

Western Digital External Hard Drive

FireWire[®], 1394, i.LINK[™]
Macintosh and PC Compatible





Western Digital External Hard Drive

FireWire, IEEE 1394, i.Link

Installation Guide

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1

Getting Started

What is FireWire?

Defined by the Institute of Electrical and Electronics Engineers (IEEE), the 1394 High Performance Serial Bus (commonly known as FireWire) is a standard for connecting devices to your personal computer.

FireWire is one of the fastest peripheral standards ever developed. With a capability of operating at up to 400 Mbps, it has 30 times more bandwidth than USB, and communicates fast enough to transfer digital video and audio in real time.

Additional Benefits:

- IEEE 1394 and i.LINK™ compatible.
- Hot plug capability that allows you to easily connect a new peripheral without turning off the computer.
- Automatic configuration, no device IDs or terminators.
- Cables are easy to connect, and can be up to 15 feet long.
- Allows connection of up to 63 devices.

FireWire products currently available include the latest hard drives, CD-RW drives, Digital Video (DV) camcorders, scanners, and printers. Western Digital's FireWire PCI Adapter and our FireWire CardBus PC Card enable you to connect devices like these directly to your computer.

Tip: If you need to connect your high-speed digital equipment directly to your laptop computer, look for Western Digital's FireWire CardBus PC Card at your favorite retailer or WD's online store at: www.westerndigital.com.

CAUTION
The Western Digital FireWire external hard drive is not intended as a portable device.

IMPORTANT
A FireWire connection on your computer and Windows 98 SE/Mac OS 8.6 or higher is required to use your FireWire external hard drive. If your computer is not FireWire-enabled, you may be able to add a FireWire adapter. Look for Western Digital's FireWire PCI Adapter at your favorite retailer or WD's online store at: store.westerndigital.com.

Kit Contents



Western Digital FireWire External Hard Drive Kit Contents

Also included: warranty card, power cord, and Quick Install guide.

System Requirements

PC Users

1. Minimum 200 MHz processor
2. 32 MB RAM
3. Built-in FireWire port or a FireWire adapter (OHCI compliant)
4. Windows 98 SE (second edition) or higher
5. CD-ROM drive

Make sure you have Windows 98 SE or higher installed on your system by right-clicking on **My Computer** and selecting **Properties**. The **General** tab in **System Properties** should show "Windows 98 Second Edition."

Mac Users

1. FireWire-enabled Macintosh computer
2. Minimum 32 MB RAM
3. Mac OS 8.6 or higher
4. CD-ROM drive

Make sure you have Mac OS 8.6 or higher installed on your system by clicking on the Apple symbol in the menu bar and selecting **About this computer**. The window will display your version of Mac OS.

Tip: Handle your new Western Digital FireWire hard drive with care—do not drop or jolt the drive.

CAUTION
Do not attempt to open the drive and service it yourself. Removing the cover may expose you to harmful electrical voltages and will void the warranty.

CAUTION
Do not remove any labels from the drive; this action voids the warranty.

Handling Precautions

Western Digital FireWire external hard drives are precision instruments and should be handled with care during unpacking and installation. These drives may be damaged by rough handling, shock, or vibration. Be aware of the following precautions when unpacking and installing your external hard drive:

- Do not unpack your Western Digital FireWire external hard drive until you are ready to install it.
- Save all the packing materials in case you need to return your FireWire external hard drive. Your warranty will be void if your returned drive is shipped in anything other than the original packaging or Western Digital supplied or approved materials.
- Do not drop or jolt the drive.
- Do not attempt to open the drive and service it yourself. Removing the cover may expose you to harmful electrical voltages and will void the warranty.
- To allow proper ventilation, do not block the air slots on the underside and rear of the enclosure.
- **The Western Digital FireWire external hard drive is not intended as a portable device.**

Record Your FireWire External Hard Drive Information

In the table that follows, enter the serial number and model number listed on your new Western Digital FireWire external hard drive. The complete serial number and model number are on the large label on the bottom of the drive.

