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OGT-Diagnostic Tool

User's Manual

R1.01e

⊚ Hitachi Global Storage Technologies

Contents

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1. Introduction

1.1 What is OGT?

OGT(On site Analysis tester for Generic Tool) is a tool to assist failure Investigation for the Hitachi SCSI/FCAL Hard Disk Drives.

1.2 Features of OGT

1. Installation of the OGT is easy since it requires just one file.
2. OGT can distinguish between NFF(No failure found) drives and failure drives. Once users click the start button of OGT, the tests will be started automatically and the result (failure code or NFF) is displayed automatically.
3. Log files of OGT are compressed and saved in the PC. Users can send the compressed file to Hitachi FAEs/FQEs for further investigation.
4. Hitachi GST call center URL is displayed on the OGT screen. Users can easily understand where to contact.

1.3 Notes for using OGT

1. There is a possibility that sector repair operation is executed during sequential read test. Therefore, making back up of the data of the drive is required before executing the sequential read test.
2. Also making back up of the drive is required before formatting the drive.
3. Do not install the OGT in the PC which win-DDD and DFT are installed. OGT requires the ASPI Ver.4.71a2 (latest version). On the other hand, win-DDD may not work with the ASPI Ver.4.71a2.

1.4 Customer Support Services

Hitachi offers worldwide customer support for Hitachi Hard Disk Drives.

For technical support for the Hard Disk Drives, please contact your

local help desk, which can be found in the following URL.

URL: http://www.hitachigst.com/hdd/support/sources/tsc.htm/

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2. Installation

2.1 Preparation

1)Download the OGT-Diagnostic Tool Setup program from the web site.

2) Required hardware environment

- Host PC : **Desk Top**

OS : Windows-NT (later version than Service Pack6),

Windows2000, Internet explorer 6(SP1)

Note book

OS : Windows-NT (later version than Service Pack6),

Windows-2000, Windows-XP, Internet explorer 6(SP1)

- HBA : SCSI Card : Adaptec 29320, Slim SCSI 1480 etc.

FCAL Card : Qlogic QLA2xxx, Emulex LP9xx series etc.

ASPI Driver for Adaptec (Recommend Ver.4.71a2)

- SCSI / FCAL Interface adapter card (SCA 80pin, 68pin, 40pin)

- Power supply unit.

(Note1) Windows ASPI driver is required to be installed to run the OGT.

Click Here → link to Adaptec Web site.

(Note2) We found out that Windows-XP issues Mode Sense and changes Mode Parameter when starting up.

For Customers using the drive with Write cache disabled, Please use OGT on Windows-NT or 2K with Desk-Top PC.
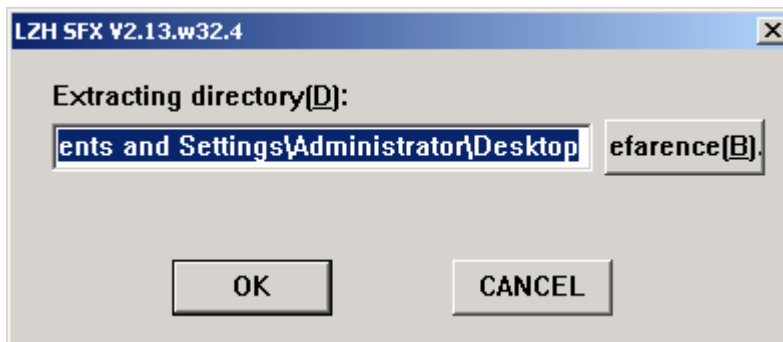
(Note3) In case the format of the tested HDD is larger than 512 Bytes per Sector, the HDD can be tested only on Windows NT.
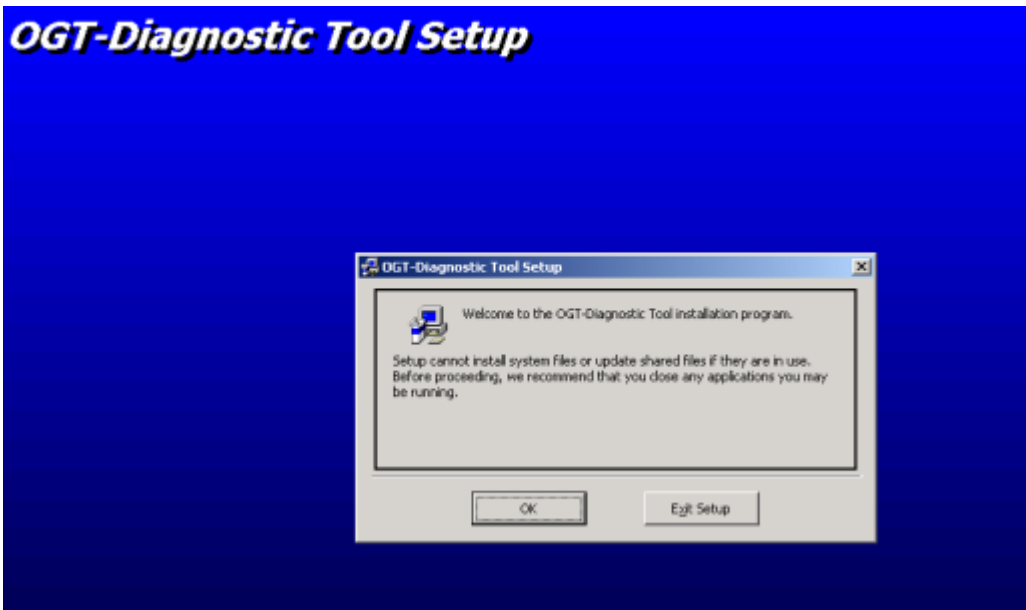
2.2 Setup Procedure

