



CD RECORDERS

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DVD-RAM

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DVD-R/RW

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HARD DRIVES

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RAID ARRAYS

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USB 2.0

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FIREWIRE

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SCSI

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FIBRE CHANNEL



## YOUR FANTOM DRIVES OWNERS MANUAL

Thank you for choosing Fantom Drives! Your Fantom Drives disk drive has been built to the highest standard of quality and workmanship and, when used according to the instructions in this guide, will provide years of trouble-free operation. We at Fantom Drives take great pride in bringing personal satisfaction to each of our customers.

Your drive is compatible with all FireWire or USB-capable Apple Macintosh computers running MacOS 9.1 (or greater), MacOS 10.1 and Jaguar (or greater) and PC-Compatible computers running Windows 98SE, Millennium Edition, Windows 2000, or Windows XP.

## **Table of Contents**

Table of Contents.....	2
Package Contents.....	3
Getting to know your Fantom Drive.....	4
Hardware Installation	
Internal Models .....	5
External FireWire Models .....	6
External USB 2.0 Models .....	6
Product Specification- Hard Disk Drives.....	6
Product Installation	
Hard Disk Drives- Apple Macintosh Systems .....	7
Hard Disk Drives- Microsoft Windows Systems .....	8
Optical Disk Drives- Microsoft Windows Systems.....	10
Optical Disk Drives- Apple Macintosh Systems.....	11
Product Specification- Optical Disk Drives.....	11
Optical disk drives Operation.....	12
Daily Use Tips.....	13
Troubleshooting Frequently Asked Questions .....	14
FCC Compliance Statement .....	16



## Package Contents

### Fantom Drives External Disk Drives contain:

- 1 External Hard Disk Drive
- 1 Disk Drive stand (Titanium Models)
- 1 Power supply and cord
- 1 FireWire cable (FireWire Models)
- 1 USB 2.0 cable (USB 2.0 Models)
- 1 Hard Disk Speedtools software CD
- 1 Users Manual



### Fantom Drives External Optical Drives contain:

- 1 External Optical Disk Drive
- 1 Power supply and cord
- 1 FireWire cable (FireWire Models)
- 1 USB 2.0 cable (USB 2.0 Models)
- 1 Users Manual



### DVD-RW MODELS

- 1 DVD Video Suite CD
- 1 Mac CD Burning Software CD

### CD MODELS

- 1 PC CD Burning Software CD
- 1 Mac CD Burning Software CD

### DVD-RAM MODELS

- 1 DVD-RAM Driver CD
- 1 Mac driver software CD

### DVD-ROM MODELS

- 1 PC DVD Playback Software CD

### Fantom Drives Internal Optical Disk Drives contain:

- 1 Internal Optical Disk Drive
- 1 IDE Ribbon Cable
- 1 Audio cable
- 1 Mounting Screw pack
- 1 Users Manual
- 1 Registration Card

### DVD MODELS

- 1 DVD Video Suite CD
- 1 Mac CD Burning Software CD

### CD MODELS

- 1 PC CD Burning Software CD
- 1 Mac CD Burning Software CD





## Getting to know your Fantom Drive

### Minimum System requirements

**Microsoft Windows systems:** Intel Pentium II-450MHz or compatible, running Windows 98SE or greater, Windows ME, Windows 2000, Windows XP, or Windows 2003.

