

3.5" Combo ION™ Drive
Hi-Speed Portable External Hard Drive

FireWire 800/USB 2.0

User Manual





Thank you for purchasing IOGEAR's® ION™ Drive, one of the fastest and sleekest Hi-Speed portable external Hard Drives on the market. IOGEAR® only manufactures high quality storage devices, so we are sure you will be satisfied with your purchase. IOGEAR® is dedicated to customer service and satisfaction, and wishes you the best with your new ION™ drive.

To better serve you, IOGEAR® offers an array of additional USB 2.0, USB, FireWire, KVM, and other peripheral products. For more information, or to purchase additional IOGEAR® products, visit us at www.IOGEAR.com.

We hope you enjoy using your new ION™ Drive – another first-rate connectivity solution from IOGEAR®!

© 2003 IOGEAR®. All Rights Reserved. PKG-M0097

IOGEAR®, the IOGEAR® logo, ION™, are trademarks or registered trademarks of IOGEAR® Inc. Microsoft® and Windows® are registered trademarks of Microsoft® Corporation. IBM is a registered trademark of International Business Machines, Inc. MAC, Macintosh, and Apple are registered trademarks of Apple Computer, Inc. All other brand and product names are trademarks or registered trademarks of their respective holders. IOGEAR® makes no warranty of any kind with regards to the information presented in this document. All information furnished here is for informational purposes only and is subject to change without notice. IOGEAR® assumes no responsibility for any inaccuracies or errors that may appear in this document. Reproduction in whole or part without permission is prohibited.

Table of Contents

Package Contents.....	02
Overview.....	03
Features.....	04
Requirements.....	05
Introduction.....	06
Pictorial Introduction.....	08
Installation.....	10
Troubleshooting.....	20
Care & Handling.....	22
Technical Support.....	23
Appendix.....	24
Specification.....	25
Radio & TV Interference Statement.....	26
Limited Warranty.....	27

Package Contents

This package contains:

- 1- 3.5" ION™ Drive
- 1- Hi-Speed USB 2.0 (Type A to Mini-B) Cable
- 1- FireWire® 9 pin to 9 pin cable
- 1- Quick Start Guide
- 1- IOGEAR® Installation CD with Electronic Manual
- 1- Warranty / Registration Card

If any of the items are missing or damaged, please contact your dealer immediately.

The ION™ Drive is the latest, innovative FireWire® 800 and Hi-Speed USB 2.0 solution developed by IOGEAR®. The ION™ Drive offers a complete high-speed storage solution at the fraction of the cost of other external Hard Drives.

Setup is fast and easy. Simply plug-in the drive, install the software, and you're ready to go. The ION™ Drive offers a feature rich interface, complete with the latest in Hi-Speed technology.

IOGEAR® brings the next generation of USB and FireWire® to your computer connectivity. You will enjoy the convenience and reliability that have made these technologies industry standard.

FireWire® 800 is the latest advancement in digital connectivity technology. With data transfer rates up to 800 Mbps, FireWire® leads the way in speed and interconnectivity. FireWire® 800 is fully backwards compatible with today's current FireWire® 400 devices.

USB 2.0 is the next generation of USB connectivity, providing additional bandwidth thus broadening the range of peripherals that may be attached to your computers; it allows you to move data at a blazing rate of 480 Mbps (Megabits per second), and is fully backward compatible with the first generation of USB devices. With the increase in speed, USB 2.0 offers increased functionality, allowing more devices to share the increased bandwidth.

The ION™ Drive is the right choice for your external storage environment.

Features

- Transfer pictures, music, and data at speeds up to 800 Mbps – Transfer 1 GB in under 15 seconds
- Ideal for backup, storage expansion, file sharing, software installation, and data management
- 4 connectivity solutions in one (FireWire® 800, FireWire® 400, USB 2.0, and USB 1.1)
- Hot-plug capable, hot swappable, and Plug-N-Play
- Preformatted for your convenience so you are up and running in no time (for those with preinstalled drives)
- FireWire® 800 interfaces – supporting data transfer rates of up to 800 Mbps
- USB 2.0 interface – supporting high speed data transfer rates of up to 480 Mbps
- Backward compatible with USB 1.1 and FireWire® 400 specifications
- Three-year limited warranty

To access FireWire® 800 and USB 2.0 speeds, your computer system must be FireWire® 800 and/or Hi-Speed USB 2.0 enabled. The 3.5" Combo ION™ Drive will work at FireWire® 400 and/or USB 1.1 speeds with FireWire® 400 and/or USB 1.1 enabled computers.