1) Please Copy ogtsetup.exe file to the desk top of the PC.
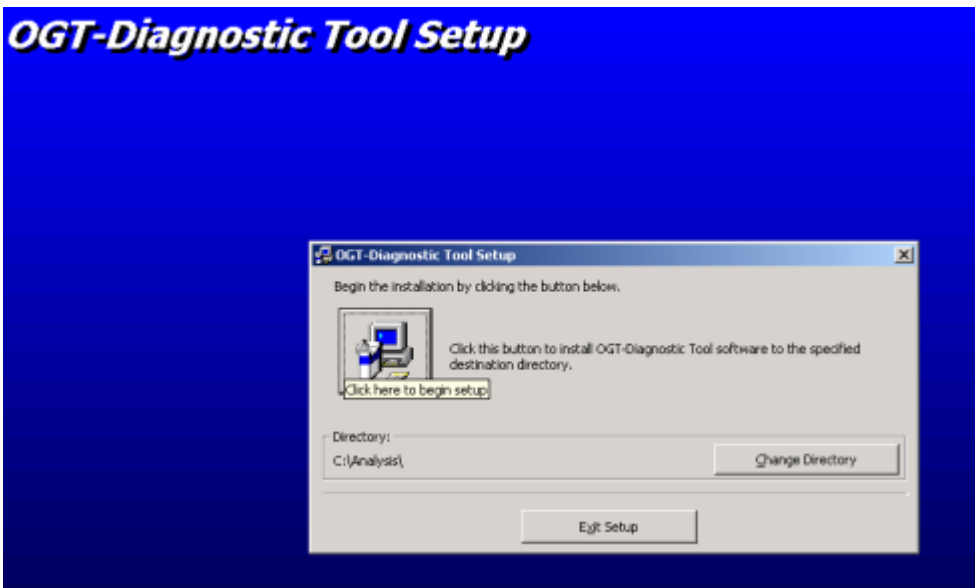
Double Click ogtsetup.exe

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Select OK button.

Select directory for Analysis folder
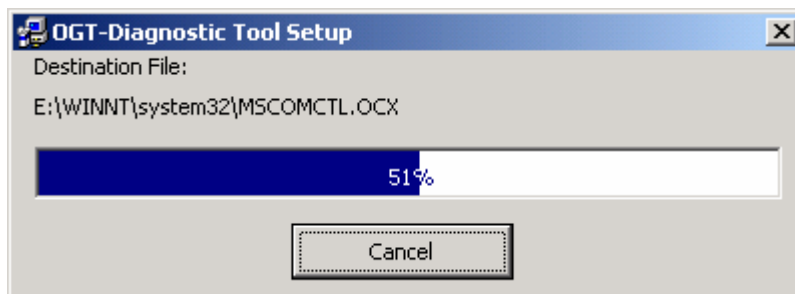

Click the button shown below.