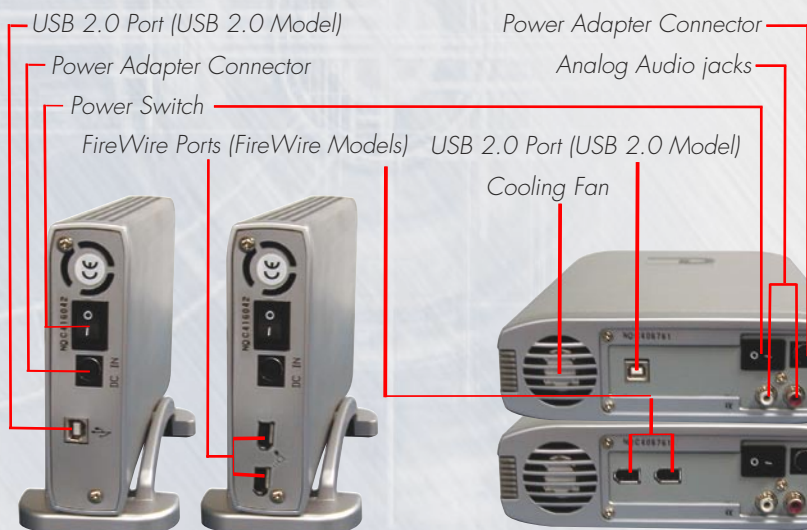
**MacOS systems:** PCI PowerMac or newer, running MacOS 8.6 or greater, or MacOS 10.1.5 or greater. If your operating system is earlier than MacOS 9.0.4, you may need to update your Apple FireWire extensions. Double click the "Download FireWire Drivers" icon on your installation CD to link to Apple's web site, or visit <http://www.apple.com> to obtain the latest drivers.

### Product Details

#### Fantom Hard Disk Drives:



#### Fantom Optical Drives:



# Hardware Installation

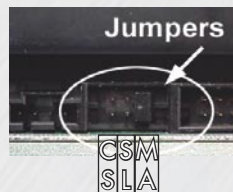
## Internal IDE Models

Before beginning drive installation, disconnect power from your computer system. The following steps must be performed to properly install your drive:

### 1. Set Drive Jumper Settings

The mode select jumpers are 6 straight angle pins located on the rear of the DVD-R/-RW Combo drive.. By placing a jumper on the pins, you can select the ATA device operating Mode:

*MA: Master, default position*  
*SL: Slave configuration*  
*CS: Cable Select configuration*

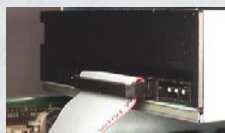


### 2. Mount Drive

Remove computer cover and faceplate if required. Refer to your computer system's manual for removal information. If the drive is replacing a CD-ROM, remove CD-ROM presently installed in your system. Place the drive in any free half-height drive slot at the front of your computer. (It can be mounted horizontally or vertically.) Carefully start sliding the drive into the opening with the disc tray facing the front of the computer. Before you push the drive all the way in complete steps 3-5.

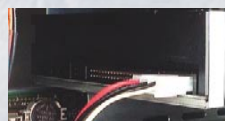
### 3. Attach IDE BUS Cable

Your computer system should have a primary and secondary IDE BUSES, with your Hard Drive most likely being the Master on the primary BUS. Connect BUS cable as follows, assuring that pin 1 of cable (side with red stripe) is connected to pin 1 (closest to the power connector) of the drive's interface connector. Please remember that each BUS can only have one master and one slave devices.



### 4. Attach Power Cable

Connect an internal computer power supply cable to the power socket at the back of the drive. One side of the plug has beveled edges, so the power connector fits only one way. Push plug completely into the socket making sure the plug fits correctly



### 5. Attach audio cable

If you have a sound card and speakers, and would like to play audio CDs on your computer, you will need to install a CD/DVD audio cable. The sound cable connects to your sound card at one end and the other end connects to the digital audio connector at the left rear of the drive. Refer to the instructions that came with your sound card for details on any sound-driver software required



### 6. Completing the installation

After you have connected all the necessary cables, push the drive completely into the computer's drive slot. Mount drive per your computer's instructions, and fasten using the included screws. Replace computer cover and all outer screws.

## Hardware Installation

**IMPORTANT: if your drive is delivered under hot or cold conditions, please allow the drive to reach room temperature before operating to prevent damage.**

### External Hard Disk Drive Models



#### FireWire

- Plug the included power cable into the power connector on your drive and plug the other end into a grounded electrical outlet.
- Press the power switch to turn on your Fantom Drives storage device, then power-on your computer.
- Connect one end of the included 6-pin IEEE-1394 peripheral cable to one of the FireWire ports on the rear of your drive.
- Connect the other end to one of your computer's FireWire ports, or to the FireWire port on a device already connected to your computer.



