

Apple Service Diagnostic for Xserve

Apple Service Diagnostic for Xserve tests the Xserve hardware for correct operation. Apple Service Diagnostic performs low-level tests of hardware directly and does not require an operating system.

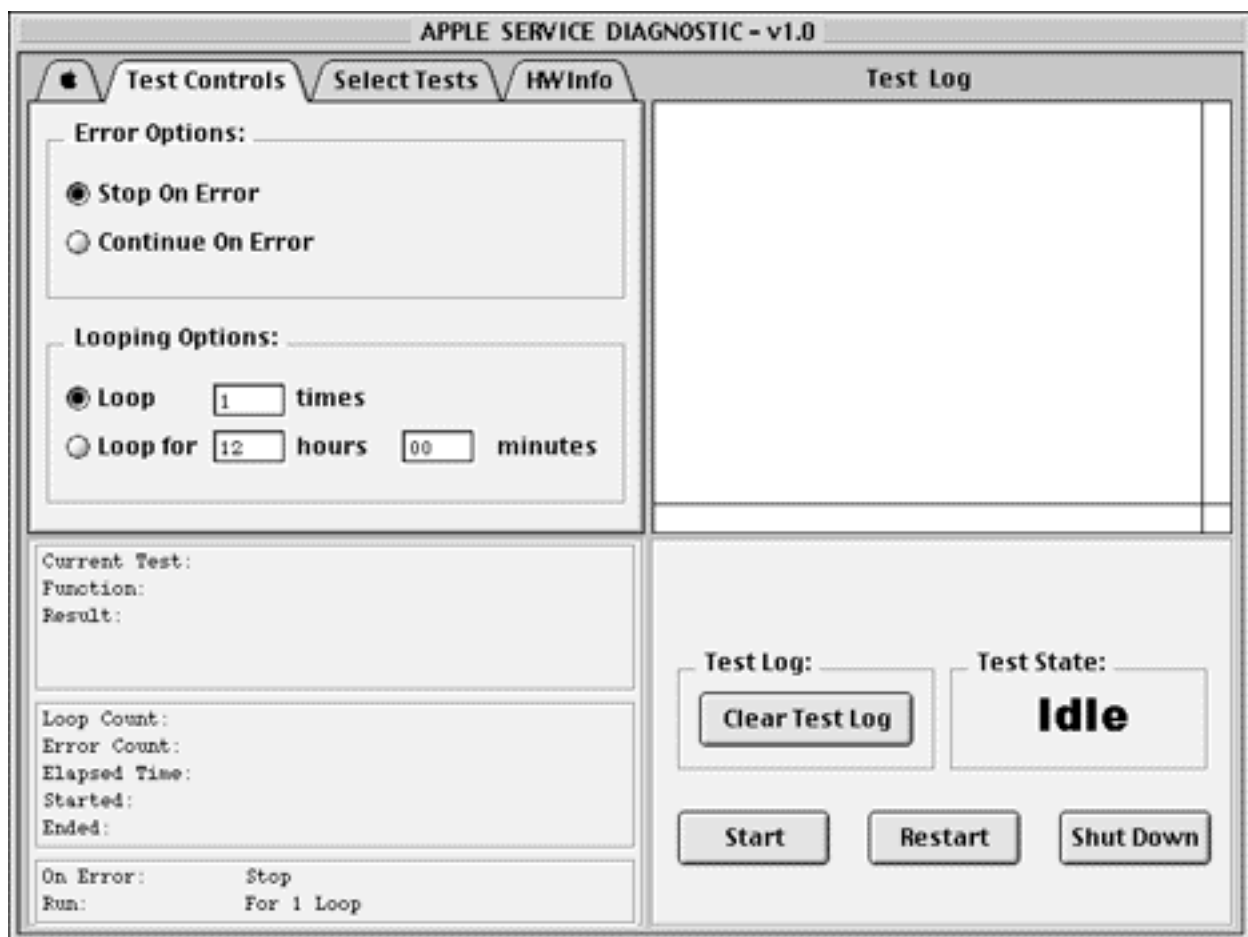
Diagnostic Requirements

A keyboard and display must be attached to the unit

Booting The Apple Service Diagnostic CD

Hold down the C key as the computer starts up. The computer will boot to the main screen of Apple Service Diagnostic.