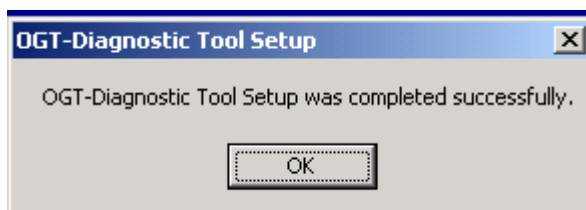Hitachi Global Storage Technologies
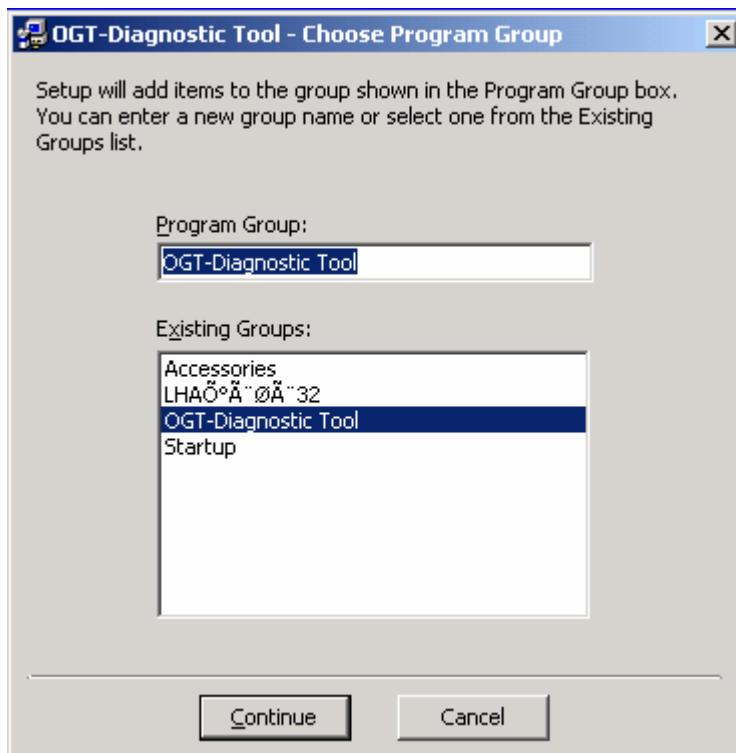
Click continue button.

OGT program installation will be started.

The above message will appear when OGT installation completes.

