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# QuickStart Installation Guide

GreenDrive

eSATA & USB 2.0 Hard Drive

**Windows & Mac**




Thank you for choosing Fantom Drives! Your Fantom Drives GreenDrive 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 Fantom Drives' disk drive is compatible with all USB-capable Apple Macintosh computers running Apple® Mac® OS 10.4 (or greater) and PC-Compatible computers running Microsoft® Windows ® XP, Vista, Seven, and Windows Server® 2003/2008.

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# Introduction

Welcome, and thank you for purchasing GreenDrive, the external environmentally friendly hard disk drive from Fantom Drives.

# Parts & Accessories List

**The package should contain the following items:**

- Fantom Drives GreenDrive
- USB Cable
- AC Adapter
- Quick Start Installation Guide

If you are missing any items listed above, please fill out the customer support form at:

http://micronet.com/support/missingpart.htm

Please retain a copy of your receipt. You will need it if warranty repair service is required in the future.

# System Requirements

## System Requirements for Mac

- G4/G5 or Intel based Apple Macintosh Computer
- Mac OS X 10.4 or newer
- Available USB port or available eSATA port

## System Requirement for PC

- Pentium-based PC with 733 MHz or faster CPU
- Microsoft® Windows® XP SP2, Vista, Seven
- Microsoft® Windows Server® 2003, 2008
- Available USB or available eSATA port

**USB 2.0 compatibility with USB 1.1**

USB 2.0 ports are backward compatible with USB 1.1. However, if you connect the drive to a USB 1.1 port, it will operate at USB 1.1 speeds.



***If your computer does not have eSATA ports, you may purchase an eSATA expansion card for your computer. Contact your authorized Fantom Drives reseller for further details.***



# Precautions

Failure to follow the precautions described below may cause damage to your Fantom Drives External Hard drive and void the warranty.

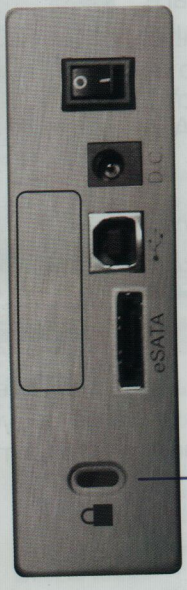
- DO NOT open the case. Doing so will void the warranty.
- DO NOT use a third-party AC adapter or power cord. Doing so may damage the drive and void the warranty.
- DO NOT bump, jar or drop the drive as this may damage it and/or result in loss of data.
- DO NOT disconnect any cables while the drive is powered on without first properly dismounting the device via your operating system; doing so can result in data loss and possible damage.
- DO NOT set any liquids or beverages on the drive as they may damage the internal electronics.
- Fantom Drives highly recommends that you regularly back-up the files stored on your Fantom Drives external hard drive.



**Fantom Drives is not responsible for any data loss, nor will Fantom Drives perform any recovery of lost data or files.**

# Fantom Drives GreenDrive Hard Disk at a Glance




Power Switch

AC Adapter Port

USB 2.0 port

eSATA port

Security Lock Slot

# Connecting the drive to Your Computer

1. Plug the AC adapter cord into the power port on the back of the drive. The plug should not require much effort to insert. If the plug will not go in, do not force it; the plug is probably upside down. Rotate the plug and try again. Incorrectly inserting the plug could damage the drive and void the warranty.

2. Plug the power cord into the cord socket in the AC adapter. Plug the other end into an AC outlet.

3. Connect the appropriate cable to your host:

***USB and eSATA plugs are shaped so they can only be properly inserted one way. Be sure to insert the plugs properly or you may damage the drive and void the warranty.***



(USB) Connect the square USB 2.0 connector (type B) of the included USB cable to the square USB plug on the GreenDrive and the rectangular end to a free USB port on your computer.

(eSATA) Connect an eSATA cable to a free eSATA port on your computer.

***If your computer does not have eSATA ports, you may purchase an eSATA expansion card for your computer. Contact your authorized Fantom Drives reseller for further details.***

4. Flip the power switch located on the back of the GreenDrive to the "ON" position (labelled "-".) Once the drive is powered up, your computer should recognize it and the drive will be ready to format.

