

Using the Diagnostic Utility

This software will test SCSI and ATAPI Travan, DAT and AIT tape drives from Seagate Technology. If your backup operations are not functioning correctly or you would like to perform other tests directly on the tape drive, you can use this diagnostic utility to verify that your system is communicating with the tape drive and confirm that the drive can successfully write data to a tape and read it back accurately.

Before running this utility, your tape drive must be installed and all cables properly attached. Be sure to close all other applications, including programs running in the background such as virus checkers, before testing your drive.

IMPORTANT: Because this program writes data to tape, you will need a blank or scratch tape that does not contain information of value to you (except for the the Check Media Capacity or Retension functions). This tape must be in the drive's native format (such as DDS-3 for a DDS-3 drive, Travan 8 for a Travan 8 drive, etc.) in order to get an accurate error count.

Customer Support

If your tape drive does not pass a test after trying multiple media, contact Seagate Tape technical support.

World Wide Web

Extensive technical help, including troubleshooting and Frequently Asked Questions (FAQs), can be found in the Technical Support section of Seagate's Web site: (www.seagate.com).

North America

For pre-recorded help on the most frequently-asked questions, dial **1-800-SEAGATE** in North America.

Europe

In Europe, call toll-free as listed below (8:30 a.m. to 5:00 p.m., European Central Time, Monday through Friday). Service is available in English, French, German and Dutch.

Austria	0 800-20 12 90
Belgium	0 800-74 876
Denmark	80 88 12 66
France	0 800-90 90 52
Germany	0 800-182 6831
Ireland	1 800-55 21 22
Italy	1 677 90 695
Netherlands	0 800-732 4283
Norway	800-113 91
Poland	00 800-311 12 38
Spain	900-98 31 24
Sweden	0 207 90 073
Switzerland	0 800-83 84 11
Turkey	00 800-31 92 91 40
United Kingdom	0 800-783 5177

NOTE: European countries with no toll-free access should call 31-2031-67222.

For direct FAX for European technical support questions, call 31-2065-33513.

Elsewhere

Australia	61-2-9725-3366
Singapore	65-488-7584
Hong Kong	852-2368-9918
Taiwan	886-22-514-2237
Korea	82-2-556-8241

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Detecting the SCSI/ATAPI Interface

The program will detect and list the SCSI and IDE/ATAPI adapters found on the system, including built-in chips on the motherboard. They will be listed in the order found. By clicking on each tape drive displayed in the "[Select a Tape Drive](#)" list with the mouse pointer or arrow keys, the corresponding adapter and tape drive information will be displayed below the list.

Selecting the Tape Drive

The program will list all the Seagate tape drives found on the system. By clicking on each tape drive displayed on the list with the mouse pointer or arrow keys, the corresponding adapter information, model number and firmware revision level will be displayed below the list. With the drive you wish to test highlighted, click the "Next" button to proceed to the main test screen.

To return to this screen from the main test screen, either use the "Back" button or select **Change drive** from the File menu.

The Log File

Each step in the diagnostic process is added to the Status Log, to provide a record of the actions. If multiple tests are made during the same diagnostic session, they are appended to any existing log information, unless you clear the log by selecting File/New or the Back button. Additional menu selections allow log files to be saved to disk as a text file (to be later opened in this utility or any word processor) and/or printed. A previously saved log file can be opened and appended to with additional test data.

The name of the currently-opened log file is displayed above the log window. When the log file has not yet been saved, such as in a new diagnostic session or when File/New has been selected, the log file name will be displayed as "Untitled."

TIP: If the log file seems to be scrolling too slowly in Windows 98, especially when loading a saved file from disc, you can eliminate the problem as follows: In the Windows control panel, select Display, then the Effects tab and uncheck the box marked "Animate windows, menus and lists."

Setting Data Size

When using the Test Read-Write or Test Read-Only functions, you can optionally configure the size of the test data set you wish to write/read by selecting Data Size from the Options menu. Enter an integer number in megabytes or gigabytes (a gigabyte is 1000 megabytes). If you enter a number greater than the uncompressed capacity of the tape, your test will fail when the end of media is reached. Click OK after you have made your selection. If you do not set a size, the data set will automatically be 5 megabytes. The program will not accept any value less than 5 MB or 1 GB.

IMPORTANT: Because the Test Read-Only function reads a data pattern previously written by the Test Read-Write function, be sure to set the Test Read-Only data size to be the same as or smaller than the Read/Write data size. Otherwise, you will receive a system error when the end of data is reached on the tape.

Retension Before Test

It is very important for Travan and minicartridges to be retensioned (quickly run the tape from beginning to end) before testing the drive, in order to make sure that the media is packed properly. The "Retension Before Test" function is therefore selected by default on the Options menu, as indicated by a checkmark next to the option (it will be unavailable for helical drives such as DAT and AIT). If you are running multiple tests in a row, you may wish to turn this feature off after the first test in order to save time on subsequent passes. Any time a Travan or minicartridge drive fails a test, however, be sure to retension the tape (and/or try a new cartridge) before re-running the test.