3. Starting OGT-Diagnostic Tool
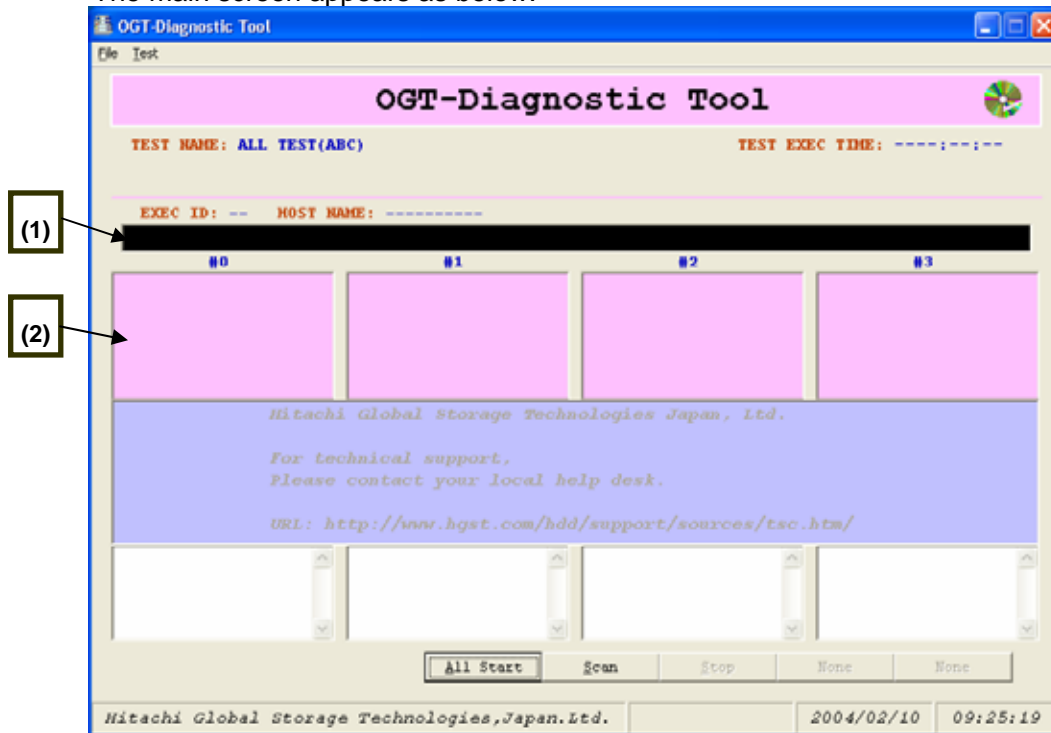
3.1 Start of the Program

OGT-Diagnostic Tool starts when "OGT-Diagnostic Tool.exe" is clicked.

The program can be started easily when short cut is made on desktop.

OGT-Diagnostic Tool.exe is in Directory C:/Analysis.exe.

[OGT icon]

3.2 OGT-Diagnostic Tool Main Screen

The main screen appears as below.

Description of each function of the main screen is as follows.

No.	Function	Contents
(1)	Current Test	[Rev.] : Program Revision [TEST NAME] : TEST NAME [EXEC ID] : Number of drives under test [TEST EXEC TIME] : TEST EXEC TIME
(2)	Massage Box	Displays each massage in test

3.3 Starting the Test

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1) Push "Initialize" button.

Disk Type, Revision, Serial Number, Host adapter ID, Target ID will appear on the Screen(3) .

2) Push "All Start" button.

Test will start and result of each process will appear on the screen(4).

3) Test result will be shown on the screen( ) as follows,

Test Fail   :   Color of the Screen will change to Red.

NFF (No Failure Found)   :   Color of the Screen will change to Green.
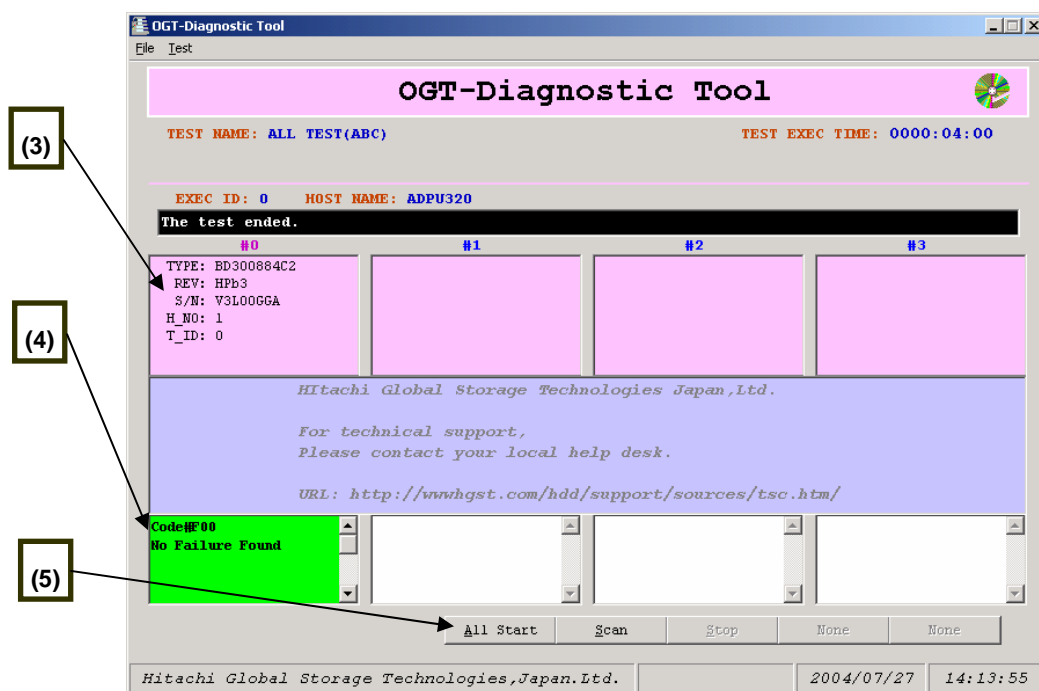
Description of each function of the main screen is as follows.

| No.	Function	Contents
(3)	Drive Information	[TYPE] : Model [REV] : Firmware Revision [S/N] :Serial Number [H_NO] : Host No. [T_ID] : Target ID
(4)	Test Result	Displays High priority error code
(5)	Command Button	All Start, Initialize, Refer to 2.3 [Starting the Test]

