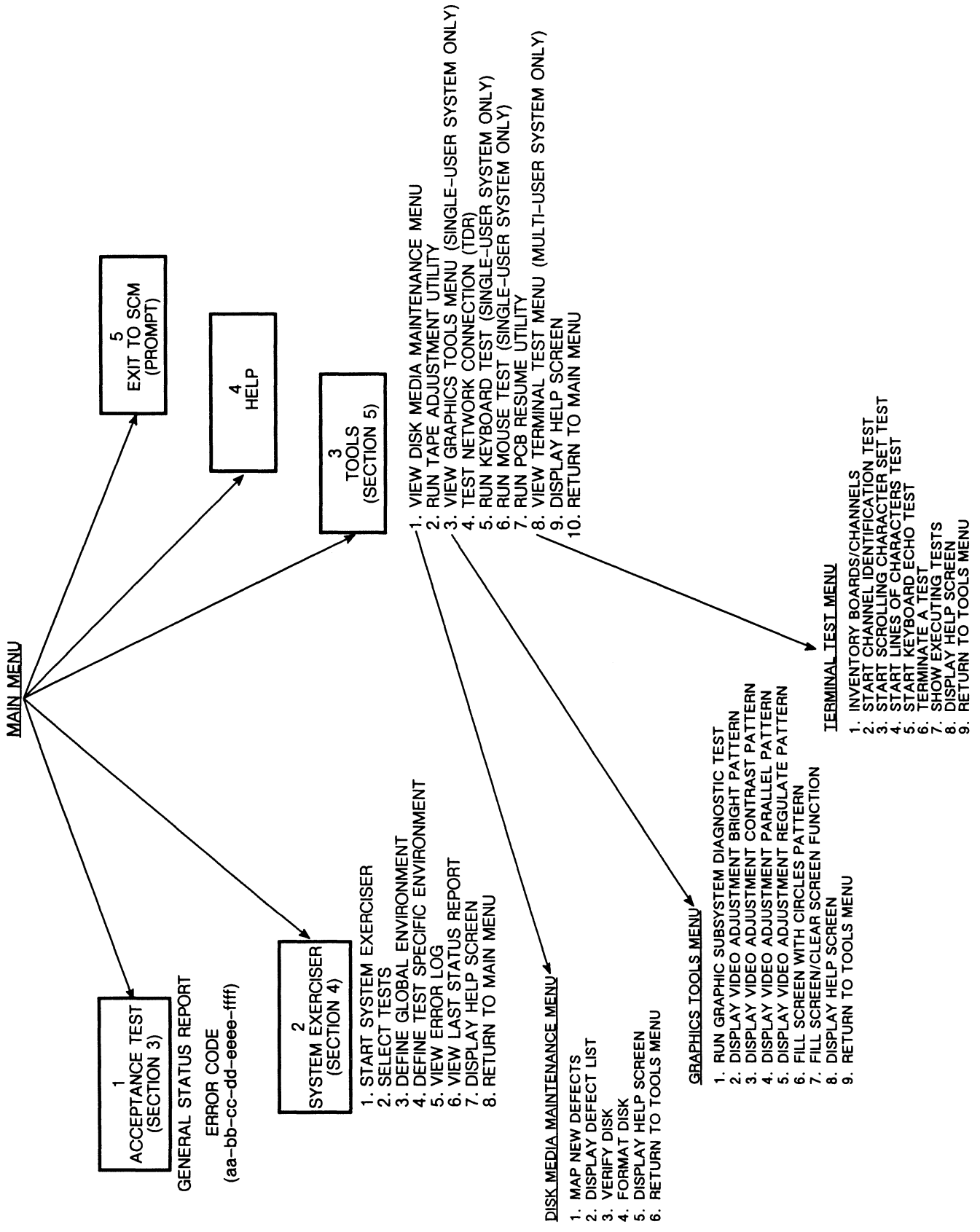


Figure 1-1. AViiON System Diagnostics Menu Structure

1.2 RELEASE NOTICE

If you have not already done so, read the AViiON System Diagnostics Release Notice (DG Part Number 085-001090) distributed with the media or located in the file /usr/release/diags.rn on a pre-loaded disk before continuing with this Guide. In case of conflict of information, the release notice takes precedence over this Guide.

1.3 RELATED DOCUMENTATION

Table 1-1 lists the documentation associated with the AViiON System Diagnostics.

Table 1-1. Related Documentation

DOCUMENT NAME	DG PART NUMBER
Installation, Repair and Maintenance Manual AViiON AV5100/AV5120 Computer Systems Models 70032, 70033, 70035, 70036	043-003722
Install, Repair and Maintenance Manual AViiON 300 Series Workstations Models 70000-70030	043-003723
Installation, Repair and Maintenance Manual AViiON AV6000 Computer Systems	043-003724
Using the AViiON System Control Monitor	014-001802

SECTION 2 INSTALLATION AND RESTART MENU

This section describes the system requirements and procedures necessary to install the AViiON System Diagnostics on the system. The diagnostics may already be installed on your disk drive. If not, they can be installed using a cartridge tape or they can be installed via a Local Area Network (LAN). This section also describes how to enter the Restart Menu and the selections available for use in the Restart Menu.

2.1 SYSTEM REQUIREMENTS

This section describes the devices required to install and run the AViiON System Diagnostics.

- Media Devices – One AViiON System Diagnostics cartridge tape (DG Part Number 079-000100) is required if you do not have the AViiON System Diagnostics loaded on your disk drive.
- Hardware Devices – There is no specific minimum hardware configuration but you must have the ability to load the AViiON System Diagnostics by cartridge tape or over a LAN if they are not already on a disk drive.

2.2 INSTALLATION

Complete this section to install the AViiON System Diagnostics.

1. Insert the AViiON system diagnostics cartridge tape (DG Part Number 079-000100) in the cartridge tape drive. Be sure to push the drive latch far to the right to engage the read/write heads. The tape drive is now on-line.
2. Turn on power to the tape drive, to your station's monitor, and to all other connected peripherals. Be sure all devices are on-line.
3. Power on the computer and wait for the System Control Monitor (SCM) prompt. If DG/UX is preinstalled, press Ctrl-C to return to the SCM prompt.
4. Boot the AViiON System Diagnostics. Be sure to type all commands using lower case letters.

To boot the diagnostics from the SCSI tape, type:

```
SCM>b st(0,4)
```

If you are booting from disk and you have a tape drive in your system configuration, make sure you have scratch media in your tape drive.

To boot the diagnostics from disk on a single-user system (for example, an AViiON 300) type:

```
SCM>b sd(insc(),0)usr:/stand/diags
```

To boot the diagnostics from disk on a multi-user system (for example, an AViiON 5000 or AViiON 6000) type:

```
SCM>b sd(cied(),0)usr:/stand/diags
```

To boot the diagnostics over a LAN on a single-user system (for example, an AViiON 300) type:

```
SCM>b inen()usr:/stand/diags
```

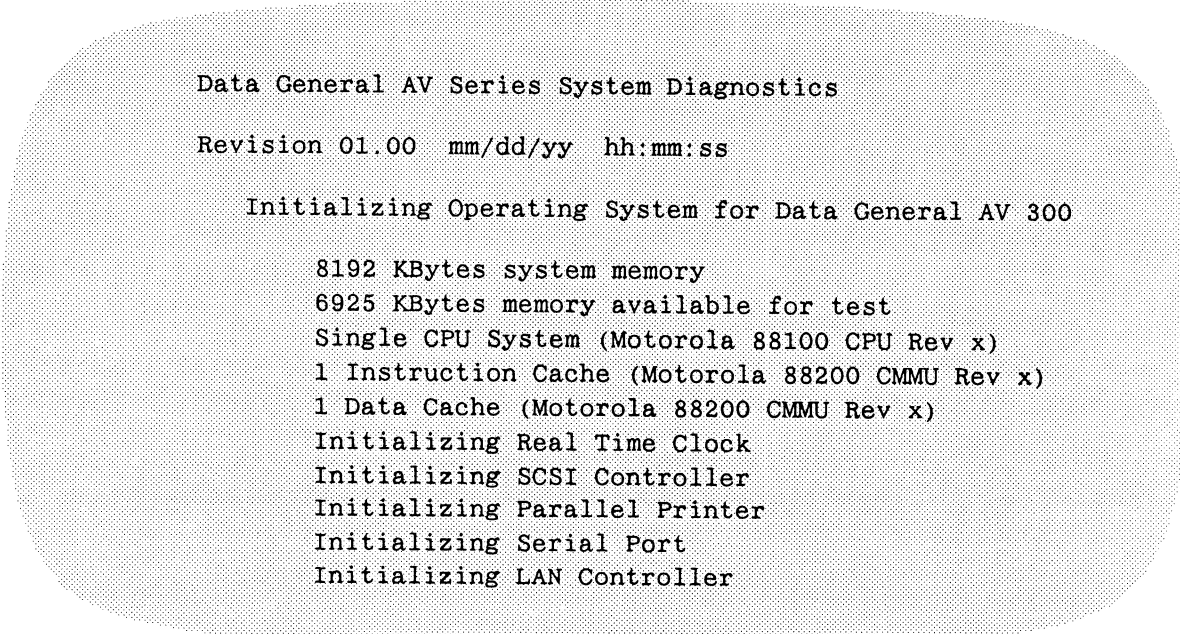
To boot the diagnostics over a LAN on a multi-user system (for example, an AViiON 5000 or AViiON 6000) type:

```
SCM>b hken()usr:/stand/diags
```

The system returns the boot path:

```
cied(ffffef00,0)usr:/stand/diags      (for a multi-user system) or  
sd(insc(),0)usr:/stand/diags         (for a single-user system).
```

5. Press New Line and the system displays a copyright legend. Press New Line again to start initializing the system using the AViiON System Diagnostics. The list of devices that appears on your screen is dependent upon your system and system configuration. Figure 2-1 shows a sample single-user AViiON 300 series station initializing screen.



```
Data General AV Series System Diagnostics  
Revision 01.00 mm/dd/yy hh:mm:ss  
  
  Initializing Operating System for Data General AV 300  
  
    8192 KBytes system memory  
    6925 KBytes memory available for test  
    Single CPU System (Motorola 88100 CPU Rev x)  
    1 Instruction Cache (Motorola 88200 CMMU Rev x)  
    1 Data Cache (Motorola 88200 CMMU Rev x)  
    Initializing Real Time Clock  
    Initializing SCSI Controller  
    Initializing Parallel Printer  
    Initializing Serial Port  
    Initializing LAN Controller
```

Figure 2-1. Initializing the System (AV 300 Series Station)

Figure 2-2 shows a sample multi-user AViiON 5000 series system initializing screen. The AViiON 6000 series system displays the same screen but lists the AV6000 Model number. This initialization also identifies device numbers. The first device listed under each controller is always device number 0, the second device listed under each controller is always device number 1, the third device listed under each controller is always device number 3, etc. For example, in Figure 2-2, ESDI controller address ffffef00 = device 0, ESDI controller address ffff100 = device 1; SCSI controller address ffff300 = device 0, SCSI address ffff500 = device 1. It is recommended that you note the controller device numbers before proceeding so that you can easily identify a device during testing.

Data General AV Series System Diagnostics

Revision 01.00 mm/dd/yy hh:mm:ss

Initializing Operating System for Data General AV 5000

Sizing Controllers on VME Bus:

Checking for ESDI Controllers at addresses:

ffffef00 (hex)	Found
fffff100 (hex)	Not found

Checking for SCSI Controllers at addresses:

fffff300 (hex)	Found
fffff500 (hex)	Not found

Checking for LAN Controllers at addresses:

55900000 (hex)	Found
55980000 (hex)	Not found

Checking for Synchronous I/O Controllers at addresses:

55b00000 (hex)	Found
55b10000 (hex)	Not found

Checking for Asynchronous I/O Controllers at addresses:

60000000 (hex)	Found
60020000 (hex)	Not found
60040000 (hex)	Not found
60060000 (hex)	Not found

Press New Line to Proceed

16384 KBytes system memory
15109 KBytes memory available for test
Motorola 88100 CPU Rev x
Motorola 88200 CMMU Rev x (Instruction Cache)
Motorola 88200 CMMU Rev x (Data Cache)
Initializing Virtual Console
Initializing Real Time Clock
Initializing Async I/O Controller 0
Initializing SCSI Controller 0
Initializing ESDI/SMD Controller 0
Initializing Parallel Printer
Initializing Serial Port
Initializing LAN Controller 0

Figure 2-2. Initializing the System (AV 5000 Series System Shown)

6. After the system is initialized, the system prompts you with the entries similar to the list in Figure 2-3. Complete each entry and press New Line.

```
Run with instruction caches on (y/n) [y]?
Enable Parity Checking for instructions (y/n) [y]?
Run with data caches on (y/n) [y]?
Enable Parity Checking for data (y/n) [y]?
```

Figure 2-3. Parity Checking/Cache Entries

7. To gain access to the FE mode of the Diagnostics (including the System Exerciser tests), when the entry

```
"Current time is hh:mm day,month dd,19yy. Is this correct (y/n) [y]?"
```

appears on the screen, press Ctrl-P. The screen displays:

```
"Enter password:"
```

Enter the current acceptable password and press New Line. The "Current time is hh:mm day,month dd,19yy. Is this correct (y/n) [y]?" entry appears on the screen again. Answer yes or no and press New Line to continue.

