



# GT 103™ FireWire 800 Manual

Single-space, Three-bay FireWire 800 hot-swap enclosure for GT Key™  
FireWire 400 and 800 cartridges

610025-2.5 GT 103 800 Manual.pdf  
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## **Contacting Glyph**

Please use the following contact information to contact Glyph and its distributors.  
Glyph USA offers phone support Monday through Friday, 8:00 am to 5:00 PM Eastern Time.

Note: DO NOT ship any return goods to the mailing addresses below unless you have a valid RMA number. All goods will be refused delivery unless a valid RMA number is displayed on the outside of the package.

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Technical Support:  
[tech@glyphtech.com](mailto:tech@glyphtech.com)

## **Unpacking Your GT 103 800**

Your Glyph GT 103 800 and accessories are packaged in a sturdy shipping container. Please inspect the container for evidence of shipping damage and mishandling. If the container is damaged, file a report with the carrier or dealer immediately. Do not attempt to unpack and operate your GT 103 800 until the carrier or dealer confirms the damage. If the container is in good condition, proceed with unpacking the GT 103 800. Verify that all of the items described in the next section are present and in good condition. If any of the items you expect to find in your container is missing or damaged, contact the dealer before proceeding any further.

In any case, do keep the shipping container and all packing materials in a safe place.

### **The GT 103 800 package includes:**

GT 103 FireWire 800 Enclosure  
9-Pin FireWire 800 Cable  
IEC Power Cable  
Rack mounting screws

## Features

FireWire 400 port accessible on front panel  
Brushed, stainless steel face plate 1/8" thick (3MM)  
Scratch-resistant black powder-coated aluminum chassis  
Dual Internal 70w power supplies  
Dual whisper quiet fans  
3 Year Warranty  
2 Year Free Basic Data Recovery\*  
1 Year Overnight Advance Replacement on GT Key drives (Continental 48 states)

## Specifications

Part Number	GT103800
Interface	(2) 9-pin FW800 rear ports, (1) FW400 front port
Bridging Chip on GT Key	FireWire 400: Oxford 911 FireWire 800: Oxford 924
Maximum Transfer Rate	FireWire 800: 100MB/sec (800Mb/sec)
Sustained Transfer Rate	FireWire 800: >70MB/sec
Dimensions	H 1.7" x W 19" x D 16"
Configuration	19" Rack width, 16" deep
Weight	11.5 lbs. / 5.2 kg (w/o GT Keys) 16 lbs. / 7 kg (fully loaded)
Internal Power Supply	Universal 100-240v 50/60 Hz
OS Compatibility	Mac OS 8.6, 9.X, 10.X Microsoft Windows 98SE, ME, 2000, XP, Vista, 7 Modern Unix-based, Linux, or BSD
Warranty	3 Years 2 Years Free Basic Data Recovery* 1 Year Overnight Advance Replacement on GT Key drives in USA (Continental 48 states)

*\*While Glyph is not obligated to recover lost data, we always give it our best effort. Nonetheless, we can't guarantee we'll always be successful.*

## Content Creation Applications

Qualified with all major audio production packages that support FireWire storage, including Digidesign Pro Tools, Steinberg Nuendo and Cubase, Apple Logic, MOTU Digital Performer, Cakewalk Sonar, Sony Vegas and more...

## About the GT 103 800

The GT 103 800 accepts three hot-swappable FireWire drives, and makes it easy to take drives between multiple computers. Older FireWire 400 GT Keys are forward-compatible with GT 103 FireWire 800 racks, and FireWire 800 GT Keys are backward-compatible with all GT Series FireWire 400 enclosures. Compatibility is maintained because both versions use the same hot-swap technology, Glyph's Integrity™ FireWire interface. This integrated exchange system offers true hard drive hot-swap technology, ensuring data integrity and consistency: removing a hot-swap drive from a Glyph FireWire system interrupts the data signal at the FireWire bus, not on the ATA or SATA bus as with other hot-swap systems.

## Configuration

The GT 103 is a JBOD, which means that each drive shows to the computer as its own drive. This configuration is similar to having three FireWire drives daisy chained to your computer. The GT 103 by default does not include any RAID configuration, although you can create RAID sets from your operation system. Windows and Mac OS have the ability to create RAID arrays from FireWire drives.