You will need this information for setup and technical support purposes.

Serial Number:	
Model Number:	Purchase Date:

Gather These Items

- Western Digital FireWire external hard drive
- 6 foot (1.8m) 6-pin to 6-pin FireWire cable
- AC adapter with power cord
- FireWire Disk Utilities software setup CD
- Windows 98 SE Install CD (for Windows 98 SE users only)

2

Installation and Setup

Connecting Your Drive

1. Turn on your computer.
2. Connect the AC power supply (with power cord connected) into the power socket on the FireWire external hard drive, then plug the power cord into an electrical outlet.
3. Plug one end of the FireWire cable (included) into any FireWire port on your computer.
4. Plug the other end of the FireWire cable into either of the FireWire external hard drive ports (port 1 or port 2).

Windows 98 SE users only: When prompted, insert the Windows 98 SE Install CD into your CD-ROM drive. You will see a series of three **Version Conflict** dialog boxes, each informing you that the file being copied is older than the file currently on your computer.

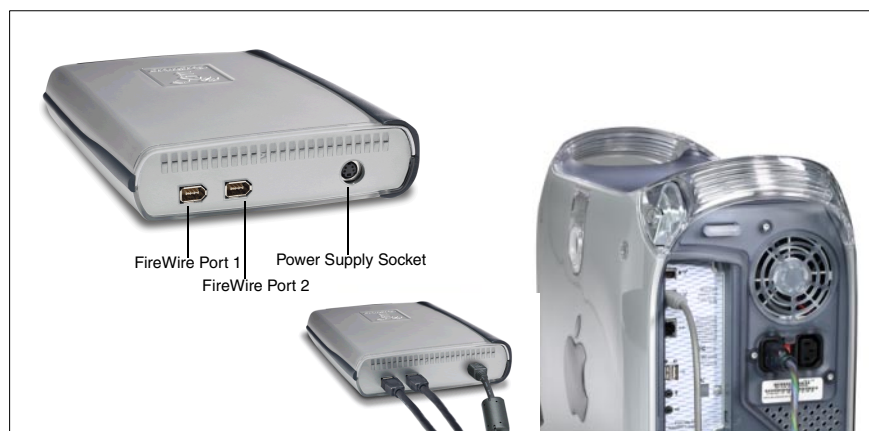
IMPORTANT: Click **Yes** in each dialog screen to keep your existing file (clicking **No** will prevent the drivers from loading properly). These dialog boxes will only display the first time you install your FireWire external hard drive.

Macintosh users only: **You must first install the FireWire Disk Utilities software on the computer before connecting the drive.** This is to ensure that the Western Digital FireWire Extensions will be utilized to achieve maximum compatibility and performance with your new WD FireWire external hard drive.

IMPORTANT
Do not attempt to force a FireWire connector into a port as this could result in severe hardware damage.

CAUTION
Always follow this installation sequence or it may take longer for your system to recognize the drive.

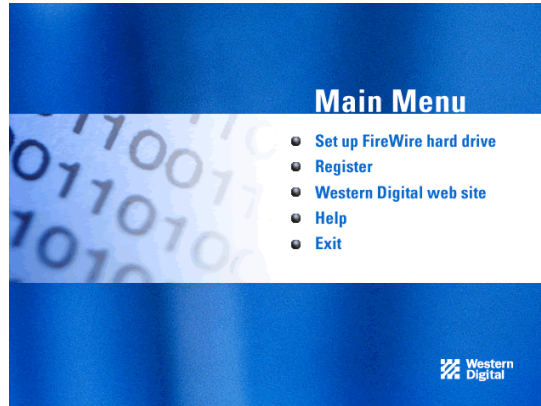
FireWire External Hard Drive Rear Panel and Installation