#### USB

- Connect the power cable to your USB Hard Disk Drive and plug it into a grounded outlet.
- Press the power switch to turn on your Fantom Drives FireWire/USB 2.0 Storage Device.
- Connect the square end of the included peripheral cable to the USB port on the rear of your Fantom Drives USB Storage Device.
- Connect the rectangular end of the cable to a free USB port on your PC or USB hub.



Note: in order to reach USB 2.0 speeds, you must have a computer or host adapter that has USB 2.0 support. Your Fantom Drives storage device will autosense the highest available connection speed.

### Specifications- Hard Disk Drives

Capacities.....	80,120, 160, 180, 200, 250GB
Buffer Size.....	>2MB
Track to Track.....	0.8
Full Stroke.....	17
Data Transfer Rate.....	30-38MB/s
Sector Size.....	512 bytes
Latency.....	<4.17 ms
Seek time (average).....	<8.5 ms
Internal Drive Interface.....	ATA 133
Cable Transfer Rate.....	400Mb/s (FireWire) 480Mb/s (USB 2.0)
Rotational Speed.....	7200RPM
Dimensions.....	5.3"x8.8"x1.5"
Weight.....	2.4 lbs
Power Supply.....	110-240 Volts Auto Switching



# Installation-Hard Disk Drives

## Macintosh OS 9 and X

Installation on a MacOS system requires MacOS 8.6 or greater. The FireWire drivers for your product do not support operating systems earlier than MacOS 8.6. No Additional software is necessary for installation under MacOS X. If your operating system is earlier than MacOS 9.0.4, you may need to update your Apple FireWire extensions. Double click the "Download FireWire Drivers" icon on your installation CD to link to Apple's web site, or visit <http://www.apple.com> to obtain the latest drivers.

### MacOS 8.6-9.x

1. Insert the included Hard Disk Speedtools Installation CD into your computer's CD drive.
2. Double click the Hard Disk Speedtools installer Icon.
3. Check the Hard Disk Speedtools and the HDST Firewire support or USB Support extensions in the installer as illustrated, and press the install button.
- 4a.(FireWire) Follow the on-screen instructions to finalize the installation. Please make sure that you have no other Firewire disk extensions enabled besides Apple's Firewire Enabler and Firewire Support.
- 4b.(USB) Follow the on-screen instructions to finalize the installation. Please make sure that you have no other USB disk extensions enabled besides Apple's USB Enabler and USB Support.
5. Run Hard Disk Speedtools, select your drive and press the "setup" button.
6. Your Fantom Drives Firewire storage device is ready to use!



Hard Disk Speedtools™



Hard Disk Speedtools™ Installer

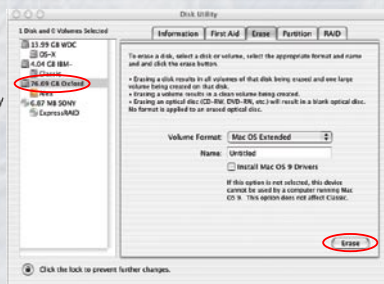


### OS-X 10.1 and Jaguar

Launch the "Disk Utility" application located under Applications/Utilities folder. Highlight your new drive and select the "Erase" tab. Select the desired file system format and click the "Erase" button. Your Fantom Drives FireWire Disk Drive is ready to use!



Disk Utility



### Disk Format Considerations

Your Fantom drive comes with DrivePC, a FAT32 formatter utility as part of the Hard Disk Speedtools Suite. Should you require cross platform compatibility with Windows, please make sure to use DrivePC to partition and format your drive. Please take note that MacOS will only recognize FAT32 partitions of up to 128GB in size, so please create multiple partitions on drives bigger than 128GB.



- If you have a Blue and White G3, please make sure to update your firmware and have version 1.1 or greater
- Final Cut users may need to tune the drive to use smaller packet size or load size. Consult the HDST documentation for more information.

