



OWC Mercury Elite RAID 4 Bay Rack Enclosure

Owner's Manual

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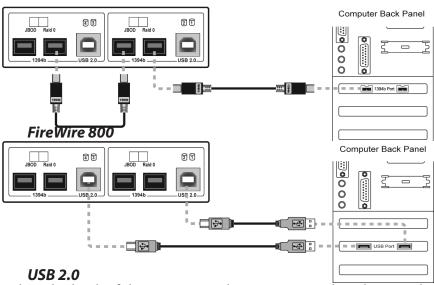
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### Quickstart Guide Chapter 1

You can start using your OWC Mercury Elite RAID Rack storage solution immediately with a few easy steps if you don't want to read the entire manual. The drive solution is formatted for a Macintosh and ready to use right out of the box. If you're using a Mac, Simply follow the instructions on this page and dive in!



1. Open the boxes and remove the above items



**2.** Look at the back of the storage enclosure. You need to choose which interface you want to use - FireWire 800 or USB 2.0.

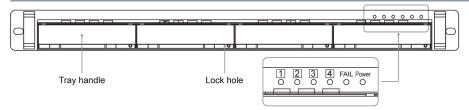


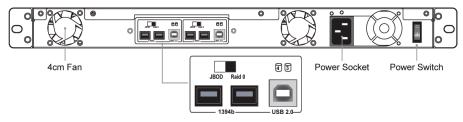
**3.** Plug the power cable in and turn the power switch on. Your drives will mount on the desktop and you can start using them.

# Package Contents and Accessories Chapter 2



### Hardware Overview Chapter 3





### Front panel LED status indicators:

- Access LEDs will light up blue if the hard drive is installed.
- Access LED will always light up red if the hard drive is removed.
- HDD Access LED will flash blue when data is being accessed.
- Power LED will light up blue when the power is turned on.
- Fail LED will light up red when the internal temperature exceeds 60°C or if the internal fan has failed.

# IMPORTANT! Please read before proceeding with installation

- **1.** Before installing, make sure that you have reviewed the previous page and that all necessary cables and parts are present.
- **2.** Please be sure to use the heavy duty power cord that is provided. The unit is able to be used with 100-240V, 60Hz power and is autoswitching.
- **3.** Any disassembly of the enclosure or modification will void your warranty. If you are experiencing problems, please contact our technical support department before opening the enclosure.

#### 4. Hardware Requirements:

- For the best performance, connect the enclosure using the included 1394b cables (FireWire 800). See note below about gaining even more performance than a single FireWire 800 connection can provide.
- You can also use a USB 2.0 connection (but not at the same time) if you do not have a FireWire port on your computer.

If you are looking to maximize the performance of this enclosure, it has the ability to utilize 2 discrete FireWire 800 connections. You can connect 2 drives to one FireWire 800 interface, for example, the built-in FireWire 800 connection on your computer, and the other 2 drives to a PCI/PCI Express FireWire 800 card, doubling the bandwidth available.

### 5. OS Requirements:

#### • Mac:

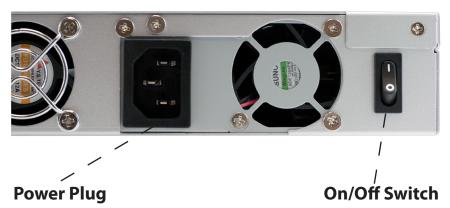
Compatible with all Apple OS Versions 8.5 through 9.2.x; Apple OS X 10.0.3 and higher (including OS X 'Leopard' 10.5.x).

#### • Windows:

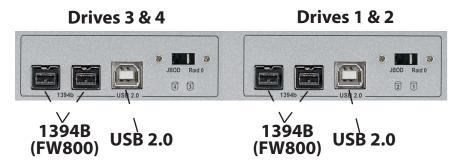
Compatible with Microsoft Windows 98SE, ME, 2000, XP; Any OS or device with standard FireWire or USB support.