# Formatting Your Drive

The GreenDrive comes preformatted at the factory with the NTFS file system, the native file system for Windows. Linux and MacOSX hosts require a third-party driver such as NTFS-3G to achieve full read/write capability with NTFS volumes. If you intend to use this drive exclusively on MacOSX it is advised to reformat your disk with the HFS ("Mac Extended") file system.

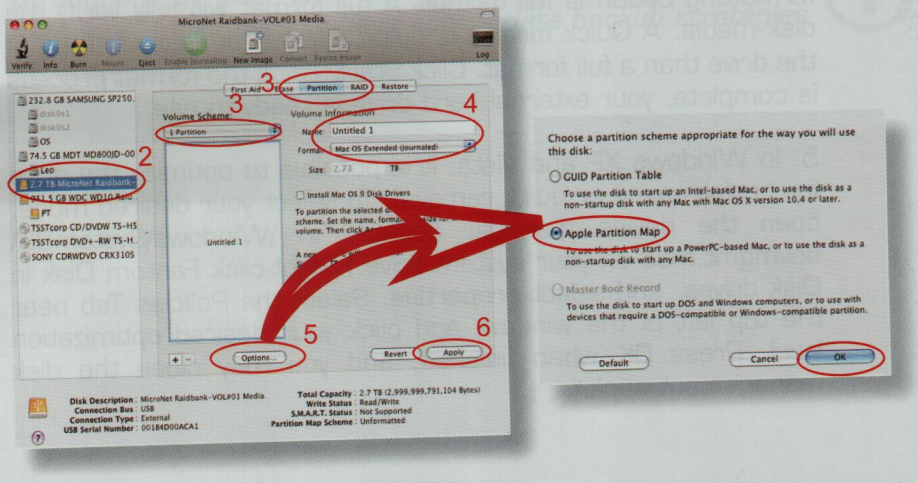
***Formatting a hard drive erases all data contained on it. Please be sure to create a copy of the files you wish to keep to another location before reformatting.***

## Formatting the drive in Mac OS X

1. Launch the "Disk Utility" application located in Applications/Utilities.
2. Highlight your new drive and select the "Partition" tab
3. Select the new partition map type.
4. For each partition in the volume scheme, select the desired file system format and volume name (optional)

***Although it is possible to format using the DOS file system, we do not recommend this as an artificial capacity limit may be imposed on the drive and performance will be unpredictable.***

5. Click the "Options" button. Select "Apple Partition Map" in the dialog box and click "OK".
6. Click "Apply." Your Fantom Drives GreenDrive is ready to use!



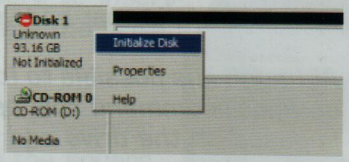
## Formatting the drive in Windows Hosts

1. Open the disk management console. A list of the attached drives and their respective volumes will appear. Select the GreenDrive Disk.

***The Disk Management Console can be accessed by right-clicking on the "My Computer" icon ( Computer ) and selecting "Manage" from the drop down menu. Disk Management is found under "Storage" in the resultant window. For an illustrated guide, please see***
***http://www.fantomdrives.com/support/faqs***

2. Right-click on the drive letter and select Format in the pop-up menu. The Format dialog box will appear.

***If the hard disk is not signed for use, the New Partition option is unavailable (superimposed no-entry icon). In this case a signature can be written on the hard drive by right clicking on the disk description window and selecting "Initialize Disk".***



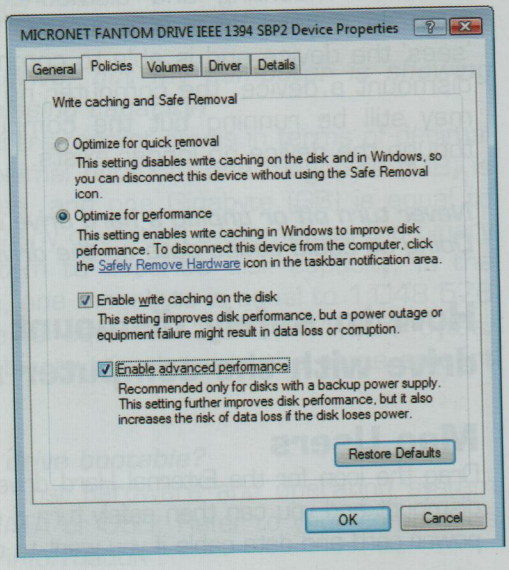

3. Under Capacity, verify the drive capacity. It should be close to the stated capacity of your drive in gigabytes.

4. In the File System pop-up menu, select NTFS. The default formatting option is full format. A full format will fully verify the disk media. A Quick format is quick, but will do less verifying of the drive than a full format. Click Start. Once the format process is complete, your external hard drive is ready to use.