## Installation-Hard Disk Drives

### Microsoft Windows

Installation on a Windows system requires Windows 98SE, Windows Millennium, Windows 2000, or Windows XP. FireWire and USB are not supported on Windows 95, earlier versions of Windows 98, or Windows NT 4.0 and earlier. No Additional software is necessary for installation under Windows ME, Windows 2000, or Windows XP.

### Windows 98/ME

Please be sure to have your Windows 98/ME installation CD available as it may be required during installation. Please skip to step 4 for Windows ME installations.

1. Before connecting your Fantom Drives Firewire Storage Device, please install one of the following:

**FireWire:** Please install the Microsoft 1394 Supplemental Storage Update (Microsoft Support Document Q242975). This update can be downloaded from Microsoft or from the Fantom Drives Support web page.

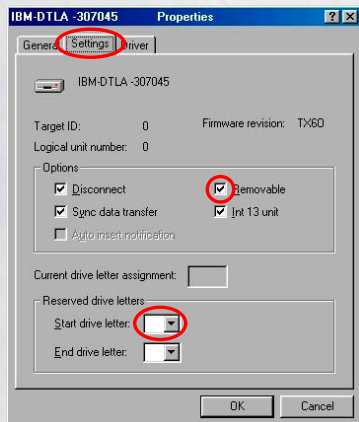
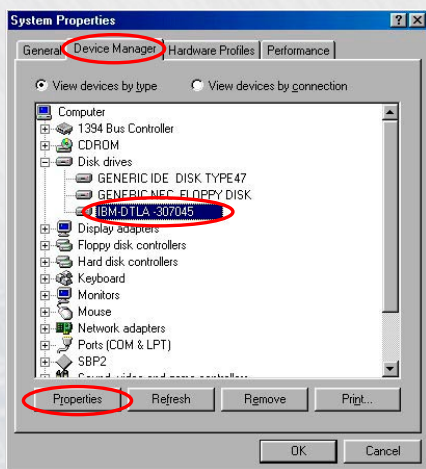
**USB:** please insert the included driver CD-Rom and run "TPPINST.EXE". Select Complete Install, and reboot the computer when prompted.

Drivers will only be required the first time you install your Fantom Drives disk drive.

2. Connect and power on your Fantom Drive and reboot your computer

3. Plug and Play will detect your Fantom Drive and will install the necessary software. Should any Version Conflict dialog boxes pop up, click YES to keep the existing files. Do not click on the cancel button, as this will prohibit the drivers from loading properly. If Windows cannot find the driver, please download the appropriate driver from [www.fantomdrives.com/support/swupdates.php4](http://www.fantomdrives.com/support/swupdates.php4), decompress it to a temporary directory, and direct Windows to that directory in the driver installation dialog. These dialog boxes will only display the first time you install your drive.

4. Right click on "My Computer" on your desktop, and select Properties. Click on the Device Manager tab (top illustration,) expand the "Disk Drives" icon, locate and select the new device, and click the "Properties" button.





## Installation-Hard Disk Drives

5. Under the "Settings" Tab, check the "removable" check box (bottom illustration.) With the removable box checked, you will be able to assign the drive a new letter below (be sure you select a letter that is not already in use by another drive).
6. Press the "OK" button and reboot. Your Fantom Drives Firewire Storage Device is ready to use!

### Windows 2000/XP Installations

Windows ME, 2000, and XP will auto detect your Fantom Drives Storage Devices and mount them automatically!

### Disk Format Considerations

The two prevalent file system formats for PCs are FAT32 and NTFS. Performance is very similar between the two systems.

*NTFS* is a newer file system that is compatible only with Windows NT, Windows 2000 and Windows XP. It has fewer limitations than FAT32 and will enable a partition to be created that is larger than 32GB.

*FAT32* is a file system that is compatible with Windows 98 SE, Windows Me, Windows 2000 and Windows XP; In Windows 2000 and Windows XP, you will not be able to create a partition greater than 32GB.