# Cable Connections Chapter 4

Please review the following pictures to determine the best way to hook your new drive solution to your computer.



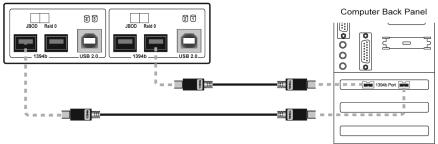
Insert the power plug and connect to your standard wall outlet. The internal power supply is autoswitching and you can use it with voltages ranging from 110V to 220V, 60Hz.



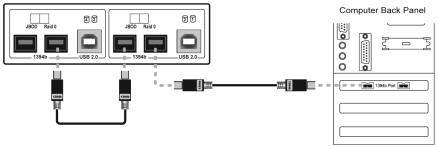
These are the connections you will use to attach the storage solution to your computer. You will need to decide if you are going to hook the solution up via FireWire 800 (1394b) - which is the fastest interface this drive solution uses, or via USB 2.0, or both.

The OWC Mercury Elite RAID Rack has two separate back panel connections - called bridges - each controlling 2 hard drives. On the following pages you will see the different methods used to connect the drive solution to your computer.

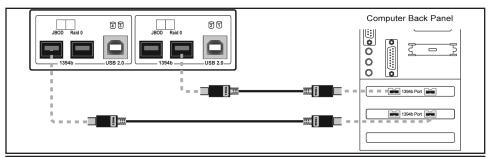
### FireWire 800 (1394B) Connection Options



**Connection option #1** - Connect to the same FireWire 800 source (built in FireWire 800 ports, or a PCI/PCIe FireWire 800 card) using two cables - direct connection for each bridge card.



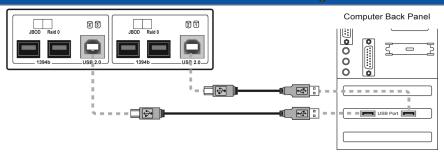
**Connection option #2** - Connect to the same FireWire 800 source (built in FireWire 800 ports, or a PCI/PCIe FireWire 800 card) via daisy-chaining the two bridges together, then connect one bridge to the computer.



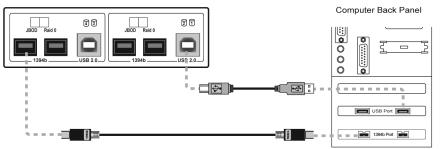
**Connection option #3** - Connect to separate FireWire 800 interfaces (such as a built in FireWire 800 port, AND a PCI/PCIe FireWire 800 card). Use the 2 included cables to connect one cable to each of these interfaces, doubling the bandwidth.

Of the 3 types of FireWire 800 connection listed above, Connection option #3 is the fastest.

### **USB 2.0 & Other Connection Options**



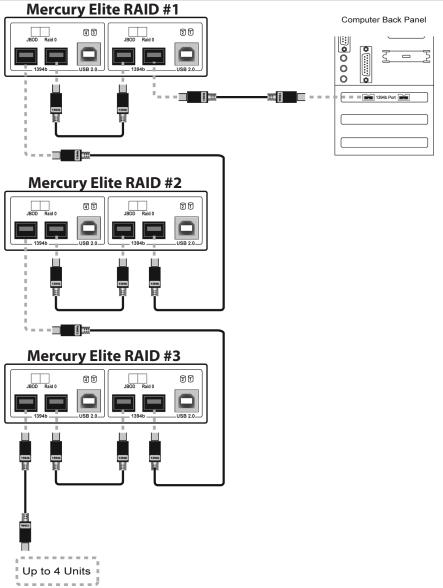
**Connection option #4** - Connect to the same USB 2.0 source (built in USB 2.0 ports, or a PCI/PCIe USB 2.0 card) using two cables - direct connection for each bridge card.



**Connection option #5** - This option allows you to use both a FireWire 800 and a USB 2.0 connection. Connect one cable from the FireWire 800 ports on either bridge card to the computer, and then connect the USB 2.0 connection on the opposite bridge card to the computer.