For Mac Users

- Mac OS 9.x*
- Mac OS X (10.2) or greater
- Available FireWire 800 or 400 port
- Available USB 2.0 or 1.1 port

For PC Users

- PC Compatible, 200MHz or greater
- Windows® 98SE*, ME*, 2000, XP
- Minimum 64MB RAM
- Available FireWire® 800 port or 400 port
- Available USB 2.0 or 1.1 port

Drivers are provided by the supporting OS or host card software.

* FireWire 800 - Mac OS X (10.2) or greater, Windows 2000 & XP
FireWire 400 - Mac OS 9 or greater, Windows 98SE, ME, 2000 & XP
USB 2.0 - Mac OS X (10.2) or greater, Windows 2000 & XP
USB 1.1 - Mac OS 9 or greater, Windows 2000 & XP

Accessories / Additional Products

8-in-1 Hi-Speed USB 2.0 Memory Bank™ (GFR280)

KVMP™ Extreme Switch – 2 and 4 port USB PS/2 KVMP™ switch (GCS1732/34)

BOSS™, Router, FTP Server, NAS, VPN end point (GNS1000)

Introduction

Introduction of the ION™ Drive's Underlying Technology

FireWire® 800 and Hi-Speed USB 2.0 are the backbone of our ION™ Drive. USB 2.0 is the next generation in USB connectivity, providing additional bandwidth; thus, broadening the range of peripherals that may be attached to your computers. USB 2.0 will move data at the blazing rate of 480 Mbps (Megabits per second), and is backward compatible with the first generation of USB 1.1 devices. With this increase in speed, USB 2.0 offers speed, allowing more devices to share the increased bandwidth.

With the increase in demand for USB 2.0 products, IOGEAR® decided to provide its customers with a total solution. We have taken some of the top peripherals on the market and upgraded them to the new USB 2.0 standard.

The advantage of FireWire can be summed up in three words: speed, speed and more speed! At 800Mbps, FireWire® 800 has more than double the usable bandwidth of USB 2.0, which makes it the perfect choice for high-speed storage and serious video capture. The extra speed of FireWire® 800 over USB 2.0 makes FireWire much more suitable for bandwidth-intensive applications like video and graphics, which often consume hundreds or even thousands of megabytes of data per file. For instance, single hour of DV-format video consumes roughly 13 thousand megabytes (13 GB).

Today's connectivity standards are faster and easier to use than ever. Moving data at the blazing speed of 800Mbps and 480Mbps these allow high-speed devices to take full advantage of the bandwidth and reliability offered by these new technologies.

This manual contains information on the installation and capabilities of your new ION™ Drive.

In sections of the manual where sequential steps are listed, each action is listed with no indentation. Additional text is included, but indented, to further explain each of these actions. A glossary has been added at the end of the manual so you may look up unfamiliar terms.

A few things should be mentioned before explaining the installation procedure:

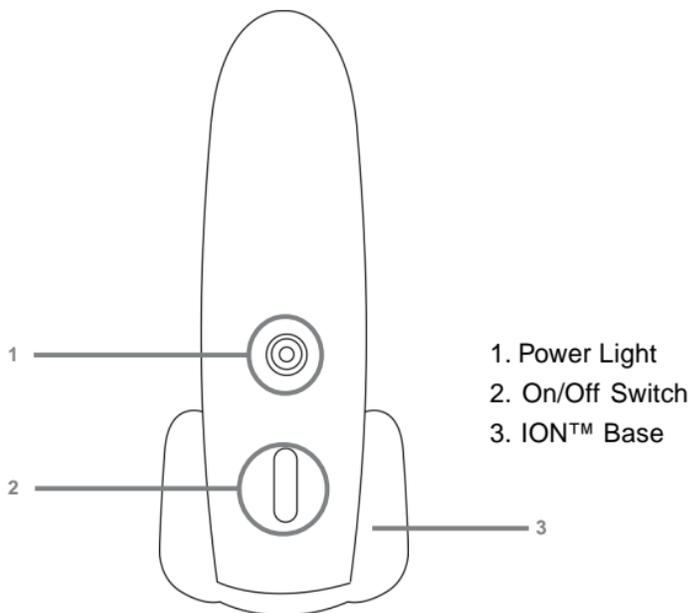
All IOGEAR® ION™ drives are tested prior to shipment to ensure product quality.