5. In Windows XP and Vista, it is possible to optimize the drive for performance or quick removal. To select your desired mode, open the device manager (located in \Windows\System32\ devmgmt.msc on your system drive.) Right-click Fantom Disk in Disk drives, and select properties. Select the Policies Tab near the top left of the window, and click your desired optimization level. Press OK when finished, and you may close the disk management applet.

# Optimizing Windows Caching Algorithm

By default, Windows XP optimizes caching for performance on external drives. Vista optimizes caching for quick removal. As a result, Windows XP appears to have faster access to external disks but at a greater risk of data corruption and loss. To change Windows' caching algorithm, open the disk management console (as described on page 8) on your system drive. A list of the attached drives and their respective volumes will appear. Right-click on the Fantom external disk in the disk list and select properties. Select the Policies Tab near the top left of the window, and click your desired optimization level. press OK when finished, and you may close the disk management applet.




***Optimizing for performance can greatly enhance the throughput of your disk but is much more vulnerable to data loss! Make sure to have appropriate backup strategies before enabling this feature!***

# How to Safely Dismount and Turn Off Your GreenDrive

What do 'mounting' and 'dismounting' mean? When a device such as a hard drive is mounted, that means the computer 'sees' the device and is able to communicate with it. When you dismount a device, the computer no longer sees it. The device may still be running but the computer cannot access it, as though the device no longer exists.

***Never turn off or unplug a hard drive without dismounting it first. Doing so could cause data on the drive to be lost or damaged.***

## How to safely dismount and turn off the drive with the computer running

### Mac Users

Drag the icon for the External Hard drive to the Trash. The drive will dismount and you can then safely turn if off. You may then unplug the power cord and data cable if you want to disconnect the drive.

### PC Users

1. Locate the System Tray. The System Tray includes the time display in the bottom right, and icons to the left of the time. One of the icons will be an hot plug icon ().

2. Left-click on (). You will receive the alert message "Safely Remove.." followed by the drive description and drive letter for the device.

3. Left-click on the appropriate device (with the drive letter matching the one used by the External Hard drive). After a few seconds, Windows will give you a message that it is safe to remove the device.

# Troubleshooting/ Frequently Asked Questions (FAQs)

## General Questions

***Q: I bought a 500GB drive, but my computer is showing 465GB. Where is the missing capacity?***

A: Hard drive manufacturers market drives in terms of decimal (base 10) capacity. In decimal notation, one megabyte (MB) is equal to 1,000,000 bytes, and one Gigabyte (GB) is equal to 1,000,000,000 bytes. Many operating systems use the binary (base 2) numbering system to describe disk capacity; In the binary numbering system, one megabyte is equal to 1,048,576 bytes, and one gigabyte is equal to 1,073,741,824 bytes. Simply put, decimal and binary translates to the same amount of storage capacity.

***Q: Is my external hard drive bootable?***

A: Yes! As long as your host hardware and operating system support booting from eSATA or USB. Refer to your computer's documentation for more information

***Q: My drive was working fine yesterday but now its gone!***

A: The disk may have been shut down without being dismounted, or may have failed. If you do not hear and feel the drive spin up when you connect the power, the drive will need to be replaced. If you verify that the computer input and the drive data cable are working, you may be able to repair or recover the data with your computer's disk repair utility or a third party utility.

If your disk repair utility cannot repair or see the disk, the drive has failed and will need to be replaced. If data recovery is desired, please contact an established professional data recovery firm. For a checklist of what qualities you might seek, see www.drivesavers.com/why_drivesavers/index.html or www.ontrack.com/services.

***Q: Can I leave my GreenDrive on all the time, or should I turn it off when not in use?***

A: The GreenDrive is meant to be left on, but does not add any limitations on being turned off. Drive reliability is affected by repeated power cycles, and the GreenDrive cannot alleviate this. In addition, Micronet recommends that the drive's power supply is connected through a UPS or surge protector; In the case of a power surge, or brown/black out, the hard drive's sensitive electrical components will not be damaged.