This allows you to maximize the performance, of the storage solution, even though you do not have two identical interfaces.

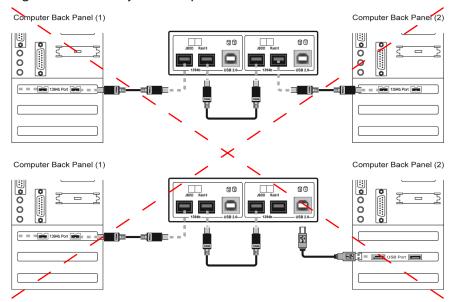
### Daisy Chaining Multiple Enclosures Together



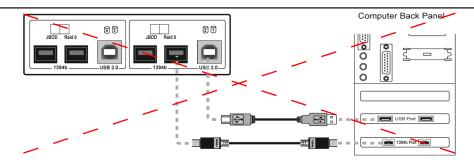
If you wish to connect multiple storage enclosures together, use the above diagram to properly connect the enclosures to each other. You can of course split the enclosures onto multiple FireWire 800 sources to improve data transfer speeds, but it is possible to connect multiple units together in the described method.

### Ways to NOT hook your storage enclosure to your computer

The below described methods show what **NOT** to do to hook your storage enclosure to your computer.



You cannot share the storage enclosure between two computers. Do not attempt to hook cables between the storage enclosure and 2 computers as shown, data loss and damage to the unit can occur.



You also cannot hook both the FireWire 800 and USB 2.0 connection to the computer on the same bridge card. Once again, data loss and damage to the computer can occur.

# Using your OWC Mercury Elite 4 bay RAID Rack with a Macintosh Computer (If you are using a PC; please turn to page # 17 Chapter 5

Once you have decided on the proper way to connect the OWC Mercury Elite 4 Bay RAID Rack to your Macintosh, you're now ready to power the unit on and begin using it. Do so now.

The OWC Mercury Elite 4 Bay RAID Rack comes from the factory pre configured one of 3 ways. Please refer to your invoice to verify which method of configuration you ordered if you do not know already.

#### The methods are:

**JBOD** - All 4 hard drives formatted independently, as four individual hard drive volumes. If you had 4 1TB drives in your OWC Mercury Elite 4 Bay RAID Rack, you would have 4 1TB volumes mount on your desktop.

**Stripe** (RAID 0) - Two volumes will mount on your desktop, each made up of a high-speed RAID-0 Stripe - combining two volumes each. Using a RAID-0 Stripe format, if you had 4 1TB drives in your OWC Mercury Elite 4 Bay RAID Rack, you would have 2 2TB volumes mount on your desktop.

**RAID 0+1** - This method is a bit different than the above two methods as it uses a piece of software that is included with this bundle - SoftRAID. SoftRAID combines two Stripe (RAID-0) volumes into a RAID-1 Mirror - allowing both speed, and full redundancy. If you had 4 1TB drives in your OWC Mercury Elite 4 Bay RAID Rack using this method, you would have 1 2TB volume mount on your desktop.

Your solution should be configured properly to work the way that you ordered it right out of the box. However, if you decide you want to reconfigure or change the method you ordered, please see the following pages to reformat or reconfigure your RAID.

## Setup your OWC Mercury Elite 4 Bay RAID Rack as JBOD (4 individual hard drives) on a Macintosh

**JBOD** - All 4 hard drives formatted independently, as four individual hard drive volumes. If you had 4 1TB drives in your OWC Mercury Elite 4 Bay RAID Rack, you would have 4 1TB volumes mount on your desktop.

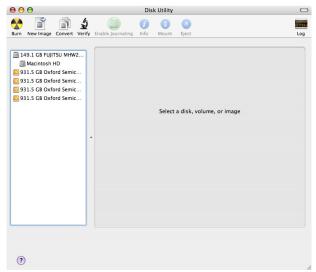
Step [MPORIZANT] Realize that reconfiguring your RAID will destroy all data on this storage enclosure. *Be sure you have a backup before proceeding*. Make sure that the power is turned off.