8. Next the system sizes all peripherals connected to the system. Check to make sure peripheral sizing information is accurate. If not, check to make sure all device jumpering is correct (refer to the appropriate documentation listed in Section 1.3 of this Guide). Restart the diagnostics.

If the message "Drive is NOT READY" appears on the screen, check to make sure there is scratch media in the tape drive and that the drive latch is pushed far to the right making the drive on-line.

When the peripheral sizing list matches your system configuration, press New Line to continue. Figure 2-4 shows a sample list.

```
Sizing peripherals ...

SCSI Controller:

UNIT 0: MICROP 1578-15 UPDG02 Disk Drive found
UNIT 4: ARCHIVE VIPER 150 21247-005 Tape drive found

Press New Line to Proceed
```

Figure 2-4. Sizing the Peripherals

NOTE

Press the ESC key at any time to exit a menu.

9. The AViiON System Diagnostics Main Menu (Figure 2-5) is displayed:

NOTE

If the System Exerciser selection is not listed on the Main Menu, you are not in the FE mode of the AViiON System Diagnostics. If you are not in the FE mode of the diagnostics, you may need to re-enter the correct password. Return to Step 4 to reboot the tape and complete the installation procedure again.

```
Data General AV 300 Series System Diagnostics
Revision: 01.00
```

```
Data General Corporation
Proprietary Use Only
```

Main Menu

1. Run acceptance test
2. View System Exerciser Menu
3. View Tools Menu
4. Display help screen
5. Exit to SCM

```
Enter choice [1]:
```

Figure 2-5. Main Menu

2.3 RESTART MENU

If you are in the FE mode of operation, you can access the Restart Menu any time after booting the AV System Diagnostics. Refer to Section 2.2 step 7 to gain access to the FE mode of operation. Do not enter the Restart Menu while running the System Exerciser test or when running individual graphics, mouse, or keyboard tests; a number of interrupt errors may result.

1. If you have a single-user system (for example, an AViiON 300 series station), press the CTRL-ALT-DELETE keys.

If the single-user system is operating as a server, press the CMD-BRK keys.

If you have a multi-user system (for example, an AViiON 5000 or AViiON 6000 series system), press the CMD-BRK keys.

2. The Restart Menu (Figure 2-6) is displayed.

C - Continue	P - Process Table Dump
D - Go to PROM Debugger	S - Semaphore Queue Dump
B - Restart Operating System	X - Stack Traceback
E - Toggle Print Messages	L - Display Error Log

Which Action ?

Figure 2-6. Restart Menu

The following briefly describes the Restart Menu entries.

- Continue - Select C to return to the activity being performed before you entered the Restart Menu.
- Go to PROM Debugger - Select D to return to the SCM prompt to access activities such as XDIAG or Environment Control Word.
- Restart Operating System - Select B to return to the system initialization (Figures 2-1 and 2-2).
- Toggle Print Messages - Select E to get printouts of the Restart Menu and SCM prompt activities.
- Process Table Dump - Selection P is for developmental purposes.
- Semaphore Queue Dump - Selection S is for developmental purposes.
- Stack Traceback - Selection X is for developmental purposes.
- Display Report Log - Select L to get the first ten error reports and the last Status Report found when running AViiON System Diagnostics.

SECTION 3

MENU STRUCTURE – ACCEPTANCE TEST

This section describes the Acceptance Test selection in the AViiON System Diagnostics. The Acceptance Test is mainly for customer use but can also be used by the field engineer. Use this test to verify proper operation of the system after installation or to verify proper operation of a FRU replacement. This tests all devices found in the system and displays general status reports every minute. Only the cartridge tape test is destructive.

Select 1 on the Main Menu (Figure 3-1) to start the Acceptance Test.

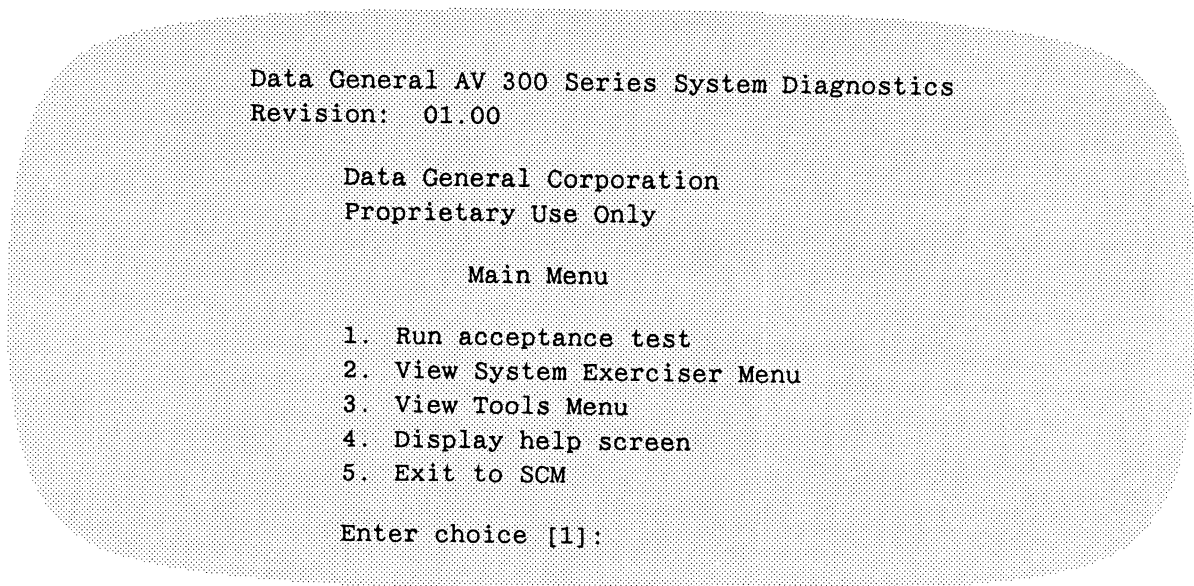


Figure 3-1. Main Menu

Figure 3-2 shows a sample acceptance test screen for a single-user AViiON 300 series station; Figure 3-3 shows a sample for multi-user AViiON 5000 or AViiON 6000 series system. The list of devices will depend on your system and system configuration.

CAUTION

Be sure to insert a SCRATCH cartridge tape in the tape drive before running the acceptance test. The tape test will destroy any existing information on the tape.

The Acceptance Test verifies that the following system components are functioning:

- Memory
- CPU
- DUART Channel A
- Mouse Interface
- Clock
- LAN Controller
- Parallel Printer
- MICROP 1578-15 Disk (Unit: 0)
- ARCHIVE VIPER 150 Tape (Unit: 4)

This test runs for 15 minutes.

Press NEW LINE to Start Acceptance Test - Press Q to Quit

Parallel printer not found. TEST WILL BE DESELECTED.

CAUTION : Tape tests destroy all data on the tape.
Please insert write-enabled scratch tapes for all tape units to be tested.
Press NEW LINE when ready to proceed.

Figure 3-2. Acceptance Test (AViiON 300 Series Station)

The Acceptance Test verifies that the following system components are functioning:

Memory
CPU
DUART Channel B
Clock
LAN Controller 0
Parallel Printer
322MB ESDI Disk (Unit: 0)
322MB ESDI Disk (Unit: 1)
MICROP 1370 Disk (Unit: 0)
ARCHIVE VIPER 150 Tape (Unit: 4)
16-line Async Controller 0

This test runs for 15 minutes.

Press New Line to Start Acceptance Test - Press Q to Quit

CAUTION : Tape tests destroy all data on the tape.
Please insert write-enabled scratch tapes for all tape units to be tested.
Press New Line when ready to proceed.

Figure 3-3. Acceptance Test (AViiON 5000/6000 Series System)

The acceptance test runs for 15 minutes. A General Status Report similar to the one in Figure 3-4 appears on the screen. The error and pass counts entries are updated for each report once every minute or whenever you press the S key. The screen subsystem descriptions are dependent on the system configuration. Use Ctrl-D at any time to stop the acceptance test and receive a final general status report before returning to the Main Menu.

General Status Report

```
Revision: 01.00
Elapsed Time: 00:00:00
TEST SUBSYSTEM PASS SOFT HARD KBYTES KBYTES
ID DESCRIPTION COUNT ERRORS ERRORS READ WRITTEN
43 Memory 1662 0 0 4073 4073
42 CPU 2398 0 0 0 0
41 DUART Channel B 56 0 0 13 13
40 Clock 0 0 0 0 0
39 LAN Controller 0 1265 0 0 24 24
38 ESDI Controller 0 240 0 0 5172 0
36 16-line Async Controller 0 3 0 3 0 0

S - Update General Status Report Ctrl-D to Stop all Tests
```

Figure 3-4. General Status Report

After 15 minutes, the test is complete. If the Acceptance Test passed, the General Status Report Total Hard Errors entry lists 0000 errors and asterisks (*) replace all numbers previously listed in the Test ID column.

If there is a hard failure at any time during the Acceptance Test, an error message in the following form appears on the screen:

aa-bb-cc-dd-eeee-ffff

where aa = processor type
bb = FRU code
cc = test type
dd = controller
eeee = target identification number
ffff = AViiON system diagnostics error code

For interpretation of this error message, contact the Customer Support Center in Atlanta at 1-800-DGHELPS.

SECTION 4

MENU STRUCTURE – SYSTEM EXERCISER

This section describes the System Exerciser selection in the AViiON System Diagnostics. The System Exerciser allows you to run an overall system exerciser program or run individual tests on specific devices. You can determine the test specifications to be used for any selected test. The global environment setup allows you to select test specifications for the system exerciser test while the specific environment setup allows you to determine test specifications for individual tests. Depending upon the test being run, you can access up to three levels of status reports (general, detailed, and level 2). This selection also allows you to view the first ten errors found while running a test.

Section 4.1 describes the Start System Exerciser selection (this section includes error reports with failing FRU lists) on the System Exerciser Menu.

Section 4.2 describes the Select tests on the System Exerciser Menu.

Section 4.3 describes the Define Global Environment selection on the System Exerciser Menu.

Section 4.4 describes the Define Test Specific Environment selection on the System Exerciser Menu.

Section 4.5 describes the View Error Log selection on the System Exerciser Menu.

Section 4.6 describes the View Last Status Report selection on the System Exerciser Menu.

Section 4.7 describes the Display Help Screen selection on the System Exerciser Menu.

Section 4.8 describes the Return To Main Menu selection on the System Exerciser Menu.

Select 2 on the Main Menu (Figure 4-1) to go to the System Exerciser Menu.

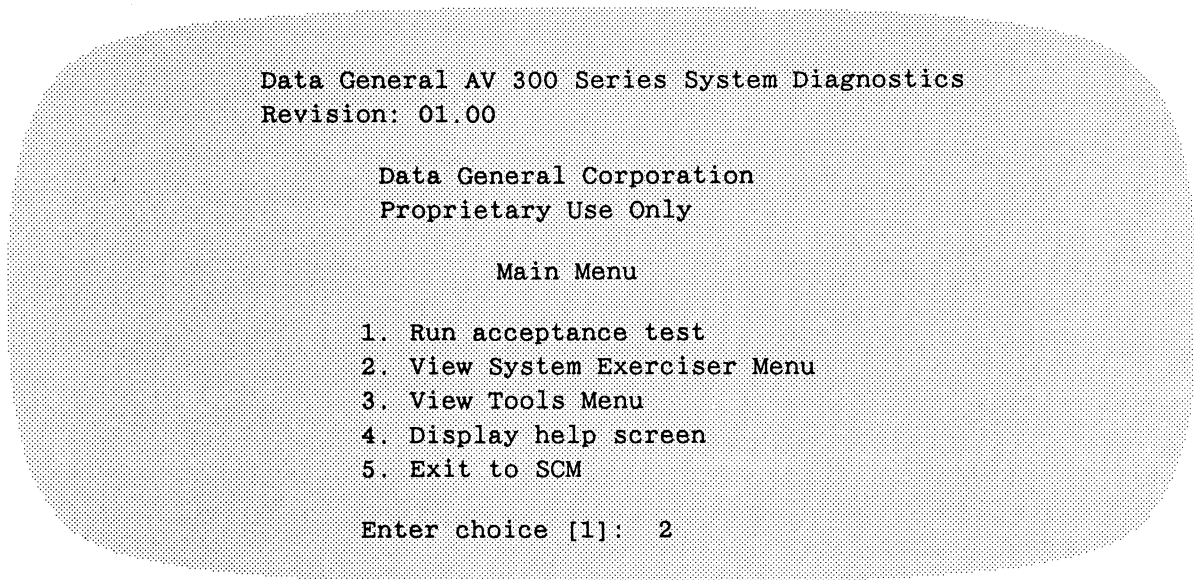


Figure 4-1. Main Menu

The System Exerciser Menu shown in Figure 4-2 appears on the screen.