The connectors on a FireWire® 800 and Hi-Speed USB 2.0 cable are designed in such a way as to prevent plugging the cable in upside down, backwards, or into a different type of connector.

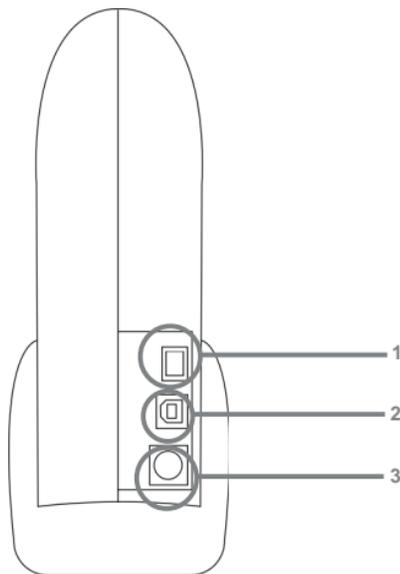
At time of print, some computers do not have FireWire® 800 and Hi-Speed USB 2.0 capabilities. To ensure optimum compatibility, please make sure your computer is FireWire® 800 and USB 2.0 compatible, or have had an FireWire® 800 and USB 2.0 upgrade card added to your computer system.

Pictorial Introduction

Front View



Back View



1. FireWire® 800 9-pin Port
2. Hi-Speed USB 2.0 Type-B Port
3. Power Port

Installation

If you purchased the **enclosure only model** (GHE835C), please follow these instructions on page 11 to install your 3.5" Hard Disk Drive. **OTHERWISE, PROCEED TO STEP 11.**

WARNING: Opening an ION™ Drive with a built-in Hard Drive (GHD835C80, GHD835C120, etc...) **WILL VOID YOUR WARRANTY.** For assistance with your hard drive, please contact your IOGEAR Service Support representative.



Hardware Installation:

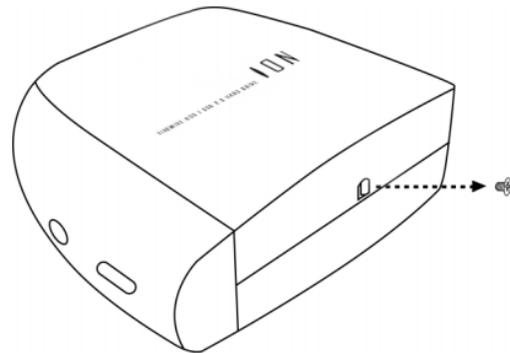
Attention! Please take all proper Electro Static Discharge (ESD) precautions during the installation of your new hardware. For further information on ESD please visit <http://www.esda.org>.

Step. 1 Please have the following ready

1 Phillips screw driver (not included in the package)

Step. 2 Remove Base

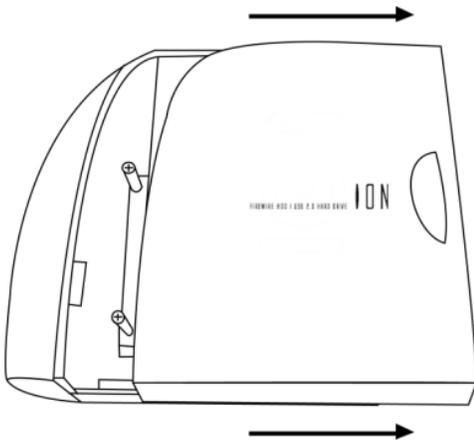
Remove Phillips screw from bottom edge of side panel.