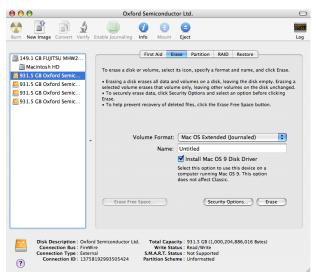
Step 2 Look at the back of the OWC Mercury Elite 4 Bay RAID Rack and locate the switches to the right of the USB port. Make sure they are both on the "JBOD" position (LEFT).



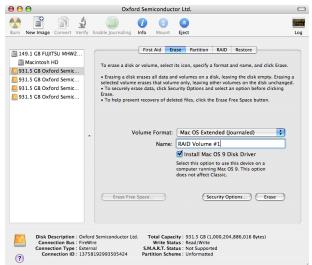
Choose the connection method you desire (USB, FireWire 800), and power on the OWC Mercury Elite 4 Bay RAID Rack enclosure. You will see these dialog boxes pop up. Click on "Initialize".



Once Disk Utility opens, you will see a screen that looks similar to this - note the 4 individual hard drives shown on the left side, all unformatted with no volumes listed.



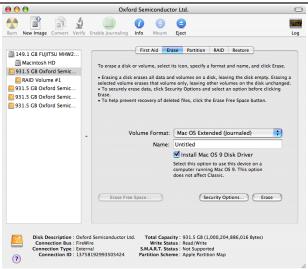
Step 5 Click on the first hard drive in the list that has no volume, as shown above.



Step 6 Enter a name for your new hard drive, select a volume format, and click Erase.



**Step** Are you sure? Click Erase.



Step 2 1 drive down, 3 more to go. Continue naming and formatting each of your drives. You're all set!

# Setup your OWC Mercury Elite 4 Bay RAID Rack as a RAID-0 (2 striped hard drives) on a Macintosh

**Stripe (RAID 0)** - Two volumes will mount on your desktop, each made up of a high-speed RAID-0 Stripe - combining two volumes each. Using a RAID-0 Stripe format, if you had 4 1TB drives in your OWC Mercury Elite 4 Bay RAID Rack, you would have 2 2TB volumes mount on your desktop.

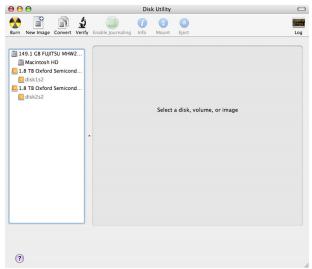
Step (MPORIZANT) Realize that reconfiguring your RAID will destroy all data on this storage enclosure. *Be sure you have a backup before proceeding*. Make sure that the power is turned off.



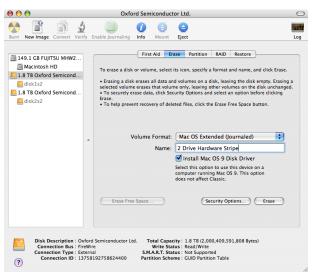
Step 2 Look at the back of the OWC Mercury Elite 4 Bay RAID Rack and locate the switches to the right of the USB port. Make sure they are both on the "RAID 0" position (RIGHT).



Step Choose the connection method you desire (USB, FireWire 800), and power on the OWC Mercury Elite 4 Bay RAID Rack enclosure. You will see these dialog boxes pop up. Click on "Initialize".



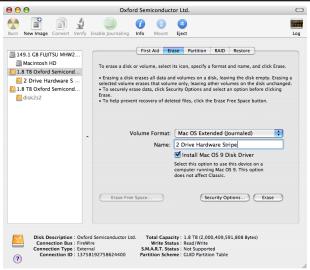
Once Disk Utility opens, you will see a screen that looks similar to this - note the 4 individual hard drives shown on the left side, all unformatted with no volumes listed.



Step 5 Click on the first hard drive in the list that has no volume, as shown above.