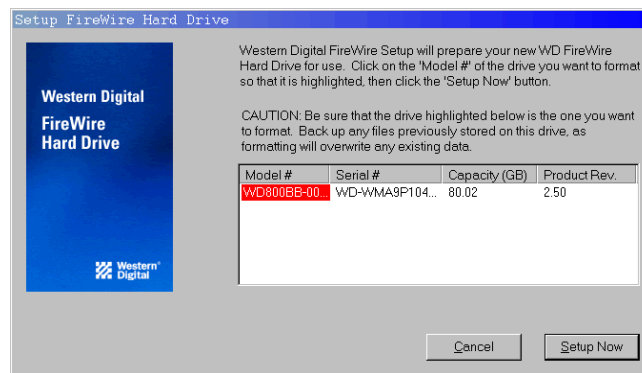
Software and Drivers Installation

Windows® Setup

1. Insert the WD FireWire Disk Utilities software setup CD into your CD-ROM drive. The program will start automatically.
2. When the **Main Menu** dialog appears, select **Set up FireWire hard drive**.



3. Read the license agreement that displays (scroll down if necessary to activate the **I Accept** button). Click **I Accept**.
4. The **Setup FireWire Device** dialog appears next, showing the drive(s) detected in your system. Check the serial number of your new FireWire external hard drive and make sure it matches the serial number displayed in this dialog.



Once the program has selected the new FireWire hard drive, click **Setup Now**. This process may take several minutes.

5. After installation is complete, you will be prompted to register your Western Digital FireWire external hard drive. Click **Register Now**. You must register your hard drive to receive 90 days of free Western Digital technical support. Click **Next** after entering your product registration information in each screen.

NOTE

Autorun may take up to 30 seconds to launch. If the program does not start automatically, open Windows Explorer, click on the CD-ROM drive icon, then double-click on the Setup.exe file.



IMPORTANT

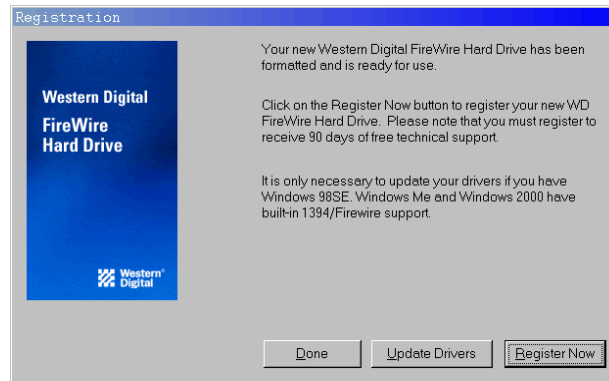
You must register your Western Digital FireWire external hard drive to receive 90 days of free technical support.

6. *Windows 2000/Millennium users only:* Your version of Windows already has the required FireWire driver support. When the Congratulations dialog box appears, click **Done**. When you have finished installing all software, click **Exit** in the Main Menu, then click **Close**.

Windows 98 SE users only: Click on **Update Drivers** to update your Microsoft FireWire storage drivers.

NOTE

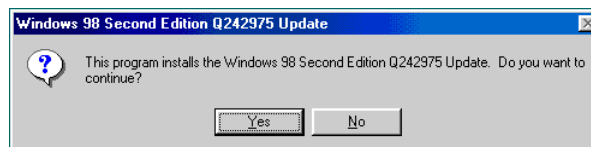
Western Digital has included the latest available release of Microsoft® FireWire drivers as of the print date of this install guide. Should you encounter any operating system issues, please check for a newer version of the FireWire drivers on Microsoft's Web site (search under FireWire or 1394).



NOTE: It is highly recommended that you update your FireWire storage drivers to optimize the performance of your FireWire hard drive and provide hot plug capability (see “Unplugging Your FireWire External Hard Drive” on page 9).

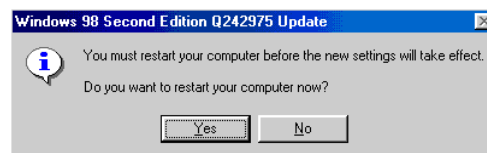
If you have a non-US/English version of Windows, you will be directed to Microsoft's Web page to download the correct FireWire driver.