Installation

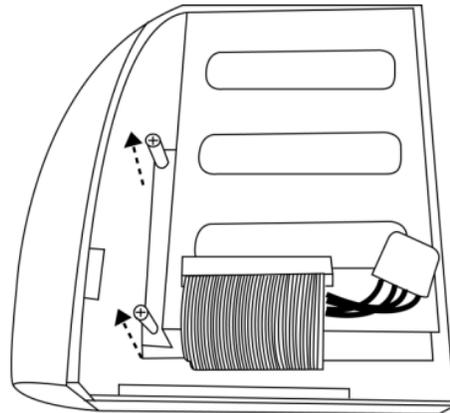
Step. 3

Remove side panel in a backward direction.



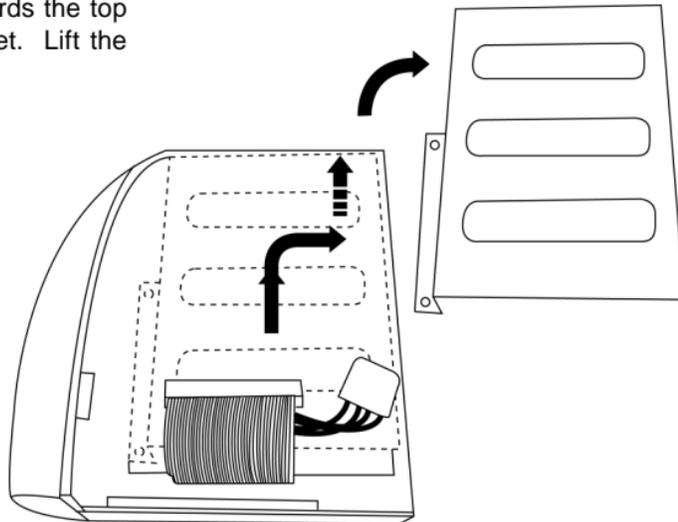
Step. 4

Remove two screws in hard drive retention bracket.



Step. 5

Remove hard drive retention bracket from enclosure. Slide in an upward direction towards the top of the enclosure to free the drive bracket. Lift the drive bracket out of the enclosure.



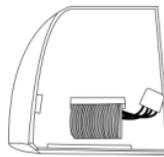
Installation

Step. 6 Inspect all the components again:

1. Side panel
2. Enclosure with one side panel attached
3. Drive bracket
4. One small screw
5. Two long screws with nylon collar
6. AC adapter
7. AC adapter cord
8. USB 2.0 A to B cable
9. FireWire (9-pin to 9-pin) cable