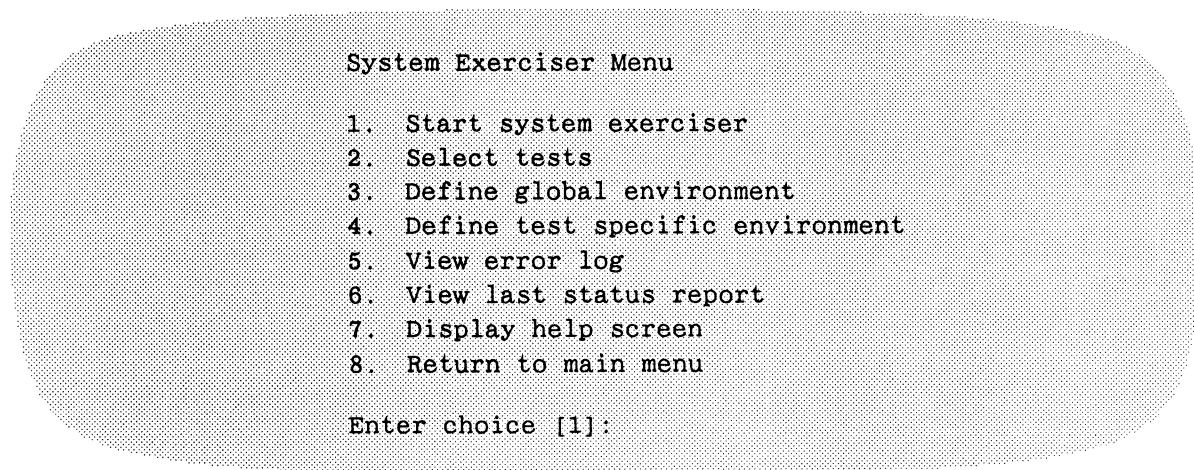


Figure 4-2. System Exerciser Menu

4.1 START SYSTEM EXERCISER

This selection executes the System Exerciser test. The currently selected tests are run using the current specifications selected in the global environment setup and the test specific environment setup. If you do not want to change the default specifications, select 1 (Start system exerciser) and a General Status Report appears on the screen. This report lists all devices being tested and the status of each test. Figure 4-3 shows a sample single user AViiON 300 series station General Status Report.

General Status Report

```
Revision: 00.00                      Total Hard Errors: 0000
Lapsed Time: 00:00:00                Current Time: 00:00:00
TEST  SUBSYSTEM      PASS  SOFT   HARD  KBYTES  KBYTES
ID    DESCRIPTION   COUNT ERRORS ERRORS READ  WRITTEN
3     Memory         0     0     0     0       0
2     CPU            0     0     0     0       0
1     Mouse Interface 0     0     0     0       0
0     Clock         0     0     0     0       0
9     LAN Controller 0     0     0     0       0
7     SCSI Controller 0     0     0     0       0

S - Update General Status Report  Ctrl-D to Stop all Tests
B - Block a Test                  U - Unblock a Test
E - Error Report Toggle (ON)      1 - Detailed Status Report
M - Error and Status Log Menu
```

Figure 4-3. General Status Report (AViiON 300 Series Station)

The following briefly describes the control keys listed in the General Status Report:

- S - Update General Status Report - This selection refreshes the screen and displays an updated General Status Report giving pass count and number of errors found.
- B - Block a Test - This selection prevents a subsystem test from being run during the system exerciser test.

CAUTION

Blocking a LAN test may cause LAN errors.

The letter "B" appears after the Test ID entry number on the screen if a test is blocked. If you select a Test ID number not listed in the Test ID column, an "Invalid Test ID - Try Again" message appears on the screen and you are reprompted for the Test ID. If, after you select "B" and the Test ID prompt appears, you decide you do not want to block a test, enter New Line at the Test ID prompt and you are returned to the General Status Report screen.

- E - Error Report Toggle (ON) - If the error report is toggled to the ON position and an error is found, an error report is displayed on the screen when found by the system exerciser. If the error report is toggled to the OFF position and an error is found, the error is reported on the General Status Report screen in the Soft or Hard Errors column but no error report is displayed on the screen and the error is not placed in the error log.
- M - Error and Status Log Menu - This selection allows you to go directly to the Error and Status Log Menu (Figure 4-4).

```

Error and Status Log Menu

1  View Error Log
2  Clear Error Log
3  View Status Report
4  Return to System Exerciser

Enter choice [1]:

```

Figure 4-4. Error and Status Log Menu

The following briefly describes the Error Log Menu selections.

- View Error Log – Select 1 on the Error Log Menu to get the first ten error reports logged after the System Exerciser is executed.
- Clear Error Log – Select 2 on the Error Log Menu if you want to clear or delete all the errors found while running the System Exerciser.
- View Status Report – Select 3 on the Error Log Menu to return to the last General Status Report issued before you entered the Error Log Menu.
- Return to System Exerciser – Select 4 on the Error Log Menu to return to the System Exerciser test. A current General Status Report is displayed that includes new pass counts and errors found while you were accessing the Error Log Menu.

U – Unblock a Test – This selection allows you to unblock a test so that it will be run during the system exerciser test.

1 – Detailed Status Report – This selection gives a detailed report of a subsystem reporting errors in the General Status Report. Included in the report are the pass and error counts. Figure 4-5 shows a sample ESDI controller report.

2 – Level 2 Status Report – This selection may be available on the Detailed Status Report screen depending on the subsystem being tested. This report gives you further error information such as the target and current test and error descriptions. Figure 4-6 shows a sample ESDI controller report.

```

Detailed Status Report
ESDI Controller Status Report Test ID: 7

SUBTEST  UNIT  SUBTEST          PASS  ERRORS  KBYTES
ID       NO   DESCRIPTION      COUNT  SOFT  HARD  READ  WRITTEN
25       0   380MB ESDI Disk  961    0     0   19552    0

S – Update General Status Report      Ctrl-D to Stop all Tests
B – Block a Test                       U – Unblock a Test
E – Error Report Toggle (ON)          2 – Level 2 Status Report
1 – Detailed Status Report             M – Error and Status Log Menu

```

Figure 4-5. Detailed Status Report (ESDI Controller Shown)

Level 2 Status Report

Controller: ESDI Controller 0 (Test ID:7)
Target: 322MB ESDI Disk Unit 0 (Subtest ID: 25)
Current Test: RANDOM Data Pattern: Not Applicable (Non-Destructive)

ERROR DESCRIPTION	COUNT
Data Compare Error	0
Memory Corruption Error	0

S - Update General Status Report	Ctrl-D to Stop all Tests
E - Error Report Toggle (ON)	1 - Detailed Status Report
M - Error and Status Log Menu	

Figure 4-6. Level 2 Status Report (ESDI Controller Shown)

If you want to change any of the default specifications currently in use, refer to Section 4.2 for test selection information, Section 4.3 for system exerciser test default information, or Section 4.4 for individual test default information.

The default test time for the system exerciser is infinity. Refer to Section 4.3 to change this time default. It is recommended that the system exerciser be run for a minimum of 15 minutes after an installation to verify proper operation of the system. Press Ctrl-D at any time to stop the System Exerciser test.

If the System Exerciser completes successfully, the General Status Report Total Hard Errors entry lists 0000 errors and asterisks (*) replace all numbers previously listed in the Test ID column.

If there is a failure, an error report describing the failing FRU is displayed. Figure 4-7 shows a sample AViiON 300 series station error report if the ESDI controller test should fail.

```

*****
* Disk Test                               Diag Rev:      00.00   *
* Rimfire ESDI                           Current Time: 00:00:00 *
* 322MB ESDI Disk   Unit 0                Elapsed Time: 00:00:00 *
* Data Compare Error                       Error Count:   1       *
* Hard Error                               Pass Count:   0       *
* Failing FRU: (1) Controller (2) System Board (3) Drive Cable *
*****

Disk Starting Address (Block Number):  0 (hex)
Disk Error Address (Block Number):     0 (hex)
Blocks to Transfer:                    100
Blocks Transferred:                    100

Data Buffer Start Address:               159144 (hex)
Data Buffer Offset (bytes):              0 (hex)

Expected Data Pattern: ----- 00000001 00000002 00000003 00000004
Received Data Pattern: ----- 2638783e 2638783e 2638783e 2638783e

Total Words Miscompared:  12800

Test:  RANDOM  Data Pattern:USR
Mode:  Non-Destructive, scatter/gather, no optimization

```

Figure 4-7. Error Report (ESDI Disk Shown)

4.2 SELECT TESTS

This selection allows you to select specific tests to be executed. The list of devices will depend on your system and system configuration. Select 2 (Select tests) on the System Exerciser Menu and a Test Selection screen similar to the one in Figure 4-8 is displayed. The current value (selected or deleted) is displayed in brackets next to each component.

Test Selection

Enter S to Select, D to Delete, New Line to Retain Current Value

Memory [Selected]:	Selected
CPU [Selected]:	Selected
DUART Channel A [Selected]:	Selected
Mouse Interface [Selected]:	Deleted
Clock [Selected]:	Selected
LAN Controller [Selected]:	Selected
Parallel Printer [Selected]:	Deleted
SCSI Controller	
MICROP 1578-15 Disk (Unit: 0) [Selected]:	Selected
MICROP 1578-15 Disk (Unit: 1) [Selected]:	Selected
ARCHIVE VIPER 150 Tape (Unit: 4) [Selected]:	Selected
ARCHIVE VIPER 150 Tape (Unit: 6) [Selected]:	Selected

Press New Line to return to the previous menu.

Figure 4-8. Test Selection Menu (AViiON 300 Series Station)

Select the test(s) you want to run and press New Line to return to the System Exerciser Menu. The tests you selected to run should appear on the next General Status Report when starting the system exerciser.

4.3 DEFINE GLOBAL ENVIRONMENT

This selection allows the user to specify the global environment to be used when running the System Exerciser test. Included in this setup are length of time to run the system exerciser, time interval for displaying status reports, and selecting output to a printer. Select 3 (Define global environment) on the System Exerciser Menu and a Global Environment Setup screen similar to the one in Figure 4-9 is displayed.

Global Environment Setup

Type in new value or press New Line to retain the current value which is displayed in brackets

Interval Between Status Reports (minutes) [15]:

Multiple Page Error and Status Report Handling

(1-Prompt for New Line 2-Delay Between Pages) [2]:

Time Delay Between Pages for Multiple Page Reports (seconds) [5]:

Error Reports to Printer (Y or N) [N]:

Status Reports to Printer (Y or N) [N]:

Time to Run Exerciser (minutes(0=infinity)) [0]:

Error Handling (1-Continue 2-Prompt for New Line 3-Halt System) [1]:

Error Type to Log (0-Soft Errors 1-Hard Errors 2-Soft and Hard Errors) [2]:

Figure 4-9. Global Environment Setup

The following describes the Global Environment Setup entries:

- Interval Between Status Reports – A General Status Report is displayed every 15 minutes (default) while the System Exerciser is running unless this default is changed. Enter the number of minutes between General Status Report screens and press New Line.
- Multiple Page Error and Status Report Handling – This entry refers to how the System Exerciser displays error reports or status reports requiring more than a one page screen display.

CAUTION

Selecting Option 1 (Prompt for New Line) between multiple pages can cause timeout errors in the exerciser since portions of the exerciser are halted until you enter New Line. The number of timeout errors increases with the length of time that passes before New Line is pressed.

Option 1 (Prompt for New Line) causes the exerciser to display the first page and then prompt the user for a New Line before displaying the next page; the user has to enter New Line between each page to proceed. Option 2 (Delay Between Pages) causes the exerciser to display a page and delay a specified number of seconds before displaying the next page. Very few tests require more than one page to display an error or status report. The CPU test uses multiple page error reports and the LAN test uses multiple page level 1 status reporting when running multi-node tests. Complete the entry and press New Line.