4. Menu Function

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MENU FUNCTION LIST

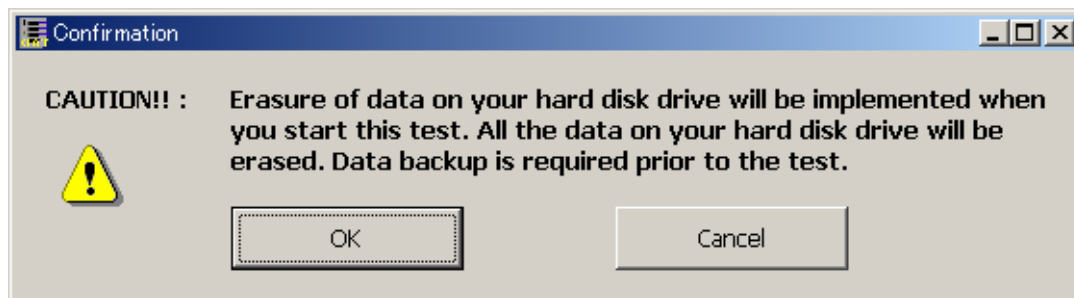| Topic	Sub Topic	Contents
Test	All Test (A,B,C)	Executing all tests.
	Option	Format : Executing formatting the drive
		Sequential Read : Executing sequential read

4.1 Format

Click "Test" and select "Format" to do the formatting the drive
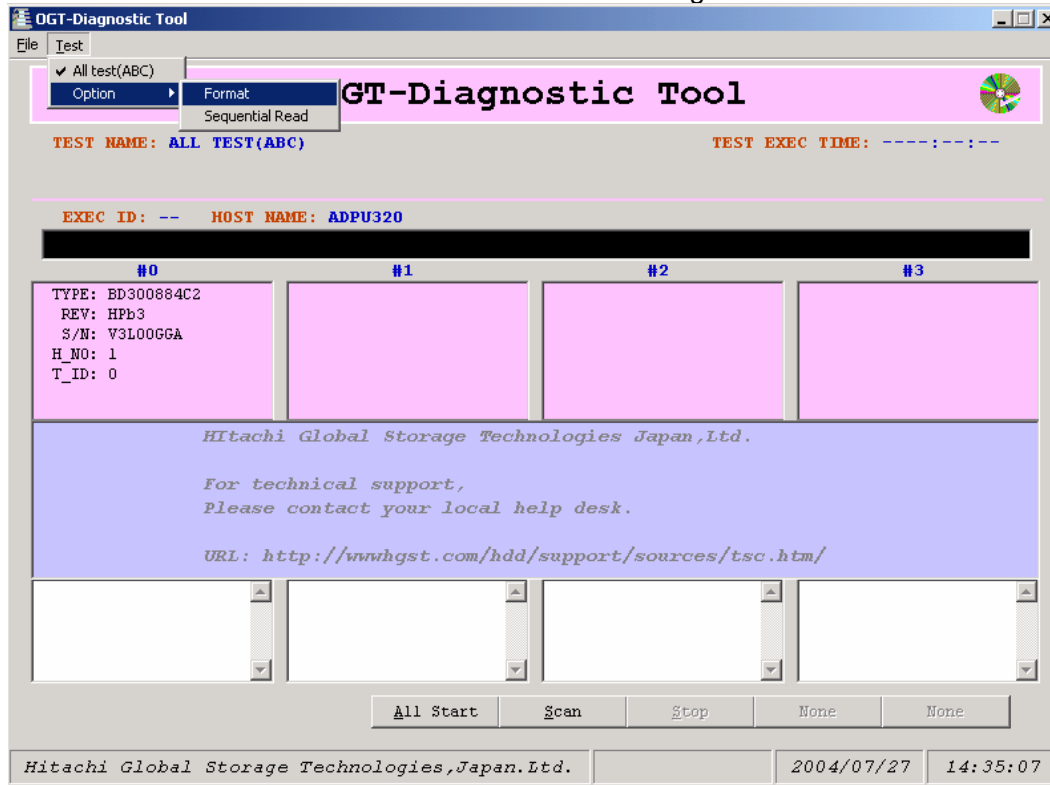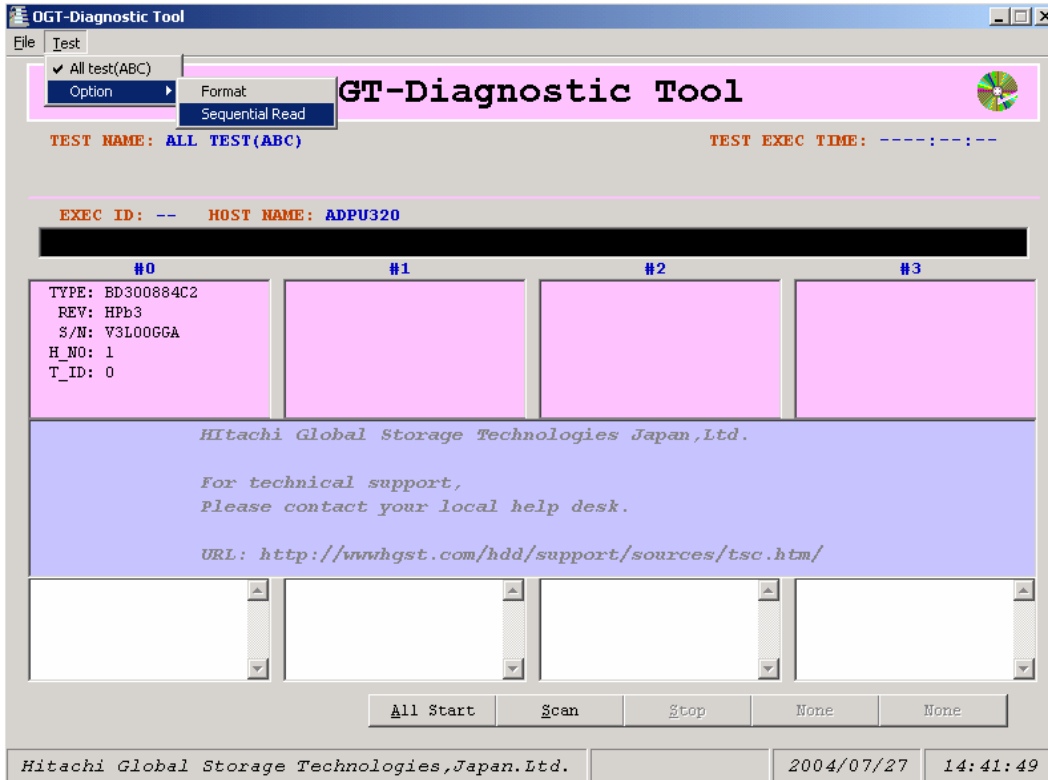