## GT Keys

GT Keys lock into the GT 103 800 chassis by means of a flip-out handle at the front of the drive. The cartridge loads on its side and the top is marked with a "This side up" label. You can load the GT 103 with up to 3 drives, if you have empty bays, it is recommended to fill them using GT Key Blank cartridges (part# GTKEY-BLANK) for proper airflow. GT Keys have power and activity indicator lights. When you insert a GT Key into the GT 103 800, the power LED should illuminate solid and the activity LED should blink when there is disk activity. GT Keys can be locked into the GT 103 chassis using the keys that are included with each GT Key. When shipping your GT 103, remove any GT Key cartridges from the unit. When transporting an individual cartridge, place it in the plastic carrying case that it came in. This will help ensure the safety of the sensitive electronics exposed at the back of the cartridge. Additional carrying cases can be ordered for GT Key drives (part# GTKEY-CASE).

## Power supplies and fans

The GT 103 includes two power supplies and two fans. Power supplies are rated at 100-240v 50-60Hz. Fans are chosen for their quiet operation and efficient cooling.

## Ports

On the rear of the GT 103 800 there are two FireWire 800 ports. Officially, these IEEE 1394b ports run at up to 800Mbps/sec. One of these ports should be connected to your computer, and the other should be connected to other downstream FireWire devices. It doesn't matter which port you connect to the computer, they are functionally identical. If your computer has a FireWire 800 port you can use the provided FireWire 800 9-pin cable. If your computer has a FireWire 400 port only, you can use a FireWire 800 to FireWire 400 converter cable, available from Glyph (part# CAB-FW800-9/6-2). If your computer doesn't have any FireWire ports you will need to purchase a FireWire adapter card. Check the Glyph web site for suggestions.

The front of the GT 103 800 has a 6-Pin FireWire 400 port. This "convenience port" is intended as an easy way to connect legacy FireWire 400 devices while the GT 103 800 is rack-mounted, without having to go around to the back of the rack.

## About FireWire

FireWire is an implementation of the IEEE 1394 serial bus standard. It not only supports automatic configuration (“plug and play”) and hot-swapping of devices, it’s fast, and best of all it’s reliable for audio/video as well as for computer peripherals. FireWire supports peripherals in a tree-like structure, and it allows peer-to-peer device communication—e.g. between a scanner and a printer—to take place, without using system memory or the CPU. With FireWire you can hook up to 63 devices to the same bus, with cable lengths of up to 4.5 meters (14 feet) including internal cabling, allowed between devices. Its cable is convenient and can also carry power. This allows low-consumption devices to operate without a separate power cord, by using power supplied by other devices on the bus.

## About FireWire 800

- FireWire 800 supports speeds up to 800 Mb/sec, twice as fast as FireWire 400.
- If your computer does not have built-in FireWire 800, you’ll need a PCI card to achieve a true FireWire 800 connection.

Most 800 ports are Bi-Lingual, which means they speak both FireWire 400 and FireWire 800.

- If you connect a 400 device to an 800 device, you will be running at 400 speed maximum.
- FireWire is forward-compatible and back-compatible, but the bus always runs at the speed of the slowest link.
- Beta cables are used to connect 800 devices to 800 devices.
- Bi-Lingual cables are available to connect 400 devices to 800 devices.
- Bi-Lingual cables have a 9-pin Bi-Lingual connector at one end and a 4-pin or 6-pin FireWire 400 connector at the other end

## Installing the Hardware

1. Position the GT 103 800.

Place the unit on a flat, level surface, or install the unit into a rack with the four supplied rack screws.

Caution: Speakers are magnetic devices; they can harm your data if they’re too close to your hard drives or tape cartridges.

2. Connect the power cable (power off):

Make sure that the power is off on all of your computer equipment and the GT 103. Connect the power cable to the back of the GT 103 800. Plug the three-prong plug into an appropriate power receptacle, preferably with surge and spike protection.

3. Connect the FireWire 800 cable.

Plug one end of the FireWire cable into your computer’s FireWire port, and the other into the back of the GT 103 800. The two ports connect internally to all drives in the GT 103 800, so it doesn’t matter which one you use.

4. Insert any GT Key cartridges into the unit.

Pull the handle on the cartridge out, then slide the cartridge into the slot on the GT 103 800 and press the handle in well to lock the cartridge firmly into place.