#### Use FAT32 if:

- You will be dual booting/accessing data with an Operating System other than Windows NT/Windows 2000/XP.
- You may need the ability to dual boot down the line. Once you have converted a volume from NTFS to FAT32, there is no going back. You can convert from FAT32 to NTFS, but not the other way around.
- You want to connect to a Mac and have access to the data. Please note that MacOS cannot support FAT32 partitions greater than 128GB.

#### Use NTFS if:

- You want to encrypt files, assign permissions to files, or want to audit files for access.
- You will be formatting partitions larger than 32GB.
- You need to store individual files that are larger than 4GB, or you use a backup program that writes large files.
- You need a filing system that can be mirrored or structured like a RAID 5 configuration.



To reach USB 2.0 speeds, you must have a computer or host adapter that has USB 2.0 support. Your Fantom Drives storage device will autosense the highest available connection speed.

## Installation: Optical Drives

### Microsoft Windows

Installation on a Windows system requires Windows 98 or greater. The USB drivers for your product do not support Windows 98/Windows NT4 or earlier. No Additional software is necessary for installation under Windows ME, Windows 2000, or Windows XP.

#### Windows 98



**USB:** Before connecting your Fantom Drive, please install the driver on the included CD-Rom. Please be sure to have your Windows 98 installation CD available as it may be required during installation.



**FIREWIRE:** Before connecting your Fantom Drive, please install the Microsoft 1394 (Microsoft Support Document Q242975). This update can be downloaded from Microsoft or from the Fantom Drives Support web page. Please be sure to have your Windows 98 installation CD available as it may be required during installation.

### Completing the Installation

1. Turn on your computer. Wait until startup has completed.
2. Plug in the power on your Fantom Drives optical drive and turn it on. Please confirm that the Power LED comes on, indicating that the drive is powered up.
3. Connect the drive to the computer. Windows will detect the new device and load Microsoft's native driver for your Fantom Drive. If this driver was not installed during the initial installation of Windows, you may be asked to insert your Windows installation CD-ROM in your computer's internal CD/DVD-ROM drive. After Windows is done with the driver installation, you may be asked to restart your computer.


Your Fantom Drives DVD drive includes DVD authoring and archive software, which allows you master digital video and data alike! Please take a moment to review the Hardware requirements for different mastering applications:

I Want to	I Need
Create a VCD Movie	a 450MHz Pentium II or better
Create a DVD Movie	a 700MHz Pentium III or better
Capture DV in real time and compress to MPEG1	a 700MHz Pentium III or better
Capture DV in real time and compress to MPEG2	a 1.7GHz Pentium IV or better
Capture DV in real time and compress to AVI	a 450MHz Pentium II or better
Capture Non real time video	a 450MHz Pentium II or better


# Installation: Optical Drives

## Macintosh Systems

1. Insert the included software installation CD into your computer's CD-ROM drive.
2. Double click the installer Icon.
3. Follow the on-screen instructions to finalize the installation.
4. Reboot your computer. Your Fantom Drives optical storage device is ready to use!



Additional Software may be included with your product. Please be sure to review all documentation on the included software CDs.



**A NOTE ABOUT DVD PLAYBACK:**

At the time of publication of this manual, iDVD provided with MacOS does not support DVD-Video playback by external DVD peripherals. While it is technically possible to watch DVD films on a Mac using your Fantom Drives DVD drive, we cannot, for legal reasons, provide the necessary extensions for iDVD use; Check the Apple and Fantom Drives web sites regularly for any updates. DVD playback is possible using third party playback software.

**ATTENTION Mac OS 9.x users:**

The included burning software installs extensions necessary for their operation, and may conflict with the Apple Firewire Authoring Support extension. You may be required to disable Apple's Authoring Support extension. Please note that with Apple's FireWire Authoring Support extension disabled you will not be able to use Apple's Disk Burner or iTunes' burn to CD function. For more information about enabling and disabling extensions, please see your MacOS user manual.