## FAQs for Mac Users:

***Q: Why is my drive asking me to format it? It was already formatted and it contains data.***

A1: Run a disk repair utility on the drive.

A2: Perform permission repair on your system drive. Open the disk utility (located in /Applications/Utilities/Disk Utility.app.) Select your system drive (usually the first disk listed) and click "Repair Disk Permissions" in the "First Aid" Tab.

A3: Restart your computer. As soon as the bootup chime sounds, press and hold down the option-command-p-r key combination to reset the PRAM. Release the keys when the chime sounds a second time. Please refer to your Mac manual for more information on these procedures

***Q: My computer does not recognize the drive.***

A: Check to make sure that all of your connections are secure and that the power switch is in the "ON" position. Then check if your External Hard drive is listed in the Apple System Profiler. If the problem persists, verify that the appropriate port used is functioning.

***Q: I'm trying to copy files to/from FAT32 volumes or network shares, and it keeps failing.***

A: FAT32, HFS+, and other file system formats allow different standards of filename length or use of special characters. Rename the offending file(s) and try the operation again.

***Q: I have a FAT32 disk, and when I try to copy a large file I get an error saying there is not enough room on the drive– I have lots of free space!***

A: FAT32 only allows files up to 4GB in size. To copy larger files, please reformat the volume using MacOS Extended Format.

## FAQs for PC Users:

***Q: My computer does not recognize the drive.***
A: Make sure all of your connections are secure. If you have an add-on card, make sure it is working properly and/or update the driver. Also, make sure you have all the latest updates for your Windows installation

***Q: Does the drive work with Norton Ghost?***
A: Yes. Norton Ghost 2003 or newer support USB drives. Fantom Drives does not provide any additional drivers.

***Q: I formatted my hard disk under Windows XP, but my Vista machine does not allow me to delete or modify files on the drive.***
A: Windows Vista and XP handle file permissions differently. In Windows XP the default user group has full permissions to every volume, whereas in Vista they do not. To fix this condition, you need to grant the users group modify privileges to the drive:

1. Right-click the drive letter in Explorer and select properties
2. Click the security tab
3. Click "Edit." You will be asked to enter your administrator password.
4. Select "Users" and check the Modify box
5. Click OK.

***Q: Where are the drivers for my operating system?***
A: Windows 2000 and newer already include all the necessary drivers. There are no drivers available for Windows NT or 98.

***Q: When I leave my computer idle for a while, my drive won't work properly.***
A: The most likely cause is that your computer is going into sleep mode. The immediate solution is to shut down your computer and turn off the drive, and then restart your computer. Once your computer is completely booted up, turn on the drive. You should see the drive in the Windows Explorer. To prevent this problem from recurring, open the "Power Settings/Energy Saver" and set it to never go into sleep mode.

***Q: I do not see my drive listed in the My Computer window, but it does appear in the Device Manager list.***
A: Right-click on My Computer. Select Manage in the pop-up menu. In the Computer Management window and navigate to Storage -> Disk Management. In the Disk Management window, you should see a list of available storage devices. Look for the disk that has a capacity closest to your Fantom Drives unit, and right-click on the corrolating right-hand box. In the pop-up menu that appears select "Delete Partition." The description will change to say "Online" & "Unallocated". Right-click on the box and select Create New Partition in the pop-up menu. When the Partition Wizard appears, select "Primary Partition" and click "Next." Click "Next" in the next dialog, selecting the default value for the drive. You will then see a drive letter (you can change this drive letter if you wish); click "Next." You will then be asked to format the drive.

***Q: After I connected the drive to my PC, I got the following alert message: HI-SPEED USB Device Plugged into non-HI-SPEED USB Hub." What does this mean?***
A: Windows 2000 and XP users will get this alert message if you plugged the drive into a USB port that only supports USB 1.1. This is fine, except your drive will operate at USB 1.1 speeds.

***If an issue cannot be resolved by using our FAQ, please contact Technical Support via the Fantom Drives support site at http://www.Fantomdrives.com/help***

# Glossary

**Bit** - The smallest unit of digital data. In binary code, a bit is represented logically as a either 1 or a 0.

**Buffer** - RAM cache that temporarily stores data so it can be delivered to a device as it is needed.

**Bus** - An electronic link for the transmission of data between digital devices, such as computers and computer peripherals.