- Time Delay Between Pages for Multiple Page Reports – This entry specifies the number of seconds the exerciser waits between page displays of error or status reports with more than one screenful of information. Complete the entry and press New Line.
- Error Reports to Printer and Status Reports to Printer – These entries determine whether or not error and status reports are printed out in hard copy. The default is No. Complete the entry and press New Line.
- Time to Run Exerciser – This entry determines how long the System Exerciser will run. The default of 0 = infinity. Enter the number of minutes to run the exerciser test and press New Line.
- Error Handling – This entry determines how an error will be reported on the screen. The default is 1 (Continue) which allows the errors to be reported with no time delays. Selection 2 (Prompt for New Line) allows the error report to be displayed but you must press New Line to proceed with the exerciser. Selection 3 (Halt System) is mainly used for engineering purposes.
- Error Type to Log – This entry determines whether a soft error, hard error, or both soft and hard errors will be logged. The default is 2 (Soft and Hard Errors). Complete the entry and press New Line.

4.4 DEFINE TEST SPECIFIC ENVIRONMENT

This selection allows you to customize specifications (or turn prompting on) for individual tests. When prompting is on for a test, you can select the test setup for that test. The tests and test prompts will depend on your system and system configuration. Setup prompts can include test runtimes, test patterns, and nondestructive/destructive test modes. Select 4 (Define test specific environment) on the System Exerciser Menu and a Test Prompting screen similar to the one in Figure 4-10 is displayed. The current value (prompt or no prompt) is displayed in brackets next to each component.

Test Prompting

Enter P for Prompting On, N for No Prompt, New Line to retain Current Value

Memory [NO PROMPT]:	PROMPT
CPU [NO PROMPT]:	PROMPT
DUART Channel A [NO PROMPT]:	PROMPT
Mouse Interface [NO PROMPT]:	PROMPT
Clock [NO PROMPT]:	PROMPT
LAN Controller [No PROMPT]:	PROMPT
Parallel Printer [NO PROMPT]:	NO PROMPT
SCSI Controller	
MICROP 1578-15 Disk (Unit: 0) [NO PROMPT]	PROMPT
MICROP 1578-15 Disk (Unit: 1) [NO PROMPT]	PROMPT
ARCHIVE VIPER 150 Tape (Unit: 4) [NO PROMPT]	PROMPT
ARCHIVE VIPER 150 Tape (Unit: 6) [NO PROMPT]	PROMPT

Press New Line to return to the previous menu

Figure 4-10. Test Prompting Screen (AViiON 300 Series Station)

If you choose NO PROMPT, the system exerciser will run the test using default specifications. You are returned to the System Exerciser Menu.

If you choose PROMPT, you will be prompted for test specific runtime parameters such as test pattern, destructive mode, etc., when you begin the system exerciser test.

4.4.1 Memory

The memory test consists of two subtests: random and retention. The random test randomly writes and reads data patterns to and from random buffers. This information is compared back to the original data pattern to detect data compare errors. The retention test verifies the capability of memory to retain data. The retention test writes a pattern to memory then reads the pattern back after a randomly selected time period. The expected pattern and the received patterns are compared for accuracy. If memory prompting is turned on, the following questions appear on the screen:

```
Initialization for Memory Test
Use random test pattern in Memory Test? (Y or N) [Y]:
Are all Entries Correct (Y or N) [Y]:
```

The default test pattern is random. Complete the entries and proceed to the next screen.

4.4.2 CPU

The Central Processing Unit (CPU) test verifies proper operation of the Motorola 88100 CPU chip and proper timing of the CPU to the system through a sequence of subtests. There is no prompting for the CPU.

4.4.3 DUART Channel A/B

This tests for proper operation of the asynchronous controller ports on the system board. Random data will be transmitted, received, and data compared. All combinations of baud rates, stop bits, data bits, and parity will be tested. If DUART Channel A (or B) prompting is turned on, questions similar to the following are displayed:

```
Initialization for DUART Channel B Test
Enter loopback mode (1=Internal Loopback; 2=External Loopback) [1]: 1
Are all entries correct (Y/N) [Y]:
```

The internal loopback mode is the default. If you choose the external loopback mode, be sure to install an external loopback plug before testing begins. Complete the entries and proceed to the next screen.

4.4.4 Clock

This test compares the time of boot clock located in PROM with the current time of day clock. A soft error is reported if there is more than a ten percent difference between the two values. The fifth consecutive soft error is reported as a hard error. Soft errors may indicate that the battery needs to be replaced. There is no prompting for the Clock test.

4.4.5 LAN Controller

This test verifies proper operation of the LAN controller board (multi-user system) or the LAN controller IC on the system board (single-user system). If LAN controller prompting is turned on, the following message appears on the screen:

```
Initialization for LAN Controller Test

** WARNING:  Running External Loopback on a busy network is not
              suggested.  Results are unpredictable.**

Test Mode (1-Internal Loopback 2-External Loopback 3-Node to Node) [1]:

Are all entries correct (Y or N) [Y]:
```

The default mode is selection 1-Internal Loopback. If you choose selection 2 - External Loopback, packets are looped back through the transceiver testing the transmit and receive circuitry. You must install an external loopback plug if you are not connected to a network before you start this test. If you choose selection 3 - Node-to-Node, test packets are transmitted to other nodes on the network. This mode tests connectivity to other LAN nodes which support test packets that conform to IEEE 802.2 protocol. (A system that is running DG/UX (tcpip) will not respond to IEEE 802.2 protocol.) There is also a slave mode option for the Node-to-Node test. Slave mode only responds to packets initiated by other LAN nodes; it does not transmit any test or broadcast packets. Complete the entries and proceed to the next screen.

4.4.6 ESDI Controller

This tests the Enhanced Small Disk Interface (ESDI) controller board and any internal disk drives connected to the controller. The default test for the ESDI controller is the Random test. All tests except the seek test can run in either a destructive or non-destructive mode. The following lists possible test definitions:

- Random (default) - This destructive test randomly writes and reads the disk drive. Data is compared after each read operation.
- Odd/Even - This selection is used mainly for developmental purposes. This test writes a data pattern on every odd cylinder, then writes a data pattern on every even cylinder, then compares the two data patterns for accuracy.
- Seek - This selection is used mainly for developmental purposes. The test performs 4000 seek operations to random locations on the drive for each test pass. A read operation is issued after each seek operation. It then calculates the average disk seek time.
- Sequential/Random - This selection performs two sequential passes and three random passes on the disk per test pass.
- Sequential - This test sequentially writes and reads the disk beginning at the first sector of the disk to be tested.

If ESDI controller prompting is turned on, questions similar to the following appear on the screen (the default Random test is used):

Initialization for Rimfire ESDI Controller Test

Initializing Unit 0: 322MB ESDI Disk

Test Definitions...

ODD/EVEN - Odd and even cylinder test
RANDOM - Random test (address and transfer size)
SEEK - Random seek test
SEQ/RAN - 2 sequential passes and 3 random passes
SEQUENTIAL - Sequentially write and read disk

Test (ODD/EVEN, RANDOM, SEEK, SEQ/RAN, SEQUENTIAL) [RANDOM]:

Destructive testing (NO, YES) [NO]: y

WARNING - You have selected a DESTRUCTIVE test. This test will destroy data on the disk.

Are you sure you want to do this (NO, YES) [NO]: yes

Data Pattern Definitions...

ADR - Data equals disk block test
ALO - All bits are one
ALT - Alternating bits of ones and zeroes
ALZ - All bits are zero
BAD - Byte address data (byte 0 = 0, byte 1 = 1...)
MEM - Data equals memory address
RAN - 32-bit random data
ROT - Rotating F8743210 data (1 bit shift left per phase)
USR - User defined data (up to 8 32-bit words)

Data pattern (ADR, ALO, ALT, ALZ, BAD, MEM, RAN, ROT, USR) [RAN]: alo

Max sectors per transfer (1 - 200) [50]:

Minimum disk address for testing in hex (1 - 9c5f3) [1]:

Maximum disk address for testing in hex (1 - 9c5f3) [9c5f3]:

Max disk operations in progress (1 - 128) [8]:

Invoke read after write (NO, YES) [YES]: no

Do scatter/gather operations (NO, YES) [YES]:

Error type to loop (ALL, DATA CMP, HARD, MEM CORRUPT, NONE, SOFT) [NONE]:

How many times should an operation be retried (0 - 11) [1]:

Are all entries correct (NO, YES) [YES]:

If you answer “yes” to the Destructive testing entry, then 1 is the minimum disk address that can be used for testing. If you answer “no” to the Destructive testing entry, then 0 is the minimum disk address that can be used for testing.

Complete the entries and proceed to the next screen.

4.4.7 SCSI Controller

This tests the Small Computer Systems Interface (SCSI) controller board and any external disk or tape drives connected to the controller. All tape drive tests are destructive. The default test for the 150 MB tape drive on the SCSI controller is Sequential 3 (SEQ3). The following lists possible test definitions (note that these tests are listed in order of longest completion time to shortest completion time):

- Positioning – This test performs with minimum data transfer and maximum positioning activity. This test takes the longest period of time to complete one pass and is not suitable for field use.
- Random 2 – This test performs a random test with full readback. This test takes a long period of time to complete so may not be suitable for field use.
- Random 1 – This test performs a random test with partial readback. This test takes a long period of time to complete so may not be suitable for field use.
- Sequential 1 – This test writes ten files of random size, then reads back the tenth file, then reads back the other nine files in sequential order. It repeats this pattern until end of tape or termination by the user. This is the longest of all the sequential tests.
- Sequential 3 (default) – This test randomly writes ten files, then reads the ten files back and compares the data. It then writes the remainder of the tape as one file, reads it back and compares the data. This test takes less time than the sequential 1 test (approximately 20 minutes for a 40 MB tape drive) to complete.
- Sequential 2 – This media performance test is the default for the customer mode Acceptance test. This test writes the entire tape as one file then reads back the file. This sequential test requires the least amount of time to complete.

If SCSI controller prompting is turned on, questions similar to the following appear on the screen (the default SEQ3 is used):

Initialization for Rimfire SCSI Controller Test

CAUTION: Tape tests destroy all data on the tape.
Please insert write-enabled scratch media for all tape units to be tested.
Press New Line when ready to proceed.

Initializing Unit 4: ARCHIVE VIPER 150 Tape

Test Definitions...

POSITIONING - Positioning with minimum data transfer
RAN1 - Random test with partial readback
RAN2 - Random test with full readback
SEQ1 - Write/Read multiple files
SEQ2 - Write/Read single file (no positioning)
SEQ3 - Write/Read multiple files (23%positioning activity)

Test (POSITIONING, RAN1, RAN2, SEQ1, SEQ2, SEQ3) [SEQ3]:

Data Pattern Definitions...

ADR - 32-bit device address data
ALO - All bits are one
ALT - Alternating bits of ones and zeroes
ALZ - All bits are zero
BAD - Byte address data (byte 0 = 0, byte 1 = 1...)
RAN - 32-bit random data
ROT - Rotating F8743210 data (1 bit shift left per pass)
USR - User defined data (up to 8 32-bit words)

Data pattern (ADR, ALO, ALT, ALZ, BAD, RAN, ROT, USR) [RAN]: alo

Drive in buffered mode (NO, YES) [YES]:

Transfer size (in records) (1 - 200) [128]:

Error to loop (DATA COMPARE, MEMORY CORRUPT, NONE) [NONE]:

Are all entries correct (NO, YES) [YES]:

Complete the entries and proceed to the next screen. If, based on your selections, a user notice appears on your screen, type the letter S to exit the notice and display a General Status Report.

4.4.8 16-Line Async Controller or Host Adapter

This tests the asynchronous controller for multi-user systems (for example, the AViiON 5000 or AViiON 6000 series system). For internal loopback test information, refer to the appropriate vendor documentation. For external loopback testing, random data will be transmitted, received, and data compared. All combinations of baud rates, stop bits, data bits, and parity will be tested. If 16-line async controller or host adapter prompting is turned on, questions similar to the following are displayed:

```
Initialization for 16-line Async Controller Test

Enter loopback mode (1=Internal Loopback; 2=External Loopback) [1]: 2

Are all entries correct (Y/N) [Y];

Please install external loopback connectors now
Press <Enter> when ready to proceed

Checking ports for loopback connections
```

The internal loopback mode is the default. If you choose the external loopback mode, be sure to install external loopback plugs on the lines you wish to test when prompted. It is possible to loopback one port to another or one port to itself. Complete the entries and proceed to the next screen.