## Specifications- Optical Disk Drives

Models .....	CD-RW, DVD-RW, DVD Dual-RW (+/-) DVD-ROM, DVD-RAM
Buffer Size.....	2MB-8MB
Access Time.....	<120ms
Data Transfer Rate.....	up to 7.8MB/s
Buffer Underrun Protection.....	supported
Internal Drive Interface.....	ATA 100
Cable Transfer Rate.....	400Mb/s (FireWire) 480Mb/s (USB 2.0)
Rotational Speed.....	up to 52x (CD)/ Up to 16x (DVD)
Dimensions (External).....	12.25"x10.25"x4.25"
Weight.....	4.7 lbs
Power Supply.....	110-240 Volts Auto Switching

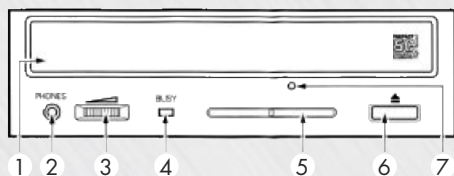


## Product Operation-Optical Disk Drives

The DVD-RW/+RW formats are designed as user recordable formats that are compatible with the existing DVD environment, which means that data written to DVD-RW/+RW will be physically compatible with your desktop or set-top DVD players. As with standard DVDs, DVD-RW/+RW discs can contain up to 4.7GB of data per side, and can be used to store video, audio, or user file data. The DVD-RW/+RW format is a member of the DVD Forum's family of DVD Specifications, and is a rewriteable medium that allows users to record, erase, and re-record their own DVD discs more than 1000 times.

### CD/DVD Operations

- 1) Disc Tray-Auto-loading using the Eject button
- 2) Headphone stereo mini-jack
- 3) Volume Control
- 4) Read/Write Indicator
- 5) Ventilation Holes (do not block)
- 6) Eject button
- 7) Forced Ejection hole



### CD/DVD media precautions


- Do not use or store CD/DVD media in dirty or dusty locations; in locations subject to extreme temperatures; in warm or humid locations where condensation may form; or in locations exposed to direct sunlight.
- Do not use cracked, warped or damaged CD/DVD media. The media may break up inside the drive, damaging it and possibly leading to injury.
- Do not touch or write on the disc surface.
- Do not drop, bend or flex the discs, or place any heavy objects on them.
- Do not apply any labels that may come loose inside the drive.
- Store cartridges in their protective sleeves when they are not being used.
- Do not incinerate CD/DVD media: discs that are no longer used should be disposed of according to local regulations.

### Emergency ejection of DVD and CD media

In the event that a media cannot be ejected with the load/eject button and when no software is controlling the drive, an emergency eject operation will open the media tray. Insert a small metal poker, such as an unbent paper clip, into the opening until it presses against the manual eject mechanism. You will feel the mechanism eject the media tray. Use this method only when the load/eject button is not working.

**Warning! Make sure the drive has been off for a minute or longer, that the disc has stopped spinning in the drive and that the power is unplugged before attempting the emergency ejection procedure.**

## Daily Use Tips

- Read this User's Guide carefully. Follow the correct procedure when setting up the device.
- Additional application software may have been included with your drive. Please review the documentation included with this software for information on the operation and support of this software. The documentation can usually be found in an electronic format on the installation CD.
- Always operate your drive on a steady, level surface. Do not move the unit while it is turned on.
- Plug your drive into a grounded electrical outlet. The use of "ground-defeating" adapters will cause damage not covered by your warranty.
- Do not open your hard drive or attempt to disassemble or modify it. Never insert any metallic object into the drive to avoid any risk of electrical shock, fire, short-circuiting or dangerous emissions. Your drive contains no user serviceable parts. If it appears to be malfunctioning, have it inspected by a qualified Fantom Support representative.
- When disconnecting a FireWire or USB drive, always make sure it has been properly shut down- failure to do so may cause data loss!
- You can connect or disconnect your Fantom Drives Storage Device to your computer while the power is turned on; however, make sure that no other devices on the connection are active when "hot-plugging" or disconnecting your device.  
Macintosh: drag the drive icon to the trash (or select the "Put-Away" command from the File menu) to remove it from the desktop.  
Windows: double click the "unplug or eject hardware" icon  located at the edge of your start bar. Select the device and press the "stop" button (Windows) before disconnecting the drive.
- Fantom Drives Hard Disk Drives are compatible with the leading hard disk repair and defragmentation software. We recommend using this software to maintain peak performance and data-integrity of your drive. Contact your local software retailer for more information about the software best suited for your computer.
- The IEEE-1394 standard for FireWire sets a limit of 63 FireWire devices per computer. When connecting directly to your computer, there should be no more than 16 cable lengths between the computer's FireWire port and the last FireWire device.