**Byte** - A unit of digital data, usually made up of eight bits.
**Data Stream** - The flow of data between digital devices such as computers and hard drives.

**Driver** - Software that enables the computer to communicate with a peripheral.

**Gigabyte** - 1,024 Megabytes, or approximately one billion bytes. The capacity of most hard drives is measured in Gigabytes.

**Hardware** - Physical components of a computer system (computer, hard drives, printers, etc.)

**Hub** - A device which links peripherals together onto the same bus.

**Interface** - Junction between two items of hardware or software for the exchange of data.

**Mb (Megabit)** - One million bits.

**Mbps (Megabits per second)** - A data transmission speed of one million bits per second. Data transmissions are typically measured in bits (kilobits, megabits etc) per second.

**MB (Megabyte)** - 1,048,576 bytes.

**Operating System (OS)** - Software that controls the assignment and use of hardware and application software resources.

**Peripheral** - A generic term for hard drives, printers, scanners and other discreet devices that add functionality to a computer.

**Port** - A connection which enables compatible peripherals to send and receive data.

**Software** - A set of instructions that enable the computer to perform pre-programmed functions in the order specified by the user.

**Storage** - Any equipment which stores data, such as hard drives, CDs, and DVDs.

# Two Year Limited Warranty

Fantom Drives warrants this product (the "Product") against defects in material or workmanship as follows:

1. LABOR: For a period of two (2) year from the original date of purchase from Fantom Drives or its authorized relseller, Fantom Drives will repair defective Product (or, at its option, replace with a new or recertified product) at no charge. After this 2 year period, you must pay for all labor charges.

2. PARTS: For a period of two (2) year from the original date of purchase from Fantom Drives or its authorized reseller, Fantom Drives will supply, at no charge, new or rebuilt replacement parts in exchange for defective parts of this Product. Any replacement parts will be warranted for the remainder of the original warranty period or ninety (90) days from installation by Fantom Drives. All exchanged parts replaced under this warranty will become the property of Fantom Drives.

This warranty only covers the hardware components packaged with the Product. This warranty does not cover any software contained in, or included with, the Product; any such software is provided "AS IS". Please refer to any documentation included with the software for your rights and obligations with respect to the software.

This warranty extends only to you, the original purchaser. It is not transferable to any one who subsequently purchases the Product from you.

Proof of purchase in the form of a bill of sale (which is evidence that the Product is within the warranty period) must be presented to obtain warranty service.

To obtain warranty service you must take the Product, or deliver the Product freight prepaid, in either it's original packaging, or in a package that provides the Product with a degree of protection equivalent to that of the original packaging, to Fantom Drives. Please contact Fantom Drives at the number listed on the reverse side for further information.

Fantom Drives is not responsible for any damage to, or loss of, any programs, data, or other information stored on any media or any part of any Product serviced hereunder. Be sure to remove all features, parts, options, alterations, and attachments not under warranty prior to returning the Product to Fantom Drives. Fantom Drives is not liable

for any loss or damage to these items.

This limited warranty does not cover: (1) any consumables (such as batteries) supplied with this product; cosmetic damages; damage or loss to any software programs, data or removable storage media; or damage due to the Product such as but not limited to excessive heat or humidity, or modifications of this Product; (2) improper installation, operation, testing or maintenance of this Product; (3) power failure or connection to improper voltage supply; or; (4) attempted repair by any party other than Fantom Drives. This Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by Fantom Drives that there is no fault with this Product itself.
This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement as provided under this warranty is the exclusive remedy of the consumer. Fantom Drives shall not be liable for any incidental or consequential damages for breach of any express or implied warranty, breach of contract, negligence, strict liability or any other legal theory related to this product. Such damage include, but are not limited to, loss of profits, loss of data, loss of use of the product or any associated equipment, down time and purchaser's time. Except to the extend prohibited by applicable law, any implied warranty of merchantability or fitness for a particular purpose on this product is limited in duration of this warranty.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long on implied warranty lasts, so the above limitation or exclusions may not apply to you. This warranty gives you specific rights; you may have other rights which vary from state to state.

**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.**


Fantom Drives
20525 Manhattan Place
Torrance, CA 90501
Sales: 310-320-7272
Support: http://www.Fantomdrives.com/help

www.Fantomdrives.com


FANTOM DRIVES
By MicroNet

## 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


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