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- 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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MDCSIM Rev E

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# QuickStart Installation Guide

Windows & Mac

**G-FORCE™**  
**MEGADISK**



Thank you for choosing Fantom Drives! Your Fantom Drives G-Force Megadisk has been built to the highest standard of quality and workmanship, is compatible with all USB or eSATA capable Apple Macintosh computers running MacOS 10.3 (or greater) and PC-Compatible computers running Windows 2000, Windows XP, Windows 2003, and Windows Vista. We at Fantom Drives take great pride in bringing personal satisfaction to each of our customers; When used according to the instructions in this guide, your Fantom Drives G-Force Megadisk will provide years of trouble-free operation.

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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.

# One Year Limited Warranty

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

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

2. **PARTS:** For a period of one (1) 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 its 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

# Introduction

Welcome, and thank you for purchasing GForce Megadisk eSATA+USB High Capacity Hard Disk from Fantom Drives.

In photos and illustrations in this guide, The following alert symbols are used in this guide:



This signifies important information for ALL users.



This signifies important information for USB 2.0 users.



This signifies important information for eSATA users.

The GForce Megadisk Hard Disk can only sustain one connection type at any given time; the drive will appear as an eSATA device when connected via eSATA, and as a USB device if the USB cable is connected.

## USB 2.0 compatibility with USB 1.x

USB 2.0 ports are backward compatible with USB 1.x. However, if you connect the Drive to a USB 1.x port, it will operate at USB 1.x speeds.



# Parts & Accessories List

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

- Fantom Drives G-Force Megadisk Hard Disk
- USB cable
- eSATA cable
- Disk Stand
- AC Adapter and Power Cord
- Quick Start Installation Guide

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

<http://www.FantomDrives.com/help>



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

***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, select Storage, then select 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 External Hard Drive. Right-click on the right-hand box; in the pop-up menu select Delete Partition. Once you do this, it will 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 on Next. You will see a default value for the Drive; click Next. 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 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>***

## 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 operating system.

**Q: *Can you make the External Hard Drive bootable?***

A: This depends on your computer's BIOS (Basic Input/Output System). The BIOS contains code required to control a number of miscellaneous functions. Please check with your computer manufacturer for BIOS updates to determine if your computer's BIOS supports this feature.

**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: *Where are the drivers required?***

A: Windows 2000, XP, 2003, and Vista already include all the necessary drivers! No additional drivers are necessary.

**Q: *Do you have "DOS Driver" for the Drive?***

A: No.

**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: *Is the Drive compatible with Windows NT 4.0?***

A: No.

## System Requirements

### System Requirements for Mac

- Power Macintosh
- Mac OS X 10.2 or newer
- An available eSATA Port or
- Available USB 1.1 or 2.0 port

### System Requirement for PC

- Pentium-based PC with 233 MHz or faster CPU
- Windows 2000SP4, XPSP2, 2003, or Vista
- An available eSATA Port or
- An available USB 1.1 or 2.0 port

## Precautions

Please follow the precautions described below to avoid damage to your Megadisk 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 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 on lost data or files.



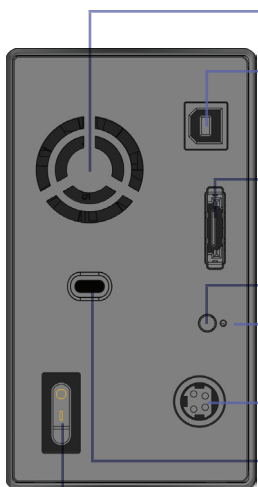
# Fantom Drives GForce Megadisk Hard Disk at a Glance



Power Indicator  
Light (Blue)

USB Activity  
Light (Yellow)

eSATA Activity  
Light (Green)



Vent (Do not block)

USB 2.0 port

eSATA port

Operating Mode

Switch

Commit Button

AC adapter port

Security Lock Slot

Power Switch

## Troubleshooting

### 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: First, 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 USB/eSATA 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.

## 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 it 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 icon with a green, diagonal arrow on it.

2. Left-click on this icon. You will receive the alert message "Safely Remove..." or "Stop..." followed by the 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.

4. Click OK. The Drive will dismount and you can then safely turn it off. You may then unplug the power cord and data cable if you want to disconnect the drive.

## How to turn off and disconnect the Drive with the computer turned off (PC and Mac)

When you shut down your computer the Drive dismounts automatically. With the computer turned off, simply turn off the Drive. You may then unplug the power cord and data cable if you want to disconnect the drive.