The **Windows 98 SE Update** dialog displays. Click **Yes** to continue and complete your installation successfully.



The Microsoft license agreement for the Windows 98 SE Update displays. Click **Yes** to continue.

You must restart your computer for the new settings to take effect. When prompted to restart, click **Yes**.



NOTE

If you have a non-US version of Windows, you will be directed to Microsoft's Web page to download the correct FireWire driver.

NOTE

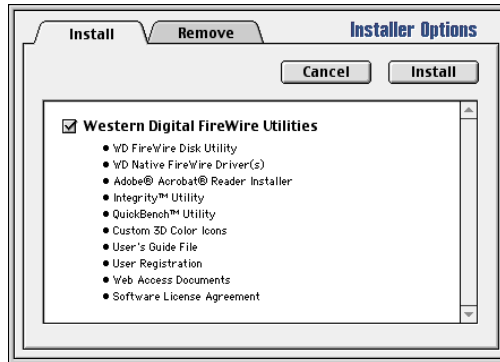
You must install the FireWire Disk Utilities software setup CD on the computer before connecting the drive.

Macintosh Setup

1. Insert the WD FireWire Disk Utilities software setup CD. The following screen appears:



2. Double-click on the WD FireWire Software Installer icon. The following WD FireWire Installer dialog displays:



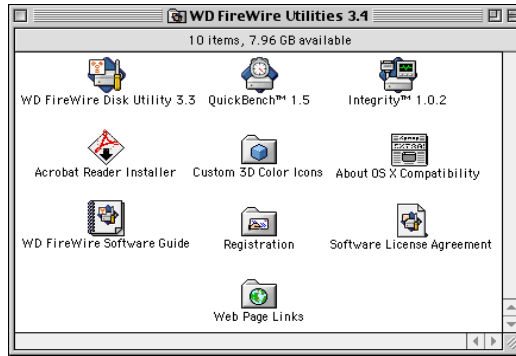
3. Click **Install**.
4. The Software License Agreement displays. Read all the information on this page. Click **Accept**. The following screen appears:



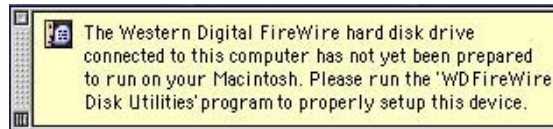
5. Click **Save** to install WD FireWire Utilities 3.4 in your selected location on the Macintosh.
6. **Eject** the CD and **restart** the computer.
7. After installation is complete, you will be prompted to register your FireWire external hard drive. Click **Register Now**. You must register your drive to receive 90 days of free Western Digital technical support. Click **Next** after entering your product registration information in each screen.

Tip: For complete instructions on the operation of WD FireWire Disk Utilities and extensions, refer to the WD Software Guide located in the WD FireWire Utilities 3.4 folder.

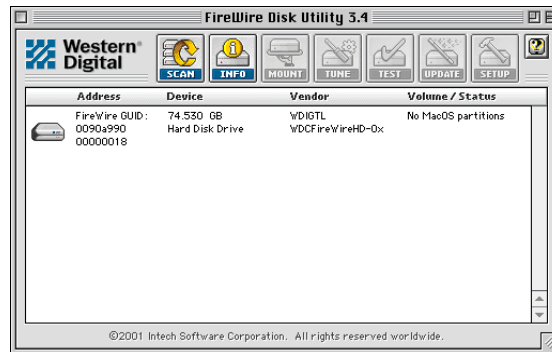
- Double-click on the WD FireWire Utilities 3.4 folder in the saved location. You will see the following window:



- Connect your Western Digital FireWire external hard drive. The following dialog will appear on your desktop as a reminder to set up your drive.



- Double-click on the WD FireWire Disk Utility 3.4 icon.
- Click to highlight the WD FireWire hard drive picture.