Step 6 Are you sure? Click Erase.



Step 7 1 pair of drives down, 1 more pair to go. Repeat on the 2nd set and you're all done!

# Using your OWC Mercury Elite 4 Bay RAID Rack with a PC (If you are using a Mac, please turn back to page # 10 Chapter 6

Once you have decided on the proper way to connect the OWC Mercury Elite 4 Bay RAID Rack to your Macintosh, you're now ready to power the unit on and begin using it. Do so now.

The OWC Mercury Elite 4 Bay RAID Rack comes from the factory preconfigured one of 3 ways. Please refer to your invoice to verify which method of configuration you ordered if you do not know already.

#### The methods are:

**JBOD** - All 4 hard drives formatted independently, as four individual hard drive volumes. If you had 4 1TB drives in your OWC Mercury Elite 4 Bay RAID Rack, you would have 4 1TB volumes mount on your desktop.

**Stripe (RAID 0)** - Two volumes will mount on your desktop, each made up of a high-speed RAID-0 Stripe - combining two volumes each. Using a RAID-0 Stripe format, if you had 4 1TB drives in your OWC Mercury Elite 4 Bay RAID Rack, you would have 2 2TB volumes mount on your desktop.

**RAID 0+1** - This method is a bit different than the above two methods as it uses a piece of software that is included with this bundle - SoftRAID. SoftRAID combines two Stripe (RAID-0) volumes into a RAID-1 Mirror - allowing both speed, and full redundancy. If you had 4 1TB drives in your OWC Mercury Elite 4 Bay RAID Rack using this method, you would have 1 2TB volume mount on your desktop.

Your solution should be configured properly to work the way that you ordered it right out of the box. However, if you decide you want to reconfigure or change the method you ordered, please see the following pages to reformat or reconfigure your RAID.

## Setup your OWC Mercury Elite 4 Bay RAID Rack as JBOD (4 individual hard drives) on a PC (Windows XP / Vista)

**JBOD** - All 4 hard drives formatted independently, as four individual hard drive volumes. If you had 4 1TB drives in your OWC Mercury Elite 4 Bay RAID Rack, you would have 4 1TB volumes mount on your desktop.

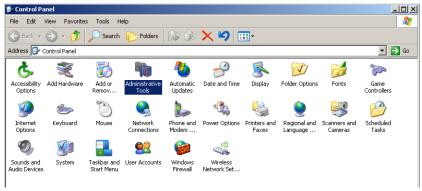
Step (MPORIZANT) Realize that reconfiguring your RAID will destroy all data on this storage enclosure. *Be sure you have a backup before proceeding*. Make sure that the power is turned off.



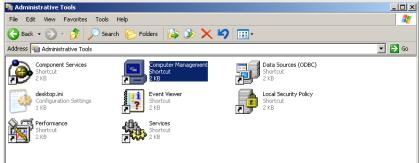
Step 2 Look at the back of the OWC Mercury Elite 4 Bay RAID Rack and locate the switches to the right of the USB port. Make sure they are both on the "JBOD" position (LEFT).



**Step** Step Click on the start button and then Control Panel.



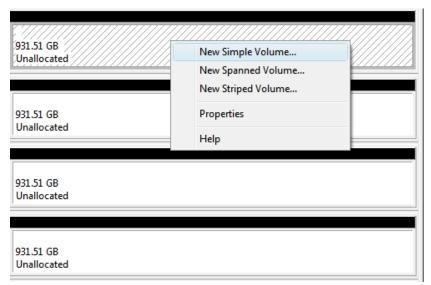
Step Open Administrative Tools.



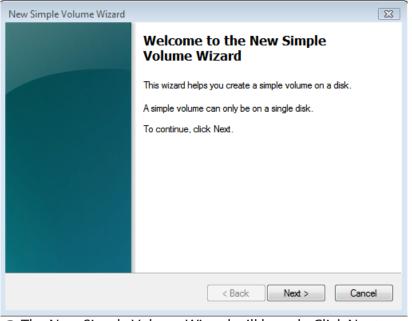
Step 5 Double click on Computer Management.