4.4.9 Mouse Interface

This tests for proper operation of the mouse port. Random data will be transmitted, received, and data compared. All combinations of baud rates, stop bits, data bits, and parity will be tested.

4.4.10 Printer

This test checks the PROM configuration to determine the type of parallel printer interface to use. If Printer prompting is on, questions such as how often to run the printer test, number of lines and columns per printer pass, whether to formfeed or single line between each printer pass, and what character to print when testing are listed.

4.5 VIEW ERROR LOG

This selection allows you to view the first ten errors logged after the System Exerciser is executed. Select 5 (View error log) on the System Exerciser Menu and first error report is displayed. Press New Line to proceed through all error reports. Press ESC to exit and return to the System Exerciser Menu.

4.6 VIEW LAST STATUS REPORT

This selection allows you to view the last General Status Report logged during the last System Exerciser session. Press New Line to return to the System Exerciser Menu.

4.7 DISPLAY HELP SCREEN

Select 7 (Display help screen) on the System Exerciser Menu to get a brief description of all System Exerciser Menu selections.

4.8 RETURN TO MAIN MENU

Select 8 (Return to main menu) on the System Exerciser Menu to return to the Main Menu.

SECTION 5 MENU STRUCTURE – TOOLS

This section describes the Tools selection in the AViiON System Diagnostics. Tools allows you to run disk media maintenance functions such as formatting disks, a tape tension adjustment utility, a network connection test, and a PCB resume utility. Tools for a single-user system also include graphics tests, and keyboard and mouse tests. An additional terminal test menu is available for a multi-user system. A Help selection gives a brief description of the Tools Menu selections.

- Section 5.1 describes the View Disk Media Maintenance Menu selection on the Tools Menu.
- Section 5.2 describes the Run tape adjustment utility selection on the Tools Menu.
- Section 5.3 describes the View Graphics Tools Menu selection on the Tools Menu for a single-user system (for example, an AViiON 300).
- Section 5.4 describes the Test network connections (TDR) selection on the Tools Menu.
- Section 5.5 describes the Run keyboard test selection on the Tools Menu for a single-user system (for example, an AViiON 300).
- Section 5.6 describes the Run mouse test selection on the Tools Menu for a single-user system (for example, an AViiON 300).
- Section 5.7 describes the Run PCB Resume Utility on the Tools Menu.
- Section 5.8 describes the View Terminal Test Menu on the Tools Menu for a multi-user system (for example, an AViiON 5000/6000).
- Section 5.9 describes the Display help screen selection on the Tools Menu.
- Section 5.10 describes the Return to main menu on the Tools Menu.

Select 3 on the Main Menu (Figure 5-1) to enter the Tools Menu (Figure 5-2 shows a sample single-user AViiON 300 menu, Figure 5-3 shows a sample multi-user AViiON 5000 menu).

```
Data General AV 300 Series System Diagnostics
Revision: 01.00
```

```
Data General Corporation
Proprietary Use Only
```

Main Menu

1. Run acceptance test
2. View System Exerciser Menu
3. View Tools Menu
4. Display help screen
5. Exit to SCM

```
Enter choice [1]: 3
```

Figure 5-1. Main Menu

Tools Menu

1. View Disk Media Maintenance Menu
2. Run tape adjustment utility
3. View Graphics Tools Menu
4. Test network connection (TDR)
5. Run keyboard test
6. Run mouse test
7. Run PCB Resume Utility
8. Display help screen
9. Return to main menu

```
Enter Choice [9]: 1
```

Figure 5-2. Tools Menu (AViiON 300 Shown)

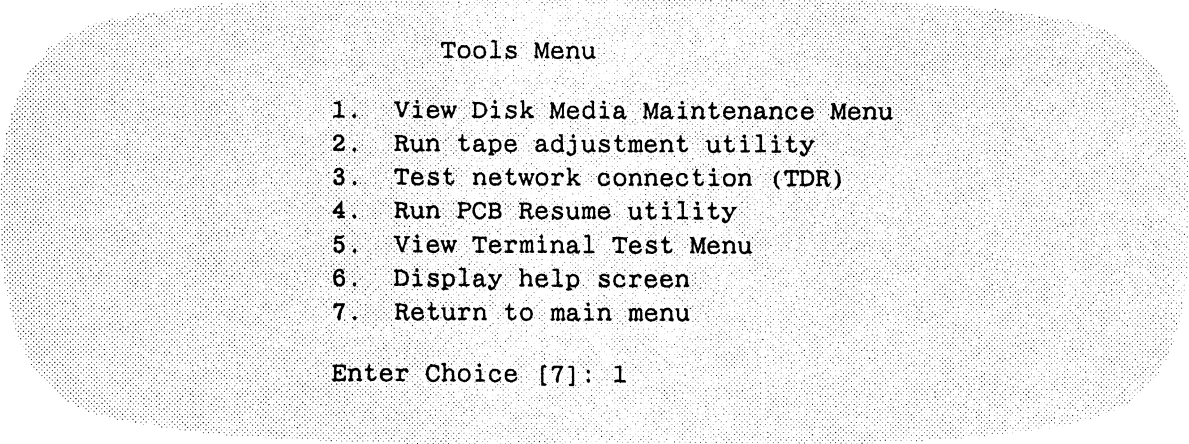


Figure 5-3. Tools Menu (AViiON 5000/6000 Shown)

Select the Tool you want to use and refer to the appropriate section.

5.1 VIEW DISK MEDIA MAINTENANCE MENU

Select 1 (View Disk Media Maintenance Menu) on the Tools Menu and the Disk Media Maintenance Menu (Figure 5-4) is displayed:

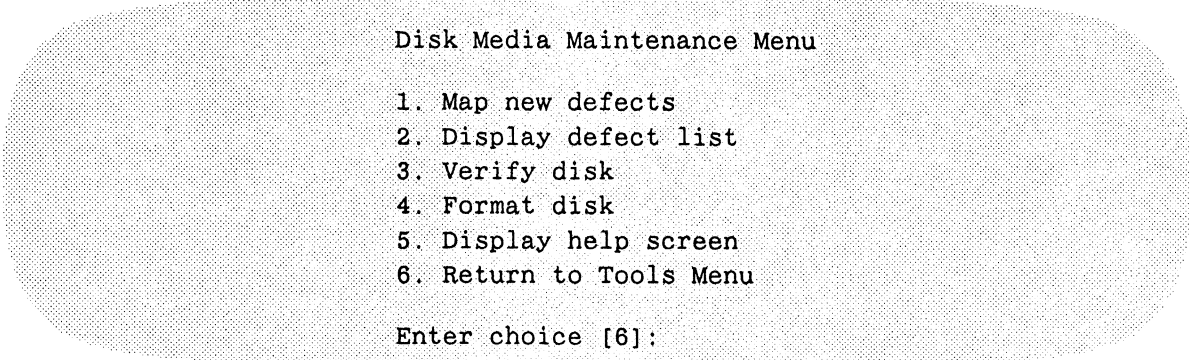


Figure 5-4. Disk Media Maintenance Menu

Section 5.1.1 contains Map new defects information; Section 5.1.2 contains Display defect list information; Section 5.1.3 contains Verify disk information; and Section 5.1.4 contains Format disk information. The Display help screen selection describes the Disk Media Maintenance Menu selections. The Return to Tools Menu selection allows you to return to the Tools Menu. Enter the desired selection and refer to the appropriate section.

5.1.1 Map New Defects

This selection allows you to manually map out one or more defects (bad blocks) to prevent usage of those defects on one or more disks. To specify a bad disk defect, enter the address of the defect. This address can be represented in different ways, depending on the source of the address. When you are asked, select the address representation which matches the address you want to map out. Possible address modes are Logical (default), Physical, and Bytes from Index.

The Logical address mode requires a logical address (single number) and is used when mapping ESDI/SMD defects or SCSI defects. The Physical address mode requires cylinder, head, and sector information and can be used when mapping ESDI/SMD defects. The Bytes from Index (BFI) address mode requires head, cylinder, offset, and length information and can be used when mapping ESDI/SMD defects.

Select 1 (Map new defects) on the Disk Media Maintenance Menu and a Target Selection screen similar to the one in Figure 5-5 is displayed. Target selections are dependent on your system configuration.

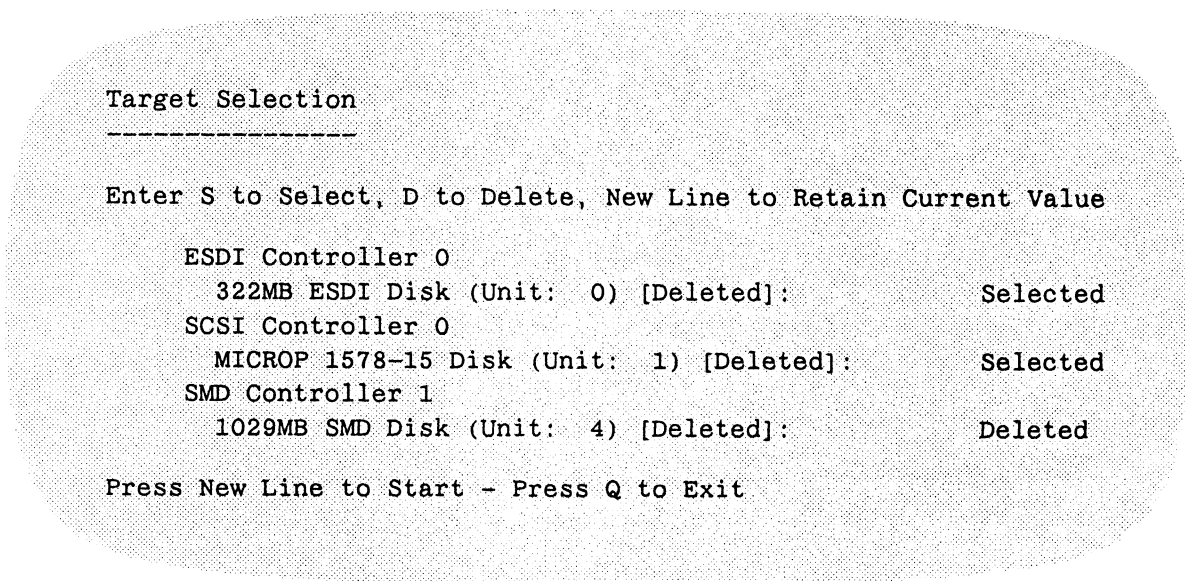


Figure 5-5. Target Selection Screen

Select the target(s) you want to map and press New Line.

Section 5.1.1.1 describes a mapping new defects session when selecting a logical address mode for a SCSI disk. Section 5.1.1.2 describes a mapping new defects session when selecting a physical address mode for an ESDI/SMD disk. Section 5.1.1.3 describes a mapping new defects session when selecting a BFI address mode for an ESDI/SMD disk. Refer to the applicable section.

5.1.1.1 Mapping New Defects on a SCSI Disk Using Logical Address Mode – Complete the entries as they appear on the screen (Figure 5-6).

Initializing for Map New Defects Selection under Disk Media Maintenance.

Radix for all input/output (DECIMAL, HEX) [DECIMAL]:

Input session for SCSI Controller 0 Unit: 1

Adding defects to unit 1 on the SCSI Controller 0.

Enter the logical block address of each defect at the following prompt.
To conclude the input of defects, press New Line at any prompt.
You will have an opportunity to change or delete any entry.

Logical address (1 - 631051): 2112

Logical address (1 - 631051): 3223

Logical address (1 - 631051): 40325

Logical address (1 - 631051):

Defects entered as follows:

Defect ID 1 : Logical Block: 2112

Defect ID 2 : Logical Block: 3223

Defect ID 3 : Logical Block: 40325

Is this defect list complete and correct (NO, YES) [NO]:

Do you want to print the defect list? (NO, YES) [NO]:

CAUTION - Data will be lost when mapping defects!

Make sure you have a current backup of your disk
before proceeding.

Do you want to map the defects entered for this disk (NO, YES) [NO]:

Figure 5-6. Mapping New Defects Screen (SCSI Disk/Logical Address)

If the defect list is complete and correct, answer yes. If you want to map the defects entered, answer yes. The new defects will be mapped. Upon completion, a screen similar to the one in Figure 5-7 is displayed. Press New Line to return to the Disk Media Maintenance Menu.