NOTE: It is not possible to cancel a retension operation.

Testing Your Tape Drive

When you click the **Test Read-Write** button, this function will run the drive test using the options you have selected in the Options menu. After a retension on minicartridge or Travan drives, the program will write the specified amount of repeating-pattern data on a new or scratch tape (or 5 MB if no value is specified), then rewind and read back the data pattern to compare it with the original. A progress bar will show the percentage completed, and an entry will be made in the log file for each action in the test. If the error count is below the acceptable maximum, the drive will be reported as having successfully passed the test. Otherwise, one or more error messages will be displayed in the log file.

NOTE: The tape must be in the drive's native format (such as DDS-3 for a DDS-3 drive, Travan 8 for a Travan 8 drive, etc.) in order to get an accurate error count.

To run another test using the same drive and append to the same log file, simply click the Test Read-Write button again.

To run the same or another test and begin a new log file, select File/New, then click the Test Read-Write button.

To run a test on a different drive, click the "Back" button or select **Change Drive** from the File menu. The log file will be cleared, after giving you the opportunity to save it to disc. If you want to append to the same log file with a different drive, open it again from the File menu.

Checking Media Capacity

When you click the **Check Media Capacity** button, you can find out how much of the media has been used by your data and how much remains. The approximate remaining uncompressed capacity will be reported in megabytes.

NOTE: Because compression ratios vary significantly, depending upon the type of data being compressed, the remaining capacity is merely a rough guide to how much more data can be stored on the tape.

Retensioning

It is very important for Travan and minicartridges to be retensioned (quickly run the tape from beginning to end) before doing a backup or restore operation, especially when using a new tape or one that has been in storage. The **Retension Tape** button allows you to manually retension a tape. It will not be available if a helical drive such as DAT or AIT is selected.

NOTE: When doing the read-write test on a Travan and minicartridge drive, the tape is automatically retensioned before the test begins, [unless you have turned it off in the Options menu.](#)

NOTE: It is not possible to cancel a retension operation.

Verifying Data Interchange

By clicking on the **Test Read-Only** button, you can verify that a data pattern written to tape with this utility on one drive can be read on another drive of the same type. This is useful for confirming head alignment, proper tracking, etc.

In order to use the Test Read-Only function, you must first use the [Test Read-Write](#) function to write a data pattern on the tape. Then insert the tape into another drive and select Test Read-Only. **IMPORTANT:** Be sure to set the [Data Size](#) in the Options menu to be the same as or smaller than the Read/Write data size, or else the test will fail.

The program will read the data pattern and compare it with the original. If the error count is below the acceptable maximum, the drive will be reported as having successfully passed the test. Otherwise, one or more error messages will be displayed in the log file.

NOTE: If you have run the [Hardware Compression Test](#) on this media since the last Test Read-Write operation, you must repeat the Read-Write test before doing the Read-Only, since the compression test will have written a different data pattern on the tape.

Log File Operations

Each step in the diagnostic process is added to the Status Log as it is completed. If multiple passes are made during the same session, they are appended to any existing log information currently displayed. From the File menu, you can select:

New to clear the currently-displayed log and start a new one

Open to open a previously-saved log file in order to read it or append to it with a new test

Save to save the current log file to disc in standard text format (to be later opened in this utility or any word processor)

Save As to save the current log file by another name or to another directory

Print to print the current log file to the default printer

Verifying Hardware Compression

In order to confirm that your tape drive's hardware data compression is functioning properly, click the **Test Hardware Compression** button on the main test screen. (NOTE: Travan tape drives do not support hardware data compression unless they are in the "NS" series.) The program will write compressible data to a blank or scratch tape in order to verify that hardware compression is functioning properly.

In normal drive operation with a backup application, the amount of data compression you gain is highly dependent upon how compressible your files are. For example, a bitmap image or database is highly compressible, while a program file is not. Compressing files that are already compressed, such as Zip files, can actually increase their size.

NOTE: The Hardware Compression Test writes a different data pattern on the tape than the Read-Write test. If you have tested the hardware compression after the Read-Write test, be sure to repeat the Read-Write test before trying a Read-Only test.

Drive Tests

After selecting your tape drive, you can perform the following tests:

Read-Write Test: This will write data to a new or scratch tape, then read it back and compare it to the original pattern to verify proper drive operation.

Read-Only Test: This will read a data pattern previously written by the Read-Write Test. It is useful to verify data interchange between two drives of the same type.

Check Media Capacity: This will report approximately how much uncompressed capacity is remaining on the tape currently inserted into the drive.

Test Hardware Compression: This will confirm that hardware compression is functioning normally on a drive that supports this feature.

In addition, you can retension a Travan or minicartridge tape to insure proper backup and restore operation.