1



2



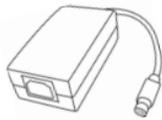
3



4



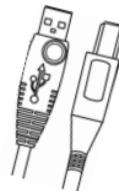
5



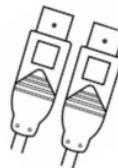
6



7



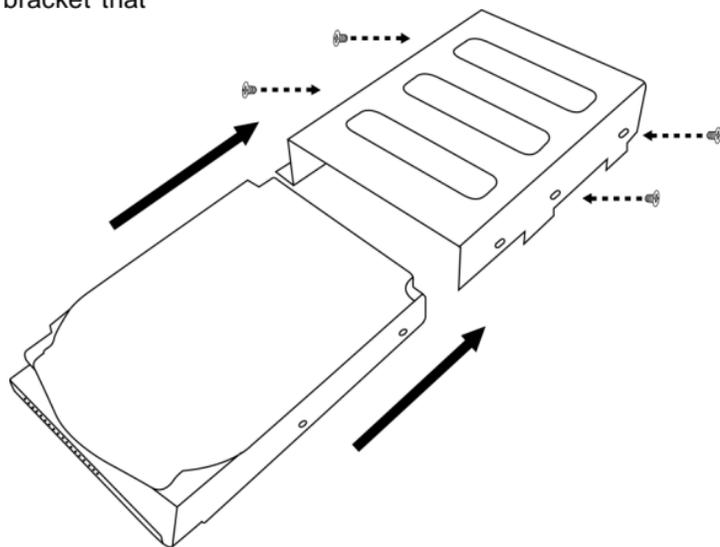
8



9

Step. 7

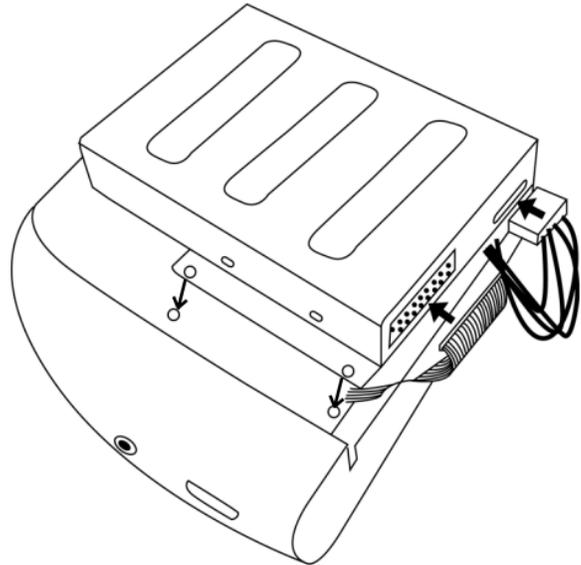
Attach the hard drive into the hard drive bracket.
Screw the four screws into the drive bracket that were provided with the hard drive.



Installation

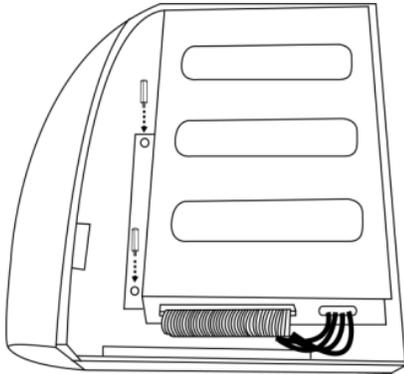
Step. 8

Attach the signal cable to the hard drive with bracket attached. Attach the power cable to the hard drive in the power socket. Place the bracket with drive attached into the enclosure over the base plate. Line up the holes in the bracket with the base plate



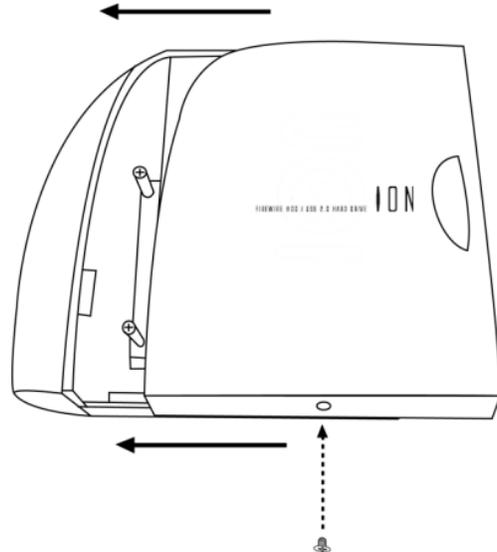
Step. 9

Insert the two previously removed screws through bracket, tighten to secure bracket to base plate.



Step. 10

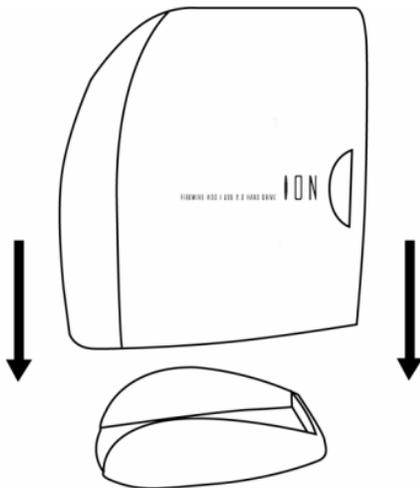
Place the side cover on the enclosure and secure by sliding in forward direction. Now replace the button screw.



Installation

Step. 11

Place the ION™ Drive into the base.