NOTE

Hard drives are reported in terms of decimal (base 10) capacity, where 1 MB = 1,000,000 bytes and 1 GB = 1,000,000,000 bytes. However Apple's operating system (MAC O/S), FDISK and other utilities report drive capacity in binary capacities, where 1MB = 1,048,576 and 1 GB = 1,073,741,824. Hence, the listed hard drive capacity is less than the advertised capacity.

- Click **Setup**. The "WD FireWire HD" icon will appear on your desktop.
- Click Mac OS Extended or Mac OS Standard (read text in dialog box to determine which option is best for your system).

Your Western Digital FireWire external hard drive is now formatted as a single volume and ready to use. For complete instructions on the operation of WD FireWire Disk Utilities and extensions, double-click on the WD Software Guide icon located in the WD FireWire Utilities folder. This will open Adobe Acrobat Reader and display the WD FireWire Disk Utilities User's Guide in PDF format.

Unplugging Your FireWire External Hard Drive

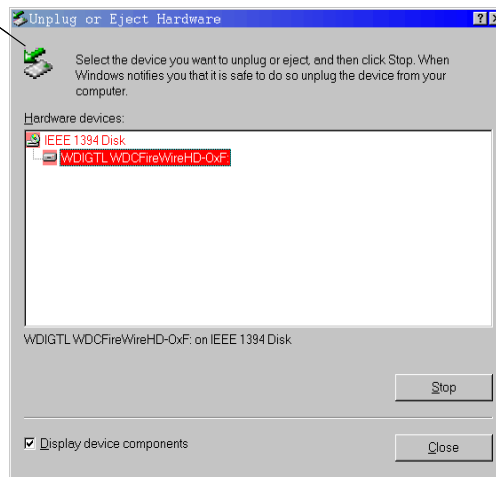
CAUTION
The Western Digital FireWire external hard drive is not intended as a portable device.

CAUTION
Do not unplug your FireWire external hard drive while copying files as this could result in data loss and disk damage.

Windows Users

Double click on the Windows **Unplug or Eject Hardware** icon in your system tray (located in the bottom right corner of your screen—see the dialog box below for a depiction of this icon). The following dialog box displays:

Unplug or Eject Hardware system tray icon



Select and highlight **WD FireWire HD** from the list, then click **Stop**. To confirm your selection of the drive to be disconnected, click **OK**.

**CAUTION**

Do not unplug your FireWire external hard drive while copying files as this could result in data loss.

Tip: If you want to move information back and forth across platforms, remember that a Mac can read PC-formatted drives but a PC will not recognize Mac-formatted drives.

Macintosh Users

There are two ways to unplug your FireWire external hard drive. One option is to click on the **WD FireWire HD** icon on your desktop and press **⌘ + Y**.

You can also do the following:

1. Drag the icon for the Western Digital FireWire external hard drive to the Trash.
2. Wait until the disk icon disappears from the desktop.
3. Disconnect the FireWire cable from the computer.
4. Disconnect the power supply cord.

To re-mount the drive, ensure that your FireWire cable is connected to both your hard drive and your computer, then do the following:

1. Double-click on the WD FireWire Disk Utilities 3.4 folder on your desktop.
2. Double-click on the WD FireWire Disk Utility 3.4 icon.
3. Click on the WD FireWire hard drive picture.
4. Click **Mount**.

3

Multiple Device Connection

FireWire Connection Instructions & Limitations

FireWire devices can be connected in any combination of branching and chaining, as long as no loops are formed. A FireWire bus can support up to 16 consecutive cable hops of 4.5 meters (14.76 feet) each. There are no SCSI-style ID numbers to set and no termination requirements.