5. Power up the GT 103 800 and Power up your computer.

## Mac OS X Formatting Instructions

Since your Glyph GT Key drives come pre-formatted for Macintosh you don't need to format them on installation. If you decide to reformat or partition your drive at a later date, use Disk Utility (supplied with the Mac OS X operating system).

*Caution: This procedure will destroy any data currently on the drive. Before formatting a drive, save any important data it contains.*

1. Open Disk Utility:

- Double click on your internal hard drive mounted on the desktop
- Open Applications Folder > Utilities Folder > double click on Disk Utility

2. Select your GT Key drive(s) from the list on the left. The top entry represents the FireWire device and the entry underneath it represents the volume associated with that device. Click on the top device which will say something like "XXXGB Glyph Technologies".

3. Click the "Erase" tab on the right side of the screen.

4. Choose the desired volume format from the drop-down list. Glyph recommends the default "Mac OS Extended (Journaled)".

5. Click in the "Name" field and type the desired name for the drive. This name will identify the drive on the desktop

6. Click the "Install Mac OS 9 Disk Driver" button if you would like your drive to compatible with OS 9.

7. Click the "Erase" button to erase your drive. Your new drive should automatically mount on the desktop as a Glyph volume.

## Mac OS 9 Formatting Instructions

Since your Glyph GT Key drives come pre-formatted for Macintosh you don't need to format them on installation. If you decide to reformat or partition your drive at a later date, you can use the Erase Disk command in the Mac OS 9 operating system. This command will erase all the data on a volume and create a new file system. Erase disk will not allow you to re-partition a FireWire drive or create a different volume structure than what was previously there.

*Caution: This procedure will destroy any data currently on the drive. Before formatting a drive, save any important data it contains.*

1. Select the volume by clicking on it once in the Finder

2. Go to the Special menu and select Erase Disk... The Erase Disk dialog box opens to verify your decision to erase the disk.

3. In the Name field, enter the new name for the disk or leave the name as it is.

4. In the Format drop-down menu, choose an Extended volume and click "Erase".

## **Windows 2000 / XP / Vista / 7 Formatting Instructions**

1. Right-click My Computer and click Manage.
2. In the Computer Management window, under Storage, click Disk Management.

The Write Signature wizard pops up.

3. Use the wizard to write a signature to the new drive. If you want only one partition we suggest using a primary partition and selecting the maximum size. In most cases you'll want to use NTFS volumes, this is the default for most versions of Windows. Choose FAT32 if you want to use the drives with Windows 98 or ME, or if you want to use the drive with Windows and Mac OS.
4. Formatting will take a few minutes, after which your drive will be ready to use.

## **Windows 98 / 98SE Formatting Instructions**

1. From your computer's task bar, go to Start > Programs > MS-DOS Prompt.
2. At the prompt, type fdisk and press Enter. You'll see a long message about disk support.
3. Enter Y (type Y and press Enter).
4. You are invited to make a choice. Enter 5 to change the current fixed disk drive. MS-DOS displays the connected disk drives.
5. Enter the number of the disk that has no corresponding drive letter.
6. You are invited to make a choice (same list as in Step 3). Enter 1 to create a primary DOS partition. Your computer verifies the drive's integrity, after which you are asked to choose whether you want to use all the space available.
7. Enter Y to opt for using the maximum available space. Your computer again verifies the drive's integrity.
8. When the drive's integrity has been verified, press ESC (Escape) three times to exit fdisk.
9. At the prompt, type exit.
10. Restart your computer.

Your new drive is now ready to use.

## **Known Issue affecting multiple FireWire drives with Windows XP and Vista**

Glyph has been investigating GT 103 mounting issues under Windows. Our tests indicate that there is a problem in the Windows FireWire stack that can be triggered when multiple keys are inserted simultaneously. Both Windows Vista and XP are affected, but the problem does not affect Mac OS X.

The problem can be induced by inserting two or more keys at the same time. If a second key is inserted before Windows mounts the first, the second key may not be mounted by Windows. Device Manager will show the device with an exclamation point. In Device Manager, if you highlight the device and select "Uninstall" and then "Scan for hardware changes", the device will mount. You can also reinsert the key to correct the problem.

The issue is more likely to occur if one drive takes longer than the others to initialize. As a result, GT 103 racks with matched drives are less likely to demonstrate the problem. In our testing, the problem could not be induced if the FireWire cable was connected after the drives were inserted and fully spinning. The problem can be avoided altogether by waiting until the first key is mounted before inserting the next.