Defect mapping in progress for unit 1

Mapping of defects complete

Press New Line to Proceed

Figure 5-7. Mapping New Defects Completion Screen

If the defect list is not complete and/or correct, answer no to add, delete, or modify the defect list. Figure 5-8 shows the entries that appear if you want to modify the defect list.

```
Do you want to add more defects (NO, YES) [NO]:
Do you want to change or delete defects (NO, YES) [NO]: yes
Enter defect ID to modify/delete, or press New Line to display all de-
fects: 1
Defect ID 1: Logical Block Address: 2112
Do you want to delete this defect (NO, YES) [NO]:
Do you want to change this defect (NO, YES) [NO]: yes
Logical address [2112]: 2002
Defects entered as follows:
    Defect ID 1 : Logical Block: 2002
    Defect ID 2 : Logical Block: 3223
    Defect ID 3 : Logical Block: 40325
Is this defect list complete and correct (NO, YES) [NO]: yes
Do you want to print the defect list? (NO, YES) [NO]:
CAUTION - Data will be lost when mapping defects!
          Make sure you have a current backup of your disk
          before proceeding.
Do you want to map the defects entered for this disk (NO, YES) [NO]: y
```

Figure 5-8. Adding, Deleting or Modifying the Defect List (Modifying Example Shown)

Upon completion, a screen similar to the one in Figure 5-7 is displayed. Press New Line to return to the Disk Media Maintenance Menu.

5.1.1.2 Mapping New Defects on an ESDI/SMD Disk Using Physical AddressMode - Complete the entries as they appear on the screen (Figure 5-9).

Initializing for Map New Defects Selection under Disk Media Maintenance.

Radix for all input/output (DECIMAL, HEX) [DECIMAL]:

Input session for ESDI Controller 0 Unit: 0

Adding defects to Unit 0 on the ESDI Controller 0.

Address modes are specified as follows:

BYTES FROM INDEX (BFI) = cylinder, head, bytes from index,
and length of defect in bits.

LOGICAL = logical block address (one number).

PHYSICAL = cylinder, head and sector.

Address mode (BFI, LOGICAL, PHYSICAL) [LOGICAL]: p

Enter cylinder, head, and sector of each defect at the following prompts.

To conclude the input of defects, press New Line at any prompt.

You will have an opportunity to change or delete any entry.

Cylinder (1 - 1223): 4

Head (0 - 14): 5

Should this entire track be mapped (NO, YES) [NO]: n

Sector (0 - 34): 3

Cylinder (1 - 1223):

Defects entered as follows:

Defect ID 1: Cyl: 4 Head: 5 Sector: 3

Is this defect list complete and correct (NO, YES) [NO]: y

Do you want to print the defect list? (NO, YES) [NO]:

CAUTION - Data will be lost when mapping defects!

Make sure you have a current backup of your disk
before proceeding.

Do you want to map the defects entered for this disk (NO, YES) [NO]: y

Figure 5-9. Mapping New Defects Screen (ESDI Disk/Physical Address)

Upon completion, a screen similar to the one in Figure 5-7 is displayed. Press New Line to return to the Disk Media Maintenance Menu.

5.1.1.3 Mapping New Defects on an ESDI/SMD Disk Using Bytes From Index (BFI) Mode - Complete the entries as they appear on the screen (Figure 5-10).

```
Initializing for Map New Defects Selection under Disk Media Maintenance.
Radix for all input/output (DECIMAL, HEX) [DECIMAL]:
Input session for ESDI Controller 0 Unit: 0
Adding defects to Unit 0 on the ESDI Controller 0.
Address modes are specified as follows:
    BYTES FROM INDEX (BFI) = cylinder, head, bytes from index,
                           and length of defect in bits.
    LOGICAL = logical block address (one number).
    PHYSICAL = cylinder, head and sector.
Address mode (BFI, LOGICAL, PHYSICAL) [LOGICAL]: b
Enter cylinder, head, and byte offset from index and length (in bits)
of each defect at the following prompts.
To conclude the input of defects, press New Line at any prompt.
You will have an opportunity to change or delete any entry.

Cylinder (1 - 1223):
4 Head (0 - 14): 5

Should this entire track be mapped (NO, YES) [NO]: n

Bytes from Index: 3
Length (1-512) [16]: 16

Cylinder (1 -1223):

Defects entered as follows:
    Defect ID 1: Cyl: 4 Head: 5 Offset: 3 Length: 16
Is this defect list complete and correct (NO, YES) [NO]: y
Do you want to print the defect list? (NO, YES) [NO]:

CAUTION - Data will be lost when mapping defects!
          Make sure you have a current backup of your disk
          before proceeding.

Do you want to map the defects entered for this disk (NO, YES) [NO]: y
```

Figure 5-10. Mapping New Defects Screen (ESDI Disk/BFI Address)

5.1.2 Display Defect List

This selection allows you to read and display the original OEM vendor defects for one or more disks. Select 2 (Display defect list) on the Disk Media Maintenance Menu and a Target Selection screen similar to the one in Figure 5-11 is displayed. Target selections are dependent on your system configuration.

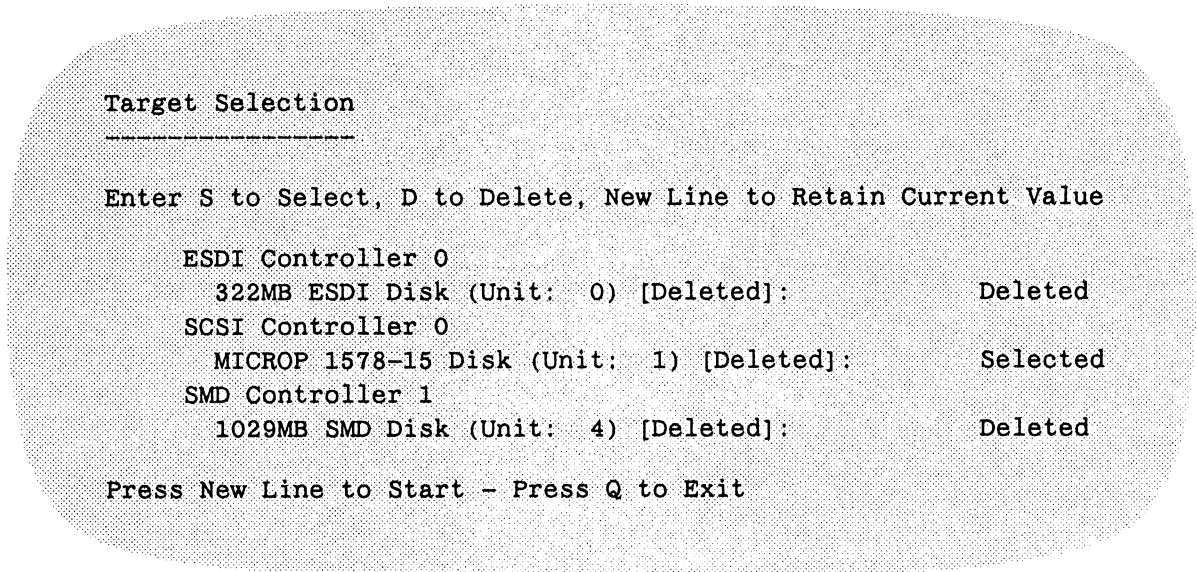


Figure 5-11. Target Selection Screen (SCSI Disk Selected)

Select the target(s) having defects you want to view and press New Line. A screen similar to the one in Figure 5-12 is displayed. Complete the entries as they appear on the screen to determine the address mode of the defect list.

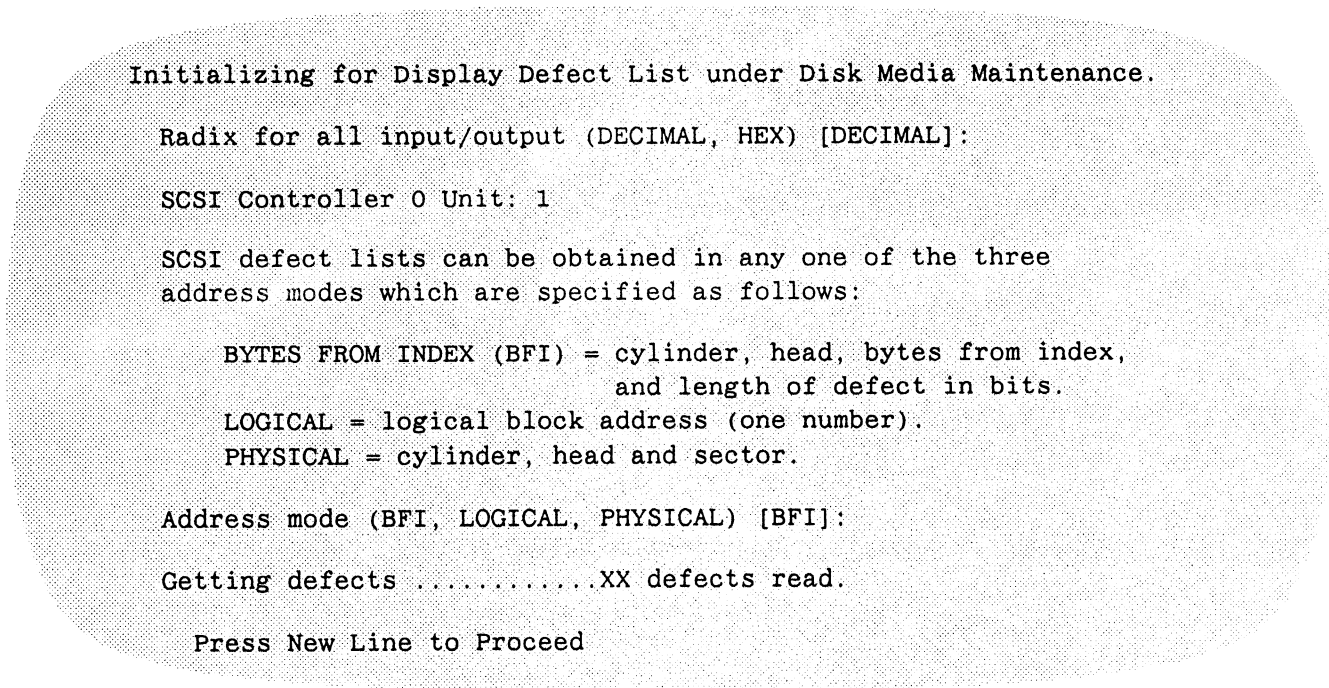


Figure 5-12. Display Defect List Address Mode (SCSI Disk Selected)

Press New Line to display the defect list. If you chose a BFI address mode for an ESDI/SMD disk, a defect list similar to the format in Figure 5-13 is displayed. If you chose a physical address mode for an ESDI/SMD disk, a defect list similar to the one in Figure 5-14 is displayed. If you chose a logical address mode for a SCSI disk, a defect list similar to the one in Figure 5-15 is displayed.

```
Defect list for Unit 0 on the ESDI Controller is as follows...
```

```
Defect ID 1 : Cyl: 1   Head: 12  Offset: 3934  Length: 1
Defect ID 2 : Cyl: 2   Head: 12  Offset: 3934  Length: 1
Defect ID 3 : Cyl: 3   Head: 12  Offset: 3934  Length: 1
Defect ID 4 : Cyl: 4   Head: 12  Offset: 3934  Length: 1
```

```
Do you want to print the defect list? (NO, YES) [NO]:
```

```
Press New Line to continue
```

Figure 5-13. Displaying the Defect List (BFI Address Mode)

```
Defect list for Unit 0 on the ESDI Controller is as follows...
```

```
Defect ID 1 : Cyl: 434  Head: 14  Sector: 8
Defect ID 2 : Cyl: 598  Head: 6    Sector: 34
Defect ID 3 : Cyl: 634  Head: 12  Sector: 24
Defect ID 4 : Cyl: 1033 Head: 6    Sector: 5
```

```
Do you want to print the defect list? (NO, YES) [NO]:
```

```
Press New Line to continue
```

Figure 5-14. Displaying the Defect List (Physical Address Mode)

```
Defect list for Unit 1 on the SCSI Controller is as follows...
```

```
Defect ID 1 : Logical Block: 227835
Defect ID 2 : Logical Block: 313657
Defect ID 3 : Logical Block: 332757
Defect ID 4 : Logical Block: 542039
```

```
Do you want to print the defect list? (NO, YES) [NO]:
```

```
Press New Line to continue
```

Figure 5-15. Displaying the Defect List (Logical Address Mode)

5.1.3 Verify Disk

This selection allows you to run a verification utility on one or more disks to ensure that all defects have been found. Select 3 (Verify) on the Disk Media Maintenance Menu, and a Target Selection screen similar to the one in Figure 5-16 is displayed. Target selections are dependent on your system configuration.