## General Use Precautions:

- Use only the power supply shipped with the device
- Do not expose the hard drive to temperatures outside the range of 5°C (41°F) to 45°C (104°F). Doing so may damage the drive or disfigure its casing. Avoid placing your drive near a source of heat or exposing it to sunlight (even through a window.)
- Never expose your device to rain, or use it near water, or in damp or wet conditions. Doing so increases the risk of electrical shock, short-circuiting, fire or personal injury.
- Always unplug the hard drive from the electrical outlet if there is a risk of lightning or if it will be unused for an extended period of time. Otherwise, there is an increased risk of electrical shock, short-circuiting or fire.
- (Hard Drive) Do not place the drive near sources of magnetic interference, such as computer displays, televisions or speakers. Magnetic interference can affect the operation and stability of your hard drive.
- Do not place heavy objects on top of the drive or use excessive force on it.
- Never use benzene, paint thinners, detergent or other chemical products to clean the outside of the drive. Instead, use a soft, dry cloth to wipe the device.

## **Troubleshooting- Frequently Asked Questions**

**To avoid corruption or loss of data, never disconnect your drive while transferring data**

### **Q: My computer will not recognize the drive**

A: Make sure the software for your drive is installed, following the instructions in this manual. Disconnect the drive and power the unit off. Wait 15 seconds, then power your drive back on. Wait 5 more seconds, then reconnect the drive to your computer system.

### **Q: The computer will not boot from a FireWire or USB Drive**

A: Booting from Firewire is currently supported on all Firewire enabled Macintosh computer except Towers with PCI graphics, as well as some PCs with supported BIOS. You cannot presently boot your Macintosh from a USB peripheral, although this may be supported by future MacOS releases. Please check our web site at [www.fantomdrives.com](http://www.fantomdrives.com) for the latest updates.

### **Q: Files are missing or corrupted (Hard Drives & Removables)**

A: Run your computer's disk repair utility.

### **Q: My computer hangs booting with an external device attached (MacOS9)**

Following the Hard Disk Speedtools installation, Create a new extension set based on the Base extensions set. Enable the HDST extensions and reboot. If the problem persists, please contact Fantom Drives Technical Support.

### **Q: My Hard Disk is not recognized by Hard Disk Speedtools (MacOS9)**

A: You may have an extension conflict causing HDST not to see the drive. Go into your Extensions Manager, change your selected set to the "Mac OS 9.x All" set and make a duplicate copy. Once this is done, enable the HDST extensions (or reinstall HDST) and restart your computer. When you are fully booted back up, open the HDST application and the drive should now be listed.

### **Q: My computer reports "This disk is unreadable, do you want to initialize" when I connect my hard disk drive**

A: There are a number of possibilities:

- Isolate the drive as the only device on the bus if possible.
- (MacOS 8-9) Make sure HDST's extensions are properly installed
- Try to repair using a disk repair utility.
- If the drive is PC formatted, it must be partitioned with FAT32 partitions smaller than 128GB
- The drive may need to be re-formatted.

### **Q: My Hard Drive drops frames during video capture**

A: There are a number of reasons this could happen:

- Benchmark the drive. Make sure the transfer rate is more than 6MB/S
- You may need to optimize the drive
- Make sure you are using the latest drivers (FireWire/USB 2.0) for your product
- You may need to tune your drive to have a lower packet size. See the Hard disk speedtools documentation for more information

### **Q: I get clicks and pops when I make an audio CD**

A: Audio is sensitive to burn speeds. Many professionals opt to burning audio CDs at 1 or 2x speeds only to ensure maximum quality and playback compatibility.