Step. 12

Now simply plug your ION™ Drive into your computer. Please choose your connectivity of choice; FireWire or USB.

USB

Plug the USB Type-B end into your ION Drive, then plug the USB Type-A end into your computer.

FireWire

Plug the FireWire 9-Pin end into your ION Drive, then plug the FireWire 9-pin end (or 6-Pin end) into your computer.

Once complete, plug the power adapter into the ION Drive and plug the power plug into power adapter and the power cord into a surge protected power supply.

Note: For the best performance, please use the certified cables that were provided with this product.

Step. 13

Power on the ION™ drive.

Congratulations! You have completed the ION™ drive installation process.

Once your ION™ Drive has been turned on you should see a new hard drive ICON (or ICON's) on your Desk-Top (Mac Only) or within your “My Computer” folder (PC Only).

Note:

IOGEAR® ION™ Drives are preformatted with FAT32. The FAT32 format can be recognized by both Mac and PC systems. FAT32 is compatible with Windows 98, ME, 2000, XP, and Mac OS 8.6 and greater (Including 10.3).

FAT32 only recognizes partition sizes of 32GB (GigaBytes) or less. Therefore if you have an ION™ drive with a preinstalled hard drive that is greater than 32GB, you will likely see two, three, or more separate partitions on your Desk-Top or within your “My Computer” folder.

If you are running one of the Mac OS's you can use the drive utility to reformat the ION™ drive into one single partition. It is recommended to format Mac Drives with Apple's HFS+ which can identify larger gigabyte size drives and partitions.

Windows 2000 and XP can recognize both FAT32 and NTFS. With NTFS you can reformat the ION™ drive into a single partition. NTFS can identify larger gigabyte size drives and partitions. Please use Windows “Computer Management” to reformat your ION™ Drive.

Windows® 98, 98SE, and ME only recognize drives formatted with FAT32.

Basic Trouble Shooting

ION™

- Make sure you have Critical Updates from the Microsoft® Website at <http://windowsupdate.microsoft.com>; then, click on “Product Updates,” select the latest Critical Update package for your Windows® OS, and then click “Download.”
- Make sure the drive is turned on before you start-up your computer.
- Make sure your new IOGEAR® ION™ Drive is the only device hooked into the FireWire® 800 or USB 2.0 port.
- Do not use a hub or repeater in connecting your drive to the computer.
- Use the cable that was shipped with your ION™ Drive.
- Check all cable connections.
- Use other IOGEAR® cables if you have any extra.

Other Issues

At the very least, make sure your computer has all available updates provided by the manufacture of both your hardware and software. Updates can be found at <http://www.versiontracker.com> or <http://www.download.com>. Upgrade your CPU firmware to the latest revision. Please read all text on the download pages to determine which firmware update is appropriate for your computer.

Notes:

All URLs are subject to change. If the URLs listed in this manual are no longer valid, you can find the majority of necessary updates at <http://www.versiontracker.com> or <http://www.download.com>.

Seagate Trouble Shooting Tip

Set up the jumper on the Seagate drive to the secondary, submissive or slave position.

Setting up your drive:

If for some reason you need to re-partition your ION™ drive, you will need to keep in mind that FAT32 limits the partition size that can be created, through the USB interface, to roughly 32GB when using the FAT32 file system. If you have Windows 2000 or XP you can format the drive with NTFS which has no limit on the partition size.

If you have Mac OS 9.2 or greater, you can format the drive with HFS+ which has no limit on the partition size.

Compatibility Note:

FAT32 is compatible with Windows 98/98SE/2000/ME & XP

NTFS is only compatible with Windows 2000 & XP

HFS+ is only compatible with Mac OS 8.6 or greater

Contacting IOGEAR® Service Support

If you are still experiencing problems using your IOGEAR® ION™ Drive, please follow the directions on pg. 23 on how to contact IOGEAR®'s Service Support department for your technical support needs.

Care & Handling

Your IOGEAR® storage device is a high performance FireWire® 800/Hi-Speed USB 2.0 HardDrive (ION™ Drive). The head that reads the information on the disk is a fragile piece of technology. Therefore, care must be taken not to bump the ION™ Drive while it is operating. Please do not bump the ION™ Drive excessively when the drive is turned off.