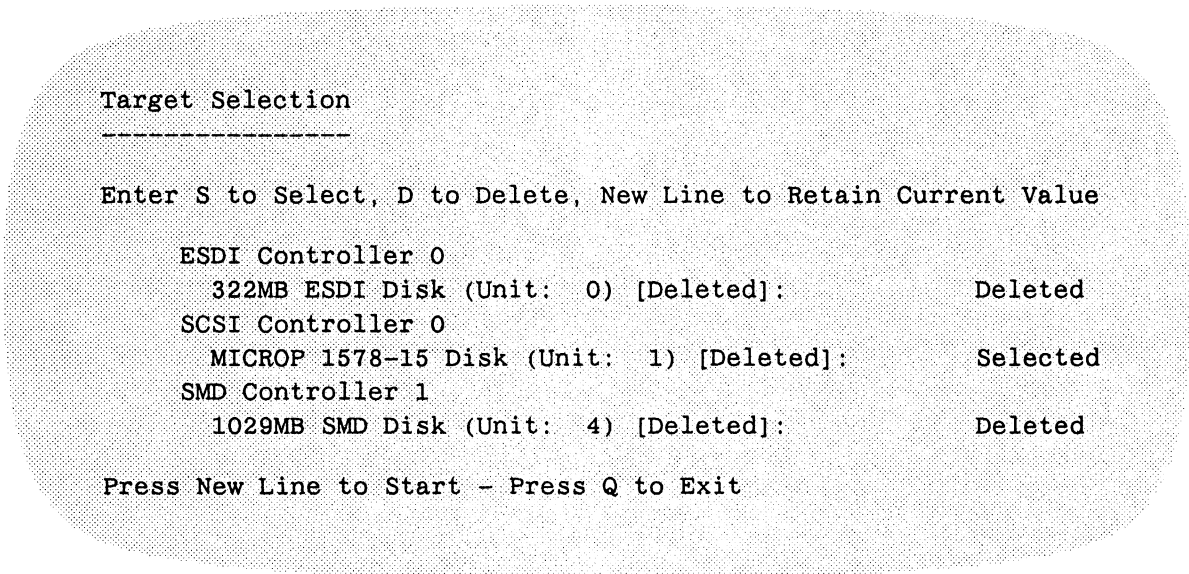


Figure 5-16. Target Selection Screen

Select the target(s) having defects you want to verify and press New Line. This example verifies defects found on the SCSI disk. Complete the entries as they appear on the screen (Figure 5-17).

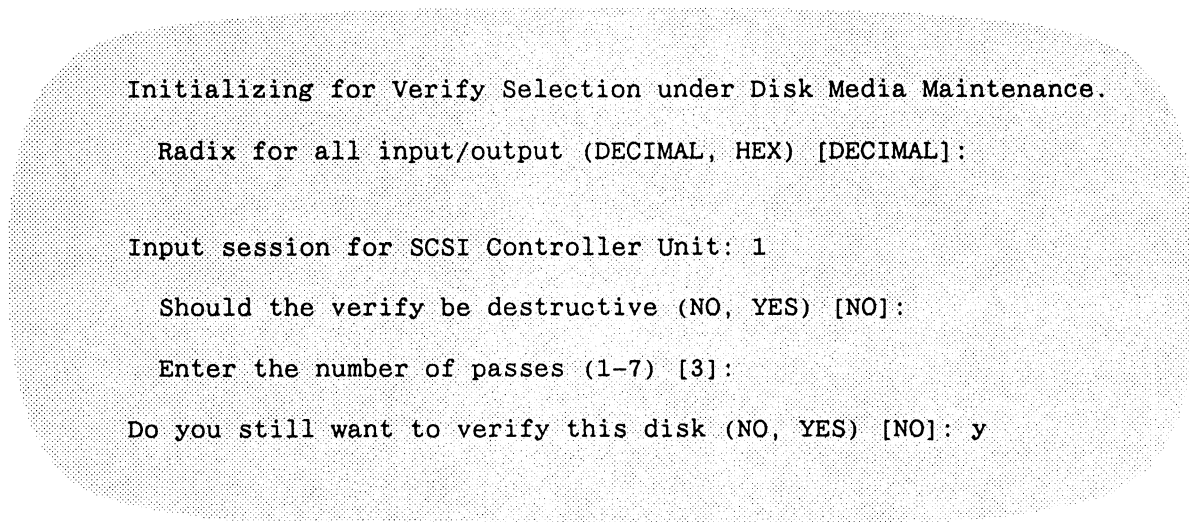


Figure 5-17. Verify Entries

If you do not want to verify the disk, answer no to return to the Disk Media Maintenance Menu. To verify the disk, answer yes and the screen in Figure 5-18 acknowledges your selection.

Disk Media Maintenance functions selected:

Verify selected for Unit 1 on SCSI Controller 0.

Do you want to cancel ALL selected functions (NO, YES) [YES]: n

Figure 5-18. Verify Acknowledgement

If you want to cancel all selected functions, answer yes and you are returned to the Disk Media Maintenance Menu. To keep all selected functions, answer no and a Status Report similar to the one in Figure 5-19 is displayed.

Status Report

Revision: 01.00 Elapsed Time: hh:mm:ss

CONTROLLER	UNIT	OPERATION	CURRENT TRACK	DEFECTS FOUND
SCSI Controller 0	1	VERIFY	308	0

S - Display Status Report Ctrl-D to Cancel before Complete

Figure 5-19. Verify Status Report

The Status Report screen refreshes every ten seconds with updated verification information. Press S to manually update the screen. To cancel the verify function and get the last status report available, press Ctrl-D. Press New Line after viewing the last status report and a Media Maintenance Summary similar to the one in Figure 5-20 is displayed.

Media Maintenance Summary

SCSI Controller 0 Unit: 1

Operation: Nondestructive Verify without Defect Mapping

Number Passes Selected: 1

Verify operation was stopped - Operation did not complete.

Number Defects Found by Verifier: 0

Do you want to print Media Maintenance Summary? (NO, Yes) [N]:

Press New Line to Return to Media Maintenance Menu.

Figure 5-20. Media Maintenance Summary

Press New Line to return to the Disk Media Maintenance Menu.

5.1.4 Format Disk

This selection allows you to hard format one or more new, unformatted disks. It is recommended that this program be used to format new, unformatted disks only. For each drive selected, the format selection will:

- Read the original OEM defects.
- List the current controller/target information.
- Describe what happened while reading the original OEM defects (e.g., all/no/some defects read from disk).
- Provide an entry to manually add other OEM defects.
- Format the disk.

CAUTION

Formatting a disk can be a lengthy process. Formatting a 322 MB drive takes approximately 15 minutes to complete. Be sure you have ample time to complete a format. If formatting is interrupted, the drive is not consistently formatted and ID CRC, data ECC, ID sync, data sync, and "sector not found" errors can occur.

NOTE

Be sure to write down the OEM defect list located on the label of the disk drive before installing the drive for formatting. This list is necessary to perform a cross reference with the OEM defect list that appears on the screen after the Target Selection Screen. The OEM defect list displayed on the screen must contain as a minimum, all the defects listed on the disk drive label. If it does not, any missing defects must be added before formatting. For example, if the drive label lists four defects, the defect list displayed on the screen must list at least these same four defects. If not, note which defects are missing so that you can add them to the list later in the format session.

Select 4 (Format) on the Disk Media Maintenance Menu and a Target Selection screen similar to the one in Figure 5-21 is displayed. Target selections are dependent on your system configuration.

Target Selection

Enter S to Select, D to Delete, New Line to Retain Current Value

ESDI Controller 0	
322MB ESDI Disk (Unit: 0) [Deleted]:	Selected
SCSI Controller 0	
MICROP 1578-15 Disk (Unit: 1) [Deleted]:	Deleted
SMD Controller 1	
1029MB SMD Disk (Unit: 4) [Deleted]:	Deleted

Press New Line to Start - Press Q to Exit

Figure 5-21. Target Selection Screen

Select the target(s) you want to format and press New Line. Figure 5-22 shows entries for an ESDI format session. Figure 5-23 shows entries for a SCSI format session. Complete the entries as they appear on the screen.

Initializing for Format Selection under Disk Media Maintenance.

Radix for all input/output (DECIMAL, HEX) [DECIMAL]:

ESDI Controller 0 Unit: 0

Getting original defects.....

Press New Line to Proceed

The OEM defect list read is as follows...

Defect ID 1	: Cyl: 1	Head: 12	Offset: 3934	Length: 1
Defect ID 2	: Cyl: 2	Head: 12	Offset: 3934	Length: 1
Defect ID 3	: Cyl: 3	Head: 12	Offset: 3934	Length: 1
Defect ID 4	: Cyl: 4	Head: 12	Offset: 3934	Length: 1
Defect ID 5	: Cyl: 5	Head: 12	Offset: 3934	Length: 1

Do you want to print the defect list? (NO, YES) [NO]:

Press New Line to continue

Do you want to enter some defects (NO, YES) [NO]:

Verify after formatting (NO, YES) [YES]:

Each pass verifies the disk with a different data pattern.
To use all data patterns, select the maximum number of passes.

Enter number of passes (1-7) [3]:

Map defects found during verify (NO, YES) [YES]:

Do you still want to format this disk (NO, YES) [NO]: y

Figure 5-22. Formatting an ESDI Disk Screen

Initializing for Format Selection under Disk Media Maintenance.

Radix for all input/output (DECIMAL, HEX) [DECIMAL]:

Input session for SCSI Controller Unit: 0

Certify during format (NO, YES) [YES]:

The factory defects are assumed present for this drive.
Use the DISPLAY DEFECT LIST option to display all
defects previously mapped.

Do you want to enter some defects (NO, YES) [NO]:

Verify after formatting (NO, YES) [YES]:

Each pass verifies the disk with a different data pattern.
To use all data patterns, select the maximum number of passes.

Enter number of passes (1-7) [3]:

Map defects found during verify (NO, YES) [YES]:

Do you still want to format this disk (NO, YES) [NO]:

Unit 0 will not be formatted.

Figure 5-23. Formatting a SCSI Disk Screen

If you answered YES to the "Do you want to enter some defects" entry in Figures 5-22 or 5-23, the screen continues with entries similar to those listed in Figure 5-24. Complete the entries to add, delete or modify defects in the BFI format.

```

Do you want to enter some defects (NO, YES): [NO]: y
Defects must be entered in a bytes from index (BFI) format only!
Enter cylinder, head, byte offset from index, and
length (in bits) of each defect.
To conclude the input of defects, press New Line at any prompt.
You will have an opportunity to change or delete any entry.

Cylinder (1-1223): 204
Head (0-14): 12
Should this entire track be mapped (NO, YES) [NO]:
Offset: 10231
Length [1]: 6

Defects read and/or entered by user for unit 2...
Defect ID 1 : Cyl: 1   Head: 12   Offset: 3934   Length: 1
Defect ID 2 : Cyl: 2   Head: 12   Offset: 3934   Length: 1
Defect ID 3 : Cyl: 3   Head: 12   Offset: 3934   Length: 1
Defect ID 4 : Cyl: 4   Head: 12   Offset: 3934   Length: 1
Defect ID 5 : Cyl: 5   Head: 12   Offset: 3934   Length: 1
Defect ID 6 : Cyl: 204 Head: 12   Offset: 10231  Length: 6

Is this defect list complete and correct (NO, YES) [NO]: y
Auto verify (NO, YES) [NO]:
Do you still want to format this target (NO, YES) [NO]: y

```

Figure 5-24. Adding, Deleting, or Modifying Defects Before Formatting (Adding Example Shown)

If you do not want to format the drive, answer no to return to the Disk Media Maintenance Menu. If you answered yes to format the target, a screen similar to the one in Figure 5-25 acknowledges your selection.

Disk Media Maintenance functions selected:

Format selected for Unit 0 on ESDI controller 0.

Do you want to cancel ALL selected functions (NO, YES) [YES]:

Figure 5-25. Format Acknowledgement

If you want to cancel all selected functions, answer yes and you are returned to the Disk Media Maintenance Menu. To keep all selected functions, answer no and the format function is executed. A Status Report similar to the one in Figure 5-26 is displayed while the formatter is running.

Status Report

Revision: XXX.XXX

Elapsed Time: hh:mm:ss

CONTROLLER	UNIT	OPERATION	CURRENT TRACK	DEFECTS FOUND
ESDI Controller 0	0	FORMAT	1501	N/A

S - Display Status Report

Figure 5-26. Format Status Report

Upon completion, the CURRENT TRACK column will display COMPLETE. Press New Line to return to the Disk Media Maintenance Menu.

5.2 RUN TAPE ADJUSTMENT UTILITY

The Run tape adjustment utility can be used to adjust the tension on a cartridge tape. This utility rewinds the tape from beginning to end and adjusts the tension so that it does not vary on different parts of the tape. Select 2 (Run tape adjustment utility) on the Tools Menu and a Target Selection screen similar to the one in Figure 5-27 is displayed. The current value (selected or deleted) is displayed in brackets next to each component.