### **Q: I can't burn CDs from iTunes (MacOS9)**

A: Some burning programs disable Apple's extensions when installed. If you enable Apple's USB Authoring Support and Firewire Authoring Support, iTunes will be able to see the recorder. Note that iTunes may not be compatible with your drive- Please check [www.apple.com/iTunes](http://www.apple.com/iTunes) for more information.



## **Troubleshooting- Frequently Asked Questions**

### **Q: When I try to burn CDs, I get a "Sense Key" error or other burning failures**

A: This is usually caused by burning at faster speed than the media allows. Make sure the media you are writing to is compatible with the speed you are trying to burn. Here are some suggestions to successful burning:

- Try lowering the burn speed down and if you are burning to CD-R media
- Choose "Write CD" option instead of the "Write Session" option
- Optimize (defragment) your source hard disk drive
- Raise the buffer size of your CD burning application
- The media used may be of low quality or incompatible- try another brand.

### **Q: My Drive is not recognized by my burning software (MacOS9)**

A: The drive may sometimes show up as "Unknown Drive at FireWire", meaning that the CD Burning Software is seeing your new external drive. We use the latest drives on the market and are constantly working with software vendors to update their database of devices used.

A: Please go into your Extensions Manager and at the top change your Selected Set to "Mac OS 9.x All". Create a "Duplicate Set" of these extensions, then scroll down to the "FireWire Authoring Support" extension and uncheck it (if enabled.) Next, Reinstall your burning software and reboot. Once you are back up to your desktop, open your CD burning application and your drive should now be recognized.

### **Q: PC software does not install properly**

A: This could happen for a number of reasons. Try the following solutions:

1. Insufficient permissions on the machine. If you are using a Windows 2000 machine, you need to have administrative permission to run an InstallShield setup. Make sure you have the correct permissions.
2. Check and make sure lkernel.exe is not in memory. If it is, and setup is not running at the time, end that task.
3. Clean out the Temp directory.
4. Delete the Program Files\Common Files\InstallShield\Engine folder and then rerun the setup.
5. Reinstalling Internet Explorer (IE) 5.x can also repair a number of corrupted/missing core Windows files from your machine, so reinstalling IE 5.x is also suggested.
6. If you are trying to install to a Windows 98 machine, download and run DCom98.exe from the following site:  
<http://www.Microsoft.com/com/dcom/dcom98/download.asp>.
7. Review the readme file on your Program CD

### **Q: Can I use my USB Drive through a USB hub?**

A: Yes, as long as the hub is a powered hub since bus powered hubs do not work with mass storage devices. For best results, Fantom Drives recommends running directly off of the USB port on the computer

### **Q: The solution didn't work, or I have a problem not listed on this page**

Fantom Drives offer additional troubleshooting resources on our web site at

[www.FantomDrives.com/support/faq.html](http://www.FantomDrives.com/support/faq.html). If the problem still persists, please call our support hotline at 310-320-0772.

**WARNING** - TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

**CAUTION** - TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

**DANGER** - THIS DEVICE CONTAINS A CLASS 1 LASER DEVICE. INVISIBLE LASER RADIATION WHEN OPENED AND INTERLOCK FAILED OR DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.

**FANTOM DRIVES**  
19260 Van Ness Avenue  
Torrance, CA 90501  
Support: 310-320-0772  
Sales: 310-320-7272

[www.fantomdrives.com](http://www.fantomdrives.com)

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**FANTOM DRIVES**

### FCC Compliance Statements

This equipment has been tested and found to comply with the limits for 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 residential installation. This equipment generates, uses, and can radiate frequency energy and, if not installed and used in accordance with the instructions, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to equipment off and on, the user is encouraged to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the distance 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

9-22-2003

FDMasterRevA

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**www.fantomdrives.com**