Click "All Start" button

Caution message appears as below

If you want to cancel, press "Cancel".

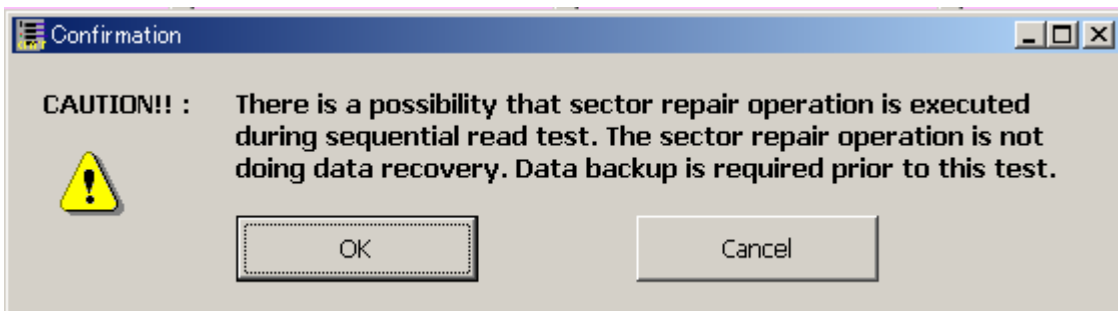Hitachi Global Storage Technologies

4.2 Sequential Read

Click "Test" and select "Sequential Read" to do the sequential read test for the drive