Main Screen



The Apple Service Diagnostic window is divided into four areas: Test Options and Information (upper left), Test Log (upper right), Test Statistics (lower left), and Test Progress and User Control (lower right):

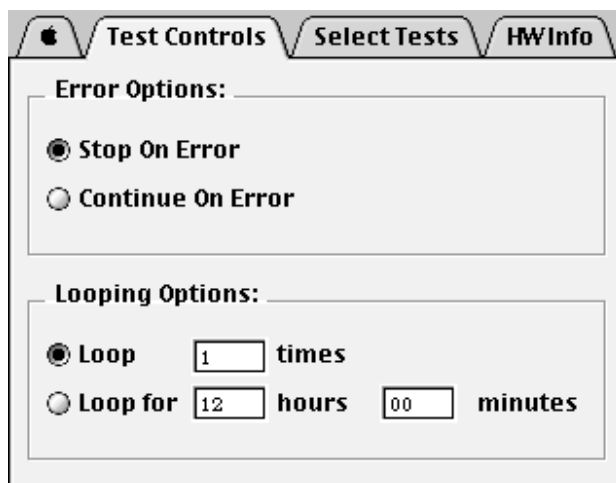
The Test Options and Information area (upper left) is divided into four tabbed panels:

Apple Panel



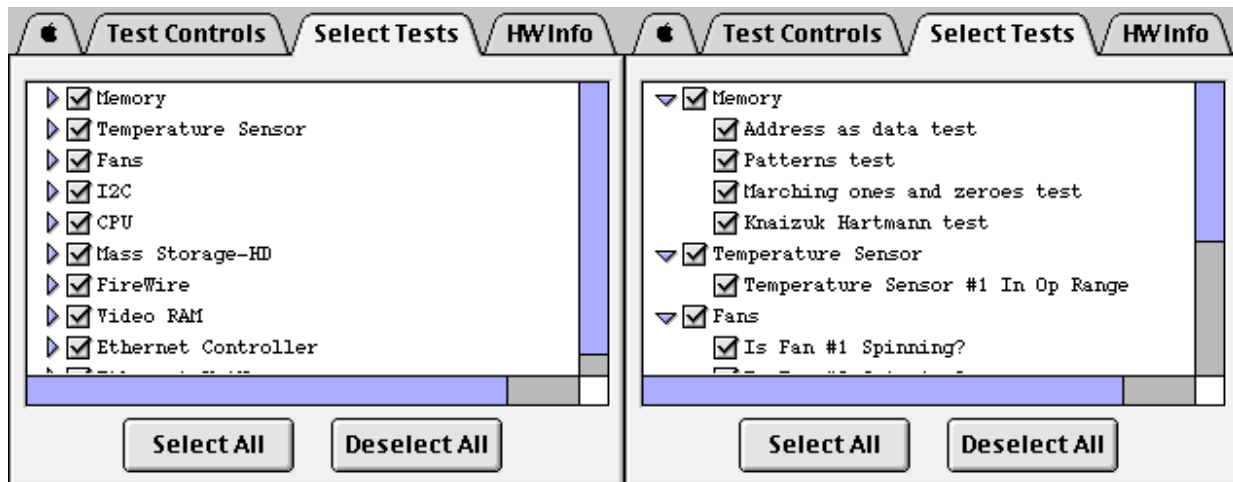
The Apple panel displays version and copyright information.

Test Controls



The Test Controls panel has settings for the number of times Apple Service Diagnostic loops a test sequence, and how Apple Service Diagnostic will handle an error condition. The default selections are to run one time and stop on error. Changes to the default selections are not saved when the machine is shut down or restarted.

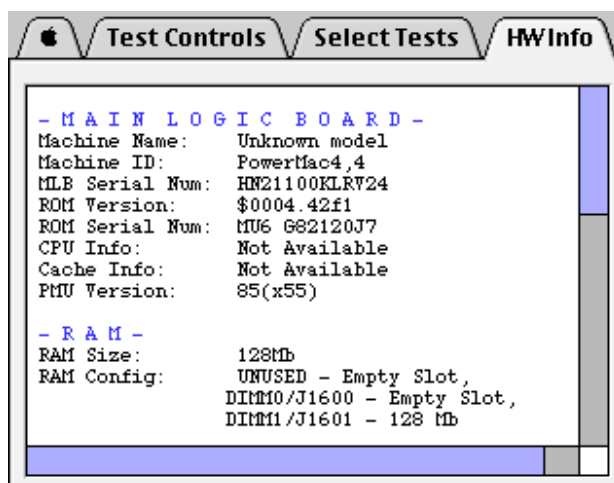
Select Tests



The Select Tests panel allows tests to be selected or deselected individually. Each test group listed has an associated disclosure triangle next to it. Clicking the disclosure triangle expands the listing to show the individual tests for the group.