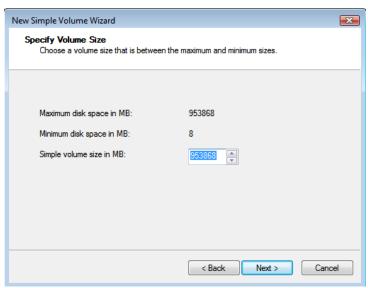
Step 6 Click on Disk Management under the Storage subcategory.



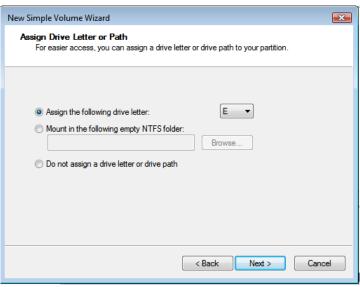
You will see the above box appear in the middle of the screen. Right click on the first unallocated volume that you wish to format. Select "New Simple Volume".



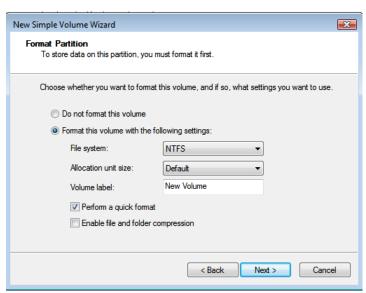
Step The New Simple Volume Wizard will launch. Click Next.



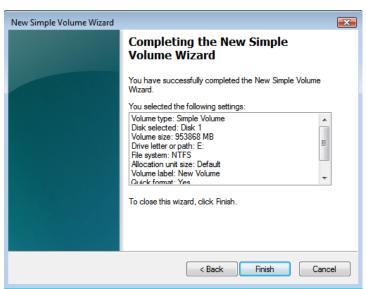
The maximum volume size will automatically be prompted in the box at the bottom. If you wish to adjust the size smaller, you can do so. In this demonstration we will use a maximum size volume. Click Next when you are ready.



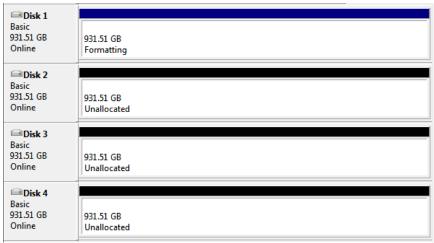
Step To Choose a new drive letter for the volume. It will automatically prompt an unused volume letter. Click Next when you are ready.



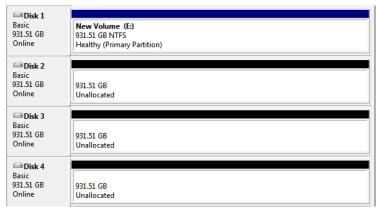
Step 77 Check "Perform a quick format" and choose which file system you want to use. NTFS is default and recommended. Click Next when you are ready.



Step 72 This screen is an overview of the settings you have chosen to format the disk with. Click Finish when you are ready.



Step 13 You will see the drive begin to format. This will take up to 5 minutes to complete.



Step 74 The format has completed. You will see it report back as a healthy partition.

Complete the formatting process for the remaining drives using these steps. You're all set!

# Setup your OWC Mercury Elite 4 Bay RAID Rack as RAID 0 (2 striped hard drives) on a PC (Windows XP / Vista)

**Stripe** (RAID 0) - Two volumes will mount on your desktop, each made up of a high-speed RAID-0 Stripe - combining two volumes each. Using a RAID-0 Stripe format, if you had 4 1TB drives in your OWC Mercury Elite 4 Bay RAID Rack, you would have 2 2TB volumes mount on your desktop.

Step (MPORIANT) Realize that reconfiguring your RAID will destroy all data on this storage enclosure. Be sure you have a backup before proceeding. Make sure that the power is turned off.