Click "All Start" button

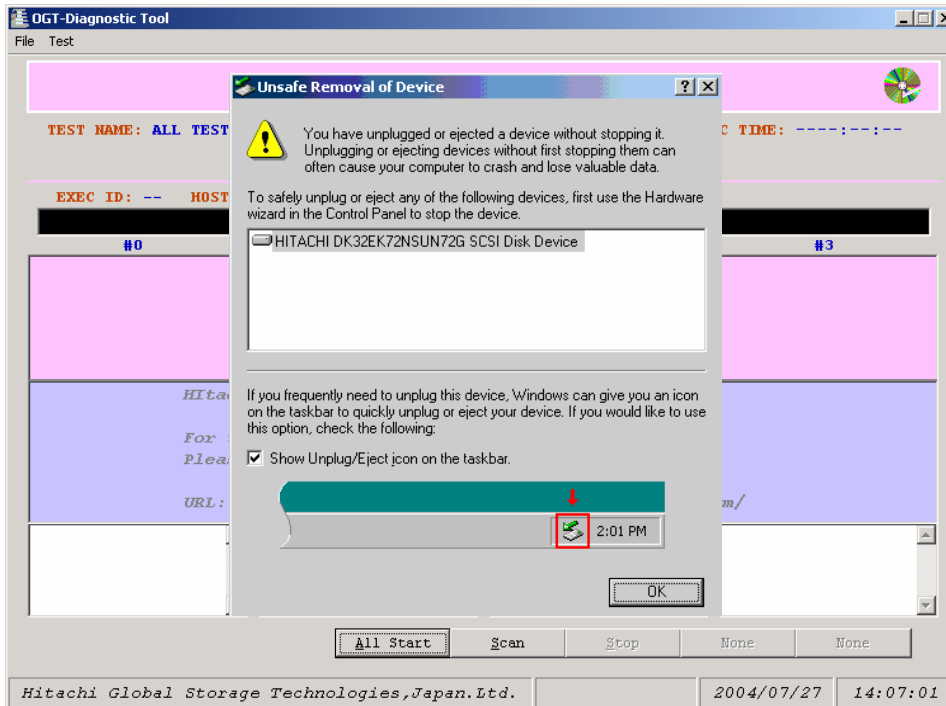Caution message appears as shown below

If you want to cancel, press "Cancel".

If "OK" is pressed, sequential read test will start automatically. (1 pass)

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5. Appendix

5.1 Rescanning the Drives

With using the OGT-Diagnostic Tool on windows 2000 or XP, when the drive
is removed, the message shown below may appear.

When you want to do the OGT again after the above message appearing,
perform the followings.

Open "System Properties" under Control Panel.

select "Hardware" tab and click "Device Manager".

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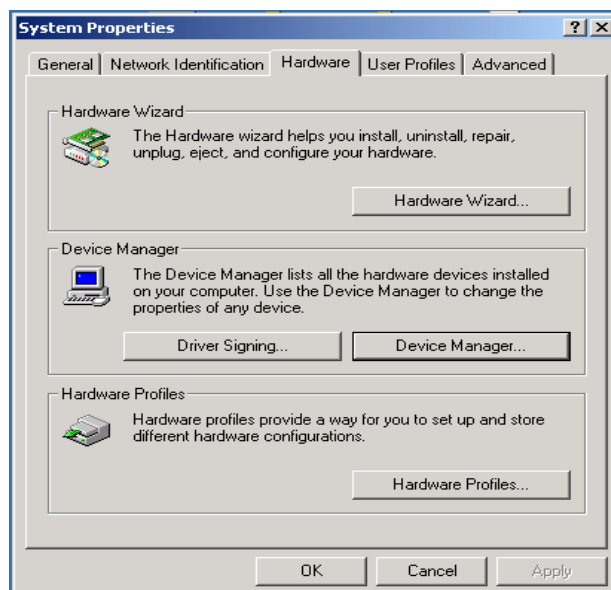
Click "Disk drives".
Click right button of the mouse and select "Scan for hardware changes".
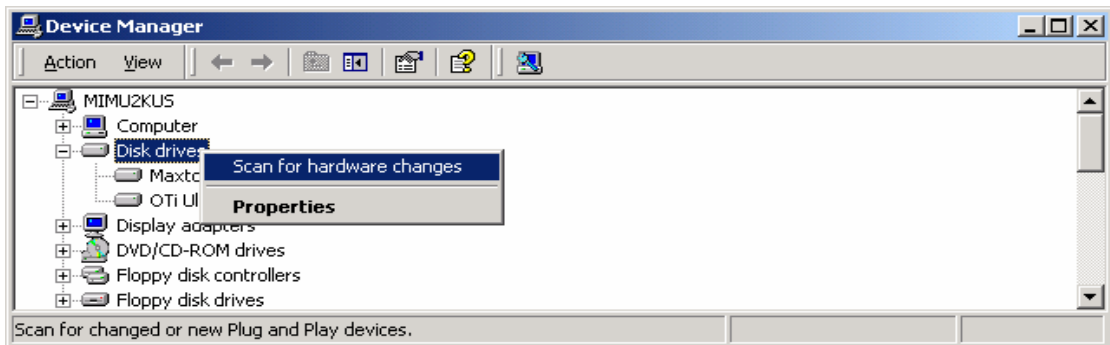
The disk drive can be recognized.