Target Selection

Enter S to Select, D to Delete, New Line to Retain Current Value

SCSI Controller

ARCHIVE VIPER 150 Tape (Unit: 4) [Deleted]: Deleted
ARCHIVE VIPER 150 Tape (Unit: 6) [Deleted]: Selected

Press New Line to Start - Press Q to Exit

Figure 5-27. Run Tape Adjustment Utility Target Selection

Select which cartridge tape units you want to adjust. The message

"Tape Adjustment in Progress - Please Wait"

is displayed while the tape is rewinding. Upon completion, a message similar to the one in Figure 5-28 is displayed:

SCSI Controller:

Adjustment of ARCHIVE VIPER 150 Tape (Unit: 6) Completed

Press New Line to Return to the Tools Menu

Figure 5-28. Run Tape Adjustment Utility Complete Message

Press New Line to return to the Tools Menu.

5.3 VIEW GRAPHICS TOOLS MENU

The Graphics tools are available for the single-user system (for example, an AViiON 300 series station). The tools provide an overall graphic subsystem test and six video adjustment functions to ensure proper operation of the monochrome graphics monitor. The video adjustment functions are used mainly in a manufacturing environment. The graphic subsystem diagnostic test selection is most helpful for a field environment. Select 3 (View Graphics Tools Menu) on a single-user system Tools Menu and the Graphics Tools Menu in Figure 5-29 is displayed:

Graphics Tools Menu

1. Run graphic subsystem diagnostic test
2. Display video adjustment BRIGHT pattern
3. Display video adjustment CONTRAST pattern
4. Display video adjustment PARALLEL pattern
5. Display video adjustment REGULATE pattern
6. Fill screen with CIRCLES pattern
7. Fill screen/clear screen function
8. Display help screen
9. Return to Tools Menu

Enter choice [9]:

Figure 5-29. Graphics Tools Menu

5.3.1 Run Graphic Subsystem Diagnostic Test

Select 1 on the Graphics Tools Menu to test the graphics logic (including memory, registers, and refresh) on the system board.

5.3.2 Display Video Adjustment BRIGHT Pattern

Select 2 on the Graphics Tools Menu to display a screen pattern. This adjustment sets parameters for checking monitor voltage control. Brightness controls on the front panel of the monitor allow you to make the necessary adjustments.

5.3.3 Display Video Adjustment CONTRAST Pattern

Select 3 on the Graphics Tools Menu to display a screen pattern. This adjustment sets parameters for the shape of the CRT (phosphorus). Contrast controls on the front panel of the monitor allow you to make the necessary adjustments.

5.3.4 Display Video Adjustment PARALLEL Pattern

Select 4 on the Graphics Tools Menu to display a screen pattern. This adjustment checks transmit/ receive logic by identifying missing pixels. Lines will appear curved if the raster is not parallel.

5.3.5 Display Video Adjustment REGULATE Pattern

Select 5 on the Graphics Tools Menu to display a screen pattern. This adjustment checks power supply levels.

5.3.6 Fill Screen With CIRCLES Pattern

Select 6 on the Graphics Tools Menu to display a screen pattern. This adjustment checks for monitor flicker.

5.3.7 Fill Screen/Clear Screen Function

Select 7 on the Graphics Tools Menu to display a screen pattern. This adjustment checks the power supply and may require yoke adjustment.

5.4 TEST NETWORK CONNECTION (TDR)

To test faults or shorts in the Local Area Network (LAN) cabling, select the Test Network Connection (TDR) option on the Tools Menu. Depending on the number of passes you choose to run, a screen similar to the one in Figure 5-30 is displayed:

```
Number of Passes to run TDR Test (1 - 256) [1]: 3
Beginning Execution of TDR Test

TDR Pass Number: 001      TDR Failure - TDR value: 7
Approximate distance to fault using Ethernet cable: 70 meters
Approximate distance to fault using Cheapernet cable: 59 meters

TDR Pass Number: 002      TDR Failure - TDR value: 7
Approximate distance to fault using Ethernet cable: 70 meters
Approximate distance to fault using Cheapernet cable: 59 meters

TDR Pass Number: 003      TDR Failure - TDR value: 7
Approximate distance to fault using Ethernet cable: 70 meters
Approximate distance to fault using Cheapernet cable: 59 meters

Press New Line to return to the previous menu
```

Figure 5-30. Test Network Connection (TDR) Test

If there is a fault, the system estimates the distance (in meters) from the transceiver to the fault. There are two distances estimated under the Time Domain Reflectometry (TDR) Pass Number. Use the Ethernet value if you have thick cabling; use the Cheapernet value if you have thin cabling. Press New Line to return to the Tools Menu.

5.5 RUN KEYBOARD TEST

To verify proper operation of a single-user system (for example, an AViiON 300 series station) keyboard keys, select 5 (Run keyboard test) on the single-user system Tools Menu. The screen displays a graphic standard PC-compatible keyboard, indicating the current keyboard language in text at the top of the screen. To test, press a key on the keyboard and the corresponding key on the screen changes from black to gray. Each time a key is pressed, a sound is emitted from the keyboard speaker located in the station. Upon completion, press Ctrl-D to return to the Tools Menu.

5.6 RUN MOUSE TEST

To test the functionality of the mouse on a single-user system (for example, an AViiON 300 series station), select 6 (Run mouse test) on the single-user system Tools Menu. The top of the screen gives instructions for testing the mouse; the center of the screen displays a figure of the mouse. Follow screen instructions to complete the test. Upon completion, press Ctrl-D to return to the Tools Menu.

5.7 RUN PCB RESUME UTILITY

The Run PCB Resume Utility allows you to obtain tracking information. This utility allows you to read information stored in PROM such as part number, serial number, revision level, ECO level, and FCO level. This program also allows you to write in and update information stored in RAM such as microcode levels, customer contract number, failed function, and error descriptions. Follow screen directions.

5.8 VIEW TERMINAL TEST MENU

The View Terminal Test Menu allows you to test a maximum of 50 terminal lines provided by VDA/128 host adaptors or VAC/16 asynchronous controllers in an AViiON multi-user system (for example, an AViiON 5000/6000 series system). Select 5 (View Terminal Test Menu) on the Tools Menu (Figure 5-3) and the Terminal Test Menu (Figure 5-31) is displayed.

```
Terminal Test Menu
1. Inventory boards/channels
2. Start channel identification test
3. Start scrolling character set test
4. Start lines of characters test
5. Start keyboard echo test
6. Terminate a test
7. Show executing tests
8. Display help screen
9. Return to Tools Menu

Enter choice [9]: 1
```

Figure 5-31. Terminal Test Menu

5.8.1 Inventory Boards/Channels

Select 1 (Inventory boards/channels) on the Terminal Test Menu to create a list of VDA/128 host adaptor boards and VAC/16 asynchronous controller boards found in the system. This inventory also includes the board number assigned to each controller, the channel number assigned to the terminal lines on each board, and the cluster controller box and port numbers describing the board location.

Channel numbers correspond to the node address of the target cluster controller and the the port number for the individual line. Node addresses for the VDA/128 host adaptor lines are specified in hex on the cluster box; port numbers are specified in decimal. Port numbers for the VAC/16 asynchronous controller are specified 1–16 (or 1–32 for systems having two VAC/16 controllers) on the computer bulkhead. Channel numbers correspond to the port numbers offset by one: channel 000 corresponds to port number 1, 001 to port 2, ... 015 to port 16 on the bulkhead.

Figure 5–32 shows a sample inventory screen for a system with one VDA/128 host adaptor (board number 0) with one attached cluster controller box (node address 33 hex), having 8 ports (numbered 00 through 07). The sample system also has one 16–line asynchronous controller (board number 1).

```

Host Adapter 0      (cc - cluster controller address, pt - port number)
CHANNEL            .....cc:pt.....
000-007           33:00 33:01 33:02 33:03 33:04 33:05 33:06 33:07
16-line Async Controller 1
CHANNEL
000-009
010-015
Press New Line to Proceed

```

Figure 5–32. Sample Inventory Boards/Channels Screen

Upon completion, the screen returns to the Terminal Test Menu.

5.8.2 Start Channel Identification Test

Select 2 (Start channel identification test) on the Terminal Test Menu to start a test which sends an identification message to a specified terminal(s). The message identifies the controller and channel number of the specified terminal(s). If the terminal is connected via a cluster controller, the cluster controller address and port number will also be displayed. The screen in Figure 5–33 is displayed.

Terminal Test Menu

1. Inventory boards/channels
2. Start channel identification test
3. Start scrolling character set test
4. Start lines of characters test
5. Start keyboard echo test
6. Terminate a test
7. Show executing tests
8. Display help screen
9. Return to Tools Menu

Enter choice [9]: 2

Board number (0, 1, [ALL]) ?

Running selftest on Host Adaptor 0 (approximately 30 seconds)

Running selftest on 16-line Async Controller 1 (approximately 30 seconds)

Figure 5-33. Start Channel Identification Selftest Message

Enter the board number of the controller you want to identify. If a self-test has not been run on the controller during any of the Terminal Test Menu selections, a self-test is run before the controller/channel identification is performed. If the selftest has previously been run by any other Terminal Test Menu selections, the controller/channel identification is performed. A screen similar to the one in Figure 5-34 is displayed on the selected terminal(s).

```
Host Adaptor 0, channel 0 (Cluster Controller address:33, port number:0)
Host Adaptor 0, channel 0 (Cluster Controller address:33, port number:0)
Host Adaptor 0, channel 0 (Cluster Controller address:33, port number:0)
Host Adaptor 0, channel 0 (Cluster Controller address:33, port number:0)
Host Adaptor 0, channel 0 (Cluster Controller address:33, port number:0)
Host Adaptor 0, channel 0 (Cluster Controller address:33, port number:0)
Host Adaptor 0, channel 0 (Cluster Controller address:33, port number:0)
Host Adaptor 0, channel 0 (Cluster Controller address:33, port number:0)
```

Figure 5-34. Start Channel Identification Test

Upon completion, the screen returns to the Tools Menu.

5.8.3 Start Scrolling Character Set Test

Select 3 (Start scrolling character set test) on the Terminal Test Menu to start a test which produces a sliding character set on the selected terminal(s). The screen displays the following entries:

```
Board number (0, 1, [ALL]) ? 0
Channel number (0 - 7, [ALL]) ? 0
```

Enter the appropriate numbers corresponding to the terminal(s) to be tested and press New Line. Upon completion, the screen returns to the Terminal Test Menu.

5.8.4 Start Lines of Characters Test

Select 4 (Start lines of characters test) on the Terminal Test Menu to start a test which produces lines of characters, cycling through the character set, on the selected terminal(s). Enter the appropriate board and channel number(s) corresponding to the terminal(s) to be tested and press New Line. Upon completion, the screen returns to the Terminal Test Menu.

5.8.5 Start Keyboard Echo Test

Select 5 (Start keyboard echo test) on the Terminal Test Menu to start the keyboard echo test on a terminal(s). Enter the appropriate board and channel number corresponding to the terminal/keyboard to be tested and press New Line.

The message "Input a character...." is displayed on the terminal connected to the keyboard you want to test. Press a key and a complete line of that character is displayed. To stop the keyboard test, return to the master terminal and select 6 (Terminate a Test) on the Terminal Test Menu.

5.8.6 Terminate a Test

Select 6 (Terminate a test) on the Terminal Test Menu to terminate a test running on a terminal(s). Enter the appropriate board and channel number of the terminal on which you want to terminate testing and press New Line. Upon completion, the screen returns to the Terminal Test Menu.

5.8.7 Show Executing Tests

Select 7 (Show executing tests) on the Terminal Test Menu to identify which terminal test is currently executing on each board/channel in the system. Figure 5-34 shows host adapter 0 is currently executing a scrolling character test on channel 000; channel identification tests on channels 001, 002, 004, 005, and 007; a lines of characters test on channel 003; and a keyboard echo test on channel 006.

S - scrolling character set test; L - lines of characters test;
I - channel identification test; E - keyboard echo test; . - none

Host Adapter 0

CHANNELCurrently Executing Tests.....

000-007 S I I L I I E I

16-line Async Controller 1

CHANNELCurrently Executing Tests.....

000-009
010-015

Press New Line to Proceed

Figure 5-34. Show Executing Tests Screen

5.9 DISPLAY HELP SCREEN

Select the Display help screen option on Tools Menu to get brief descriptions of the Tools Menu selections.

5.10 RETURN TO MAIN MENU

Select the Return to Main Menu option on Tools Menu to return to the Main Menu.