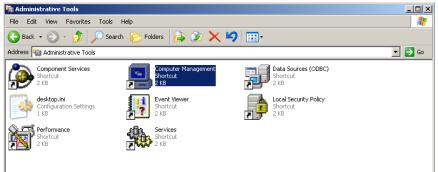
Step 2 Look at the back of the OWC Mercury Elite 4 Bay RAID Rack and locate the switches to the right of the USB port. Make sure they are both on the "RAID 0" position (RIGHT).



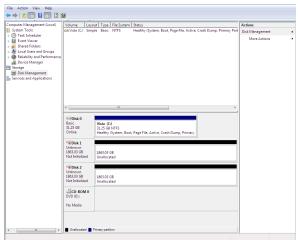
Step 3 Click on the start button and then Control Panel.



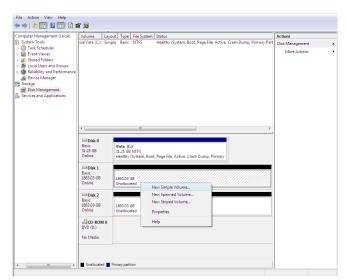
### Step Open Administrative Tools.



### Step 5 Double click on Computer Management.



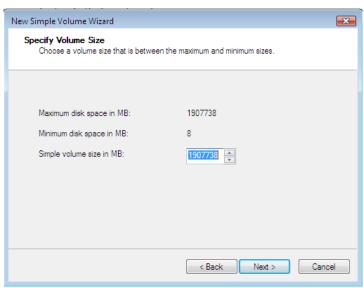
Step 6 Click on Disk Management under the Storage subcategory.



You will see the above box appear in the middle of the screen. Right click on the first unallocated volume that you wish to format. Select "New Simple Volume".



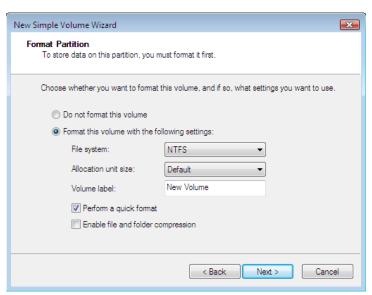
Step The New Simple Volume Wizard will launch. Click Next.



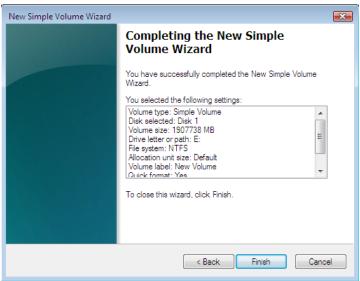
The maximum volume size will automatically be prompted in the box at the bottom. If you wish to adjust the size smaller, you can do so. In this demonstration we will use a maximum size volume. Click Next when you are ready.



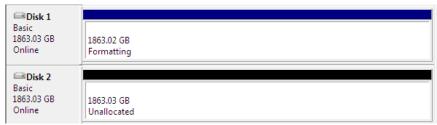
Step 70 Choose a new drive letter for the volume. It will automatically prompt an unused volume letter. Click Next when you are ready.



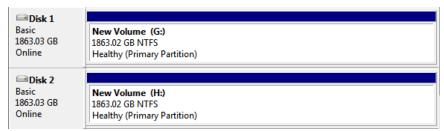
Step 77 Check "Perform a quick format" and choose which file system you want to use. NTFS is default and recommended. Click Next when you are ready.



**Step** This screen is an overview of the settings you have chosen to format the disk with. Click Finish when you are ready.



Step 73 You will see the drive begin to format. This will take up to 5 minutes to complete.



Step 14 The format has completed. You will see it report back as a healthy partition.

Complete the formatting process for the remaining drives using these steps. You're all set!

# Customizing your new OWC Mercury Elite RAID Chapter 7

### **Removable Trays:**

You can purchase extra drive carriers and swap out drive mechanisms, perfect for off-site backup or archiving.