FireWire Connection Guidelines

Follow these guidelines for connecting FireWire devices to the computer:

- Do not connect more than 63 devices at one time (including computers). If possible, connect slower devices at the end of the chain.
- Do not connect devices in such a way that any two devices have more than 16 cables directly connected between them.
- Do not connect FireWire cables in a way that forms a ring of devices.
- Unused FireWire connections should be left empty. There are no terminators for FireWire connections.
- Connect devices that require power from the FireWire bus directly to the computer or a FireWire hub.
- Do not unplug a FireWire device while it is being used. For example, do not unplug a FireWire hard drive while copying files onto it.
- If you have problems with digital video transfers, make certain that no other FireWire devices are being used at the same time.
- If for any reason the application program cannot establish contact with the FireWire external hard drive, the bus may be reset by momentarily unplugging the FireWire cable from the drive and replugging it.



CAUTION

If these guidelines are not followed correctly, your computer and other FireWire devices may not operate correctly.

Appendix A: Specifications

Interface Specifications

- IEEE 1394 compliant
- OHCI compliant
- SBP-2 compliant
- Supports serial bus data transfer rates of 100, 200, and 400 Mb/sec
- Two external 6-pin FireWire connectors
- Hot-plug capability
- UDMA66 IDE/Bridge data transfer mode

Drive Specifications

	80 GB
Formatted Capacity	80,026 MB
Actuator Type	Rotary Voice Coil
Servo Type	Embedded
Dedicated Landing Zone	Yes
Actuator Latch/Auto Park	Yes
Model Number	WD800B002-RNN

Performance Specifications

Average Read Seek	8.9 ms (typical)
Track-to-Track Seek	2.0 ms (typical)
Average Latency	4.2 ms
Rotational Speed	7200 RPM
Buffer	2 MB
Drive Ready Time	8.0 sec average

Environmental Conditions

Operating Temperature	0° to 40°C
Non-Operating Temperature	-20° to 65°C
Acoustics (typical)	<i>Idle Mode</i> : 33 dBA average

Power Requirements

AC Input Voltage	100-240 VAC
AC Input Frequency	50-60 Hz
AC Input Current	0.6A max (RMS)

Physical Dimensions

Height	1.74 in. (44.20 mm) ± .10
Length	8.61 in. (218.75 mm) ± .10
Width	6.08 in. (154.43 mm) ± .10

Appendix B: Regulatory Compliance

FCC Class B Information

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio/TV Interference Problems." This booklet is available from the US Government Printing Office, Washington, DC 20402. Stock No. 004-000-00345-4.

CSA Notice

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

This digital apparatus does not exceed the Class B limits for radio noise for digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Underwriters Laboratories

UL-Standard 1950, Standard for Safety of Information Technology Equipment including Electrical Business Equipment (File E101559).

CE Compliance For Europe

Verified to comply with EN55022 for RF Emissions and EN50082-1 for Generic Immunity, as applicable.

Appendix C: Warranty Information

Obtaining Service

Western Digital Technologies, Inc. (WDT) values your business and always attempts to provide you the very best of service. If this Product ever requires maintenance, either contact the dealer from whom you originally purchased the Product or telephone WDT's Technical Support Department. No Product may be returned directly to WDT without prior authorization. You may obtain a return authorization via www.westerndigital.com/service or contact our Technical Support Department at 800.275.4932, or +31.20.446.7651 in Europe. If it is determined that the Product may be defective, you will be given a Return Material Authorization (RMA) number and instructions for Product return. An unauthorized return (i.e., one for which an RMA number has not been issued) will be returned to you at your expense. Authorized returns must be shipped in an approved shipping container, prepaid and insured, to the address provided on your return paperwork. For more information on packaging or for our shipping address, go to www.westerndigital.com/service. Your original box and packaging materials should be kept for storing or shipping your Western Digital FireWire external hard drive. In order to conclusively establish the period of warranty, check warranty expiration (serial number required) via www.westerndigital.com/service or contact our Technical Support Department at 800.275.4932, or +31.20.446.7651 in Europe. WDT shall have no liability for lost data, regardless of the cause, recovery of lost data, or data contained in any Product placed in its possession.

1 Year Limited Warranty

WDT warrants that the Product, in the course of its normal use, will be free from defects in material and workmanship for a period of one (1) year and will conform to WDT's specification therefor. This limited warranty period shall commence on the purchase date appearing on your purchase receipt.