And then, start the OGT-Diagnostic Tool.

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6. OGT Error Code Table

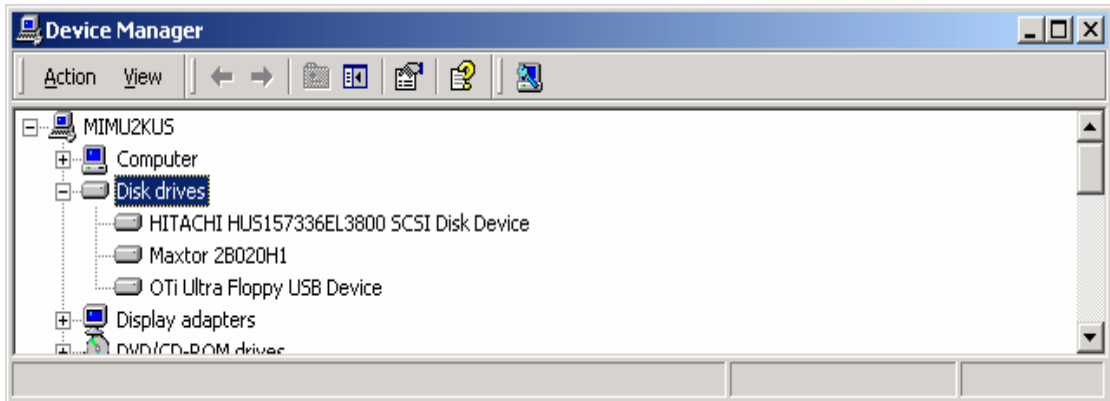| Codes	Description
xx1	**Defective HDA** An Error caused by the HDA was detected. The drive should be replaced.
xx2	**Device not ready** The selected drive is not ready for operation. Check cabling and HDD connectors. If the drive does not come ready after replacing cables and connectors, the drive is defective and should be replaced.
xx3	**Defective Hard Disk Drive Component** An Error caused by the HDA or the PCB was detected. The drive should be replaced.
xx4	**Corrupted Sector** An Error caused by the HDA was detected. You can perform write/read and if the test fails again, the drive is defective and should be replaced.
xx5	**Disk Surface Damage** An Error caused by the disk platter was detected. The drive should be replaced.
xx6	**Defective HDA** An Error caused by the HDA was detected. The drive should be replaced.
xx7	**Format Degraded.** A SCSI low level format was interrupted. The drive should be formatted again.
xx8	**Defective PCB.** An Error caused by the components on the PCB was detected. The drive should be replaced.
xx9	**Write Operation aborted** Write operatin was possibly aborted by the user. You can perform write operation again.
xxF	**Defective Hard Disk Drive Component** An Error caused by the HDA or the PCB was detected. The drive should be replaced.
2x0	**Defective HDA** An Error caused by the HDA was detected. The drive should be replaced.
300	**Device not ready** The selected drive is not ready for operation. Check cabling and HDD connectors. If the drive does not come ready after replacing cables and connectors, the drive is defective and should be replaced.
500	**Device S.M.A.R.T. Error** The self-Monitoring, Analysis and Reporting Technology (S.M.A.R.T.) has detected a drive problem. The drive may fail soon and should be replaced as soon as possible.
600	**Disk Surface Damage** An Error caused by the disk platter was detected. The drive should be replaced.
700	**Device damaged by shock.** This device was possibly damaged by an excessive shock.
800	**Device damaged by shock.** This device was possibly damaged by an excessive shock.
F0x	**No Error** All the tests completed successfully.
A00	**Defective Hard Disk Drive Component** An Error caused by the HDA or the PCB was detected. The drive should be replaced.

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