## 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 a three-prong outlet.

3. Plug in the eSATA or the USB 2.0 data cables.

***Connect the USB 2.0 connector of the included USB cable to a free USB 2.0 port on your computer.***

***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.***

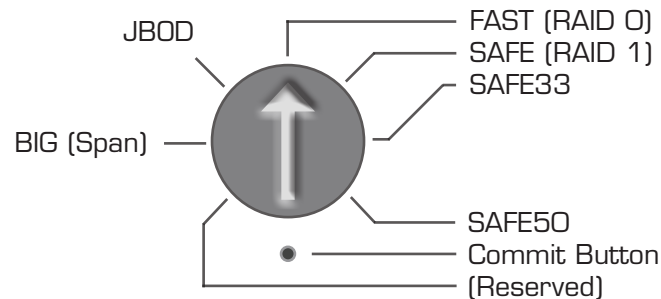
4. Press the power switch located on the back of the GForce Megadisk Hard Disk. Once the Drive is powered up, your computer should recognize it and the Drive will be ready to use.

***The Megadisk is preconfigured from the factory for FAST operation (RAID 0.) If you wish to reconfigure it for a different operation mode, please follow the instructions on the following page.***



# Setting the RAID operation mode

You can configure the Fantom Drives Megadisk eSATA+USB to use any of the following Storage Policies to map the physical hard drives to virtual drives, or "volumes", that are visible to the host computer. The host operating system treats these volumes as if they were a single physical drive. This virtualization allows you to overcome restrictions that are imposed by physical hard drives, such as speed, storage capacity or data storage reliability. To select a storage policy, make sure that the unit is powered on, set the rotary switch on the back of the Megadisk with a small flathead screwdriver to the desired storage policy, and press the recessed "Mode Change Commit" button with a pin or paperclip to create the new virtual volume(s). Refer to page 6, "Fantom Drives GForce Megadisk Hard Disk at a Glance" for the locations of the storage policy mode switch and commit button.



**Please exercise care before pressing the "Commit" button. Creating new virtual volumes will destroy any existing data that existed on the previous volume!**

## Formatting the Drive in Windows 2000/XP/2003/Vista

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

*The Disk Management Console can be found under \Windows\System32\diskmgmt.msc on your system drive. 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.

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 take about 30-90 minutes. A Quick format will take just a few minutes, 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, 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 the Fantom external 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.



# Formatting your GForce Megadisk Hard Disk

The G-Force Megadisk comes preformatted with the FAT32 file system, which will mount on most modern operating systems. FAT32 has some limitations, and we recommend you reformat the volume to a file system format more compatible with your particular computer and operating system environment.



***Formatting a hard drive erases all data contained on the drive. Make sure to create a copy of the files you wish to keep before reformatting.***

## Formatting the Drive in Mac OS X

1. Launch the Disk Utility application (located in /Applications/Utilities folder.)
2. You should see the Megadisk volume listed in the left sub-window. Click on the drive to highlight it. Information about the Drive will appear in the Information sub-window.
3. Click on the Erase tab. In the Erase sub-window you will see a Volume Format pop-up menu and a Name field.
4. In the Volume Format pop-up, select the format type (MacOS Extended is recommended.)

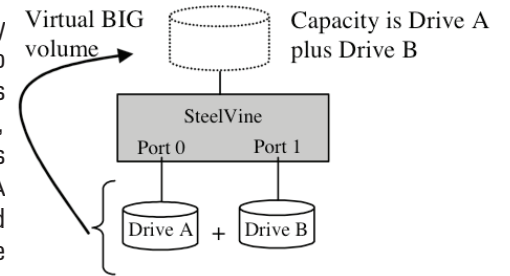


***Although it is possible to format a hard drive on Mac OS X using the DOS file system, we do not recommend this, as an artificial capacity limit may be imposed on the drive.***

5. Click Erase. You should see an alert pop up with the message: "Erasing a disk will destroy all information on all of the volumes of the disk..." Click Erase. Once initializing is complete, you should see the drive listed in the left sub-window of the Disk Utility screen. Quit Disk Utility. You should now see the Drive icon on the Desktop.