To insure maximum reliability of the ION™ Drive, please follow the guidelines listed below:

- DO NOT block the air circulation around the drive.
- DO NOT move or bump the drive while it is operating.
- DO NOT open the drive case for it will VOID your WARRANTY. (For those with pre-installed Drives)
- Keep all cables out of isles and off desktops where they can be hooked and pulled.
- Keep the drive firmly secured in the shipping container when shipping the drive.
- Keep the environment around the drive clean and free of excessive dust and chemicals.
- Use a damp cloth to clean the drive. NEVER put cleansers directly on the drive case.
- Use surge protectors with the drive.
- DO NOT expose the ION™ Drive to extreme temperatures.
- DO NOT expose the ION™ Drive to direct sun light for extended periods of time.
- DO NOT get the ION™ Drive wet.
- DO NOT place the ION™ Drive in an area with an excessive amount of dirt.

To help IOGEAR® customers obtain the highest level of performance from their ION™ Drive, IOGEAR® Service Support team is available to answer your technical questions. Do not hesitate to call if you are having trouble getting your drive to work correctly. Service Support can be reached at IOGEAR® from 8am to 5pm Pacific Standard Time, Monday through Friday or at the following address:

23 Hubble Drive Irvine, CA 92618

You may also reach us online at **www.iogear.com/support** 24 hours a day.

Please be ready to give a brief description of the problem, and what you were doing when the problem occurred, before calling Service Support. The Service Support representative will be able to serve you much quicker if you are prepared to answer the following questions listed below.

- 1) What version of OS are you using?
- 2) What type of computer are you using?
- 3) Can the problem be reproduced? If so, what are the steps necessary to reproduce the problem
- 4) When does the problem occur?
- 5) What have you already tried to get the problem resolved?
- 6) What is the purchase date and serial number of the drive?
- 7) Are you on a network? If so, what type of network is it?
- 8) Were any messages displayed on the screen when the error occurred? If so, what was the exact wording of the message?
- 9) What type of data are you trying to transfer to and from your ION™ Drive?

Appendix

Glossary

Desktop - The background area on the computers monitor screen. This area also includes the menu bar. Document windows are not part of the desktop; they sit on the desktop.

Icon - Symbols used to represent a particular object. For example a disk has an icon on the desktop which represents the disk. When you double click the disk icon it tells finder to display information related to that disk.

Mount - Makes the computer aware of a disk.

Power Adapter Port - The plug on the ION™ Drive into which the power-cord is plugged into.

Service Support - The team of IOGEAR® employees dedicated to help you resolve your technical issues.

Spin down - The act of the disk inside the drive or cartridge ceasing its rotation.

Spin up - The act of the disk inside the drive getting up to the proper rotations per minute. The disk inside the drive must spin at the proper speed for the disk to work.

Product Specification

Function	Specification
Power	Power Adapter
Input Voltage	12V / 5V DC Dual
Connector Type	Firewire 800 9-pin (f) / USB 2.0 Type mini-B (f)
Storage Temperature	32 ~ 158 ° F (0 ~ 70 ° C)
Operating Temperature	68 ~ 122 ° F (20 ~ 50 ° C)
Operating Humidity	20-80% RH, (Non Condensing)
Dimensions	7.5 in.(.19m) x 6.75 in.(.17m) x 3.25 (.08m)
Weight	2.7 lbs. (1.2 kg)
Case	Plastic

Radio & TV Interference Statement

WARNING!!! This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK, OR ITS DOCUMENTATION EXCEED THE PRICE PAID FOR THE PRODUCT.

The direct vendor makes no warranty or representation, expressed, implied, or statutory with respect to the contents or use of this documentation, and especially disclaims its quality, performance, merchantability, or fitness for any particular purpose.

The direct vendor also reserves the right to revise or update the device or documentation without obligation to notify any individual or entity of such revisions, or updates. For further inquiries please contact your direct vendor.



Contact info.

23 Hubble • Irvine, CA 92618 • (P) 949.453.8782 • (F) 949.453.8785 • www.iogear.com