By default all available tests are selected. To deselect a test, click on the check box. The "Select All" button selects all available tests. The "Deselect All" button deselects all tests. Changes to the default selections are not saved when the machine is shut down or restarted.

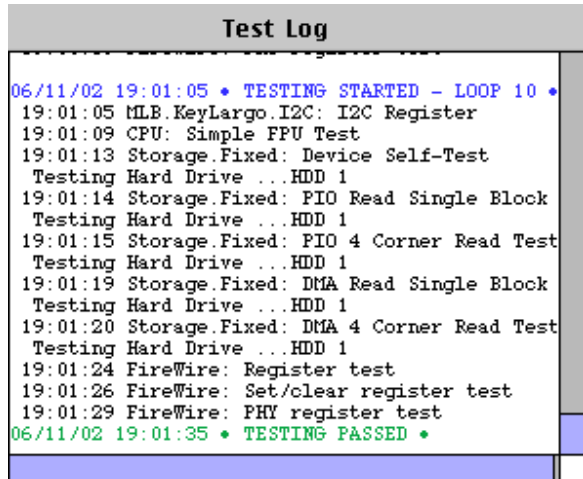
HW Info



The HW Info panel displays information about the machine being tested, including the main logic board, RAM, mass storage, I/O comm, and video.

The other areas of the Apple Service Diagnostic window include:

Test Log



The **Test Log area** (upper right) displays a running log of test events. The "Clear Test Log" button clears the Test Log. There is no way to save the Test Log. The Test Log is cleared if the machine is shut down or restarted.

The following information is added to the log as testing progresses:

Loop Heading – A loop heading is added (in blue text) to the log at the beginning of each loop through the test suite.

Current Test – Before each individual test is run, the current test information is added to the log.

Errors – If a test fails, information is added (in red text) to the log regarding the nature of the failure.

Overall Results – The overall results are added to the test log when all testing has been completed or testing is stopped by the user. The text displayed can have three possible values:

- 1) If a test failure occurred during testing, the text "TESTING FAILED" will be displayed in red text.
- 2) If all tests passed, the text "TESTING PASSED" will be displayed in green text.

3) If testing is stopped by the user, the text "TESTING STOPPED" will be displayed in black text.

Test Statistics

Current Test:	Memory
Function:	Knaizuk Hartmann test
Result:	* Test Passed *
Loop Count:	1
Error Count:	0
Elapsed Time:	< 1 Minute
Started:	17:31:26 06/11/2002
Ended:	17:32:29 06/11/2002
On Error:	Stop
Run:	For 1 Loop

The **Test Statistics** area displays the status of each test as it is run, and a summary of current test, function and test control selections. This information is updated after each individual test has completed. The values displayed in this area will remain after the entire test run has been completed or stopped by the user. If testing is restarted, these values are reset to their default state.

User Control

The User Control interface is divided into two main sections. The left section, labeled 'Idle', features a 'Test Log:' label with a 'Clear Test Log' button below it, and a 'Test State:' label with the word 'Idle' in large bold text. At the bottom are three buttons: 'Start', 'Restart', and 'Shut Down'. The right section, labeled 'Testing', features a progress bar at the top, a 'Test Log:' label with a 'Clear Test Log' button below it, and a 'Test State:' label with the word 'Testing' in large bold text. At the bottom are three buttons: 'Stop', 'Restart', and 'Shut Down'.

The **User Control** area gives the user additional feedback regarding the progress of testing, and buttons to start and stop testing, clear the test log, and restart or shutdown the computer being tested.

A progress bar appears when tests are running, indicating the percentage of ALL selected tests that have been completed. After the completion of the selected test suite, the progress bar disappears.

The Clear Test Log button is used to erase the entire Test Log.

The Test State area gives the user a quick visual evaluation of the current state of Apple Service Diagnostic. The text in this area can contain one of five different values: Idle, Testing, Passed, Failed, or Stopped.

The Start button is used to start testing. Once the tests have started, the button label switches to Stop. Click the Stop button to stop testing. When testing is stopped or after all testing has completed, the button label will toggle from Stop back to Start.

Note: Low-level testing does not support interrupts; therefore, the Stop button must be clicked between tests.

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