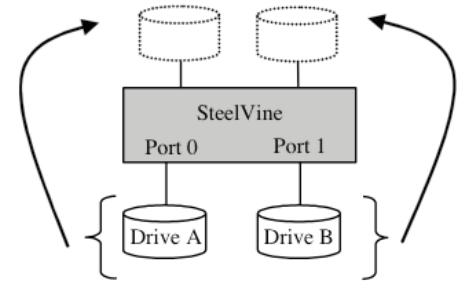
## BIG (Span)

The BIG storage policy concatenates the two physical hard drives as a single large volume, resulting in a seamless expansion. Hard drive A and B are concatenated into a single virtual volume in the Figure below with a storage capacity that is equal to the sum of each of the physical hard drives A and B:



## DUAL (JBOD)

The DUAL or JBOD (Just a Bunch of Disks) storage policy enables each hard drive to be seen separately.



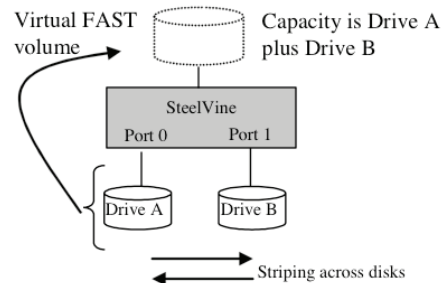
***JBOD should only be used with a port multiplier enabled SATA host controller such as the MicroNet SATAPCIX4 eSATA-PCIX host bus adapter, or the MicroNet SATAPCIE2 eSATA-PCI Express host bus adapter. If used with a non PM-aware eSATA host bus adapter, only a single drive is presented (drive 0). No such limitation exists if using a USB host connection.***



## FAST (RAID 0)

The FAST storage policy, also called striping or RAID 0, presents the best data speed by using both disks in parallel. Hard drive data segments are written to different disks simultaneously which increases performance, but at an increased fault sensitivity (two drive's worth of data may be lost at a single disk fault.)

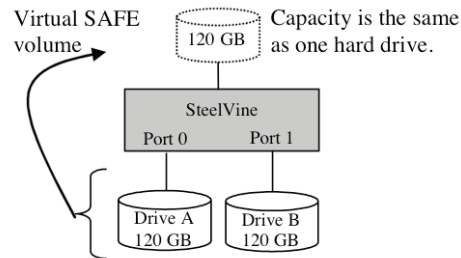
The FAST storage policy creates a single virtual volume that is striped across both hard drives, with a storage capacity that is equal to the sum of both hard disk drives.



## SAFE (RAID 1)

The SAFE storage policy stores all data in duplicate on each drives to protect against data loss due to drive failure. One drive mirrors the other at all times, which means every write operation goes to both drives. SAFE provides the highest level of data fault

tolerance, but halves the amount of storage capacity because all data must be stored twice. The resulting storage capacity of the virtual SAFE volume will be equivalent to the size of one hard drive. If one drive fails, the SAFE volume is still usable, but it is in a vulnerable state because its mirrored hard drive is inaccessible. When the offline drive is replaced, the Megadisk will begins a rebuild process immediately to restore data redundancy.



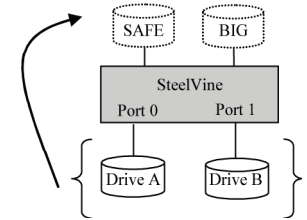
**Although the volume remains available during the rebuild process, the volume is susceptible to data loss through damage to the remaining drive until redundancy is restored at the end of the rebuild and verification process.**

Host access takes precedence over the rebuild process. If you continue to use the SAFE volume during the rebuild, the rebuild process will take a longer time to complete, and the host data transfer performance will also be affected.

## SAFE33 and SAFE50

The SAFE33 and SAFE50 storage policies create two virtual volumes; one SAFE volume and one BIG volume. RAID33 creates a SAFE partition on 33% of the available space, and SAFE50 creates a safe partition on 50% of the available spare. The BIG

partition utilizes the remaining capacity. These policies should be used when you need the high reliability for some of your data (with the added overhead of mirroring) but maximum space for the remainder of your data, reducing the cost of additional hard drives in operations where non-critical data could be lost without severe consequences. SAFE33 and SAFE50 use a SAFE volume that is mirrored across two hard drives to protect your critical data in the event a hard drive failure. If one drive fails the SAFE volume is retrievable although the BIG volume is not. When you replace the failed drive, the SAFE volume is automatically rebuilt on to the replacement drive.



**SAFE33 and SAFE50 should only be used with a port multiplier enabled SATA host controller such as the MicroNet SATAPCIX4 eSATA-PCIX host bus adapter, or the MicroNet SATAPCIE2 eSATA-PCI Express host bus adapter. If used with a non PM-aware eSATA host bus adapter, only a single drive is presented (drive 0). No such limitation exists if using a USB host connection.**