WDT shall have no liability for any Product returned if WDT determines that the Product was stolen from WDT or that the asserted defect a) is not present, b) cannot reasonably be rectified because of damage occurring before WDT receives the Product, or c) is attributable to misuse, improper installation, alteration (including removing or obliterating labels), accident or mishandling while in your possession. Subject to the limitations specified above, your sole and exclusive warranty shall be, during the period of warranty specified above and at WDT's option, the repair or replacement of the Product. The foregoing warranty of WDT shall extend to repaired or replaced Products for the balance of the applicable period of the original warranty or ninety (90) days from the date of shipment of a repaired or replaced Product, whichever is longer.

The foregoing limited warranty is WDT's sole warranty and is applicable only to products sold as new. The remedies provided herein are in lieu of a) any and all other remedies and warranties, whether expressed, implied or statutory, including but not limited to, any implied warranty of merchantability or fitness for a particular purpose, and b) any and all obligations and liabilities of WDT for damages including, but not limited to accidental, consequential, or special damages, or any financial loss, lost profits or expenses, or lost data arising out of or in connection with the purchase, use or performance of the Product, even if WDT has been advised of the possibility of such damages.

In the United States, some states do not allow exclusion or limitations of incidental or consequential damages, so the limitations above may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Appendix D: Technical Support Services

Your new Western Digital FireWire external hard drive includes 90 days of free technical support from the date of purchase. **To be eligible for the free technical support, you must register your product with Western Digital.** Should you require additional technical support after the 90-day time period, Western Digital offers extended support services for your FireWire hard drive at a rate of \$15.00 per incident after the free period.

Take advantage of various Western Digital offerings by registering your FireWire hard drive today at www.westerndigital.com and clicking on the Registration link.

Online Service

www.westerndigital.com/service

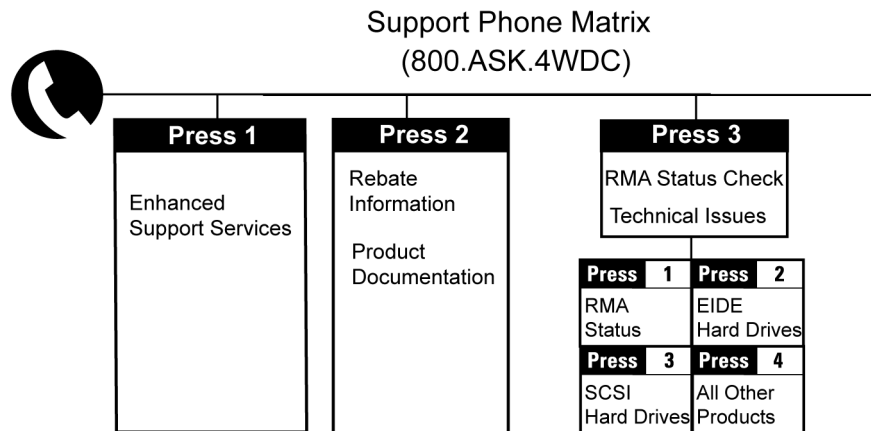
Telephone Assistance

800.ASK.4WDC (800.275.4932), +31.20.446.7651 (Europe)

If you need additional information or help during installation or normal use of this product, contact Western Digital Technical Support. When calling for support, please have your Western Digital FireWire external hard drive serial number and system hardware and software versions available (certain services may not be available without the drive model and serial number).

	USA/Canada/Outside USA (Central Time)	Europe (Central European Time)
Telephone Numbers	800.ASK.4WDC	+31.20.446.7651
Monday - Thursday	9:00 am - 7:00 pm	8:00 am - 5:00 pm
Friday	9:00 am - 6:00 pm	8:00 am - 3:00 pm
Saturday	8:00 am - 11:45 am 1:00 pm - 5:00 pm	

Technical Support Phone Matrix



Western Digital
20511 Lake Forest Drive
Lake Forest, California 92630

2079-001008-002 09/01