To remove the drive tray - first, make sure the power is turned OFF on the Mercury Elite RAID Rack this is not a "hot swap" procedure.



Start by inserting the included drive key into the small hole on the right side of the tray, in the area below the door.



Push the key in - and it will pop the door up, allowing you to pull the tray out of the enclosure.

You can purchase multiple drive trays and perform a rotation, if you want to archive data and store it at another location for safety.

### **Drive Icons:**

Now that you have your new OWC Mercury Elite-AL Dual configured to your needs, dress it up! Change the icon of the hard drive! We have created disk icons for every model of drive we make:

http://eshop.macsales.com/Reviews/Framework.cfm?page=/icons/icons.html







### Troubleshooting Chapter 8

If your OWC Mercury Elite-AL is not functioning properly, begin by checking some basic possibilities, such as:

- Are all cables tightly attached to the computer and drive?
- Is the power supply plugged in firmly, and is the LED lit on the power supply brick?

If the above solutions are not working, a full reset of your system may be in order.

• Performing a set of open firmware reset routines can result in the memory being properly recognized again. To do this, you will need to boot your machine into Open firmware.

To boot into Open Firmware, shut down your Mac, then start it up while holding down the Command, Option, O and F keys. At the Open Firmware screen prompt, enter the following commands (you may want to write them down on a piece of paper before beginning this process), pressing the return key after each:

reset-nvram (press return)
set-defaults (press return)
reset-all (press return, your machine will reboot)

For further troubleshooting tips, visit our FAQ section online at: http://eshop.macsales.com/tech\_center/FAQ/index.cfm

If you are still experiencing problems with your drive, please continue on to Chapter 10: Contacting Customer Service, on page 33.

### Tips Chapter 9

### To disconnect or unhook your OWC Mercury hard drive, follow these important steps to properly dismount your drive.

If you wish to disconnect your OWC Mercury drive without shutting down your computer, simply drag the OWC Mercury drive icon to the trash can on the desktop (or, in the dock using Mac OS X). Your drive is now safe to power off and unhook.

Realize that you have up to 4 drives to dismount with this 4 bay unit - make sure all drives are disconnected before powering down.

### Share your Mac formatted drive with your PC using MacDrive (optional purchase)

After installing MacDrive, your HFS+ Macintosh volume will mount as if the drive were formatted in a native Windows format. MacDrive allows you to use your OWC Mercury hard drive on either platform without having to reformat or re-initialize the volume. We highly recommend this software for anyone that is sharing data in a cross platform environment.

### **Cloning drives (exact copies)**

If you want to make an exact duplicate of a hard drive, we highly recommend Mike Bombich's donationware "Carbon Copy Cloner". It's a great tool! You can find it on his website at: http://www.bombich.com/ccc.html

### Contacting Customer Service Chapter 10

### **Before contacting Customer Service:**

- Read the manuals and review Chapter 5: Troubleshooting
- Try and confirm the problem is with the hard drive. If you have a second Macintosh computer, move the drive to that system and verify that the drive does not function with that machine.
- Visit our tech center for more support suggestions.

### http://eshop.macsales.com/tech\_center/index.cfm

 Also visit our FAQ section, to see what other customers have asked about and how they solved their problem.

http://eshop.macsales.com/tech\_center/FAQ/index.cfm

### If you still need support:

- •Have the serial number of the hard drive handy
- Your invoice number (if possible)
- •What operating system you are using
- •Which kind of Macintosh you are using

Available to you to speed your support contact.

### **Tech Support Hours (Central Standard Time)**

8AM-9PM Monday - Friday 9AM - 4PM Saturday & Sunday Phone (815) 338-8685

*Live Chat is available during normal business hours as well.* Visit http://eshop.macsales.com for more information.

**Or, you can email:** Submit your email at: http://eshop.macsales.com/Service/Tech.cfm

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#### Changes

The material in this document is for information only and subject to change without notice. While reasonable efforts have been made in the preparation of this document to assure its accuracy, Other World Computing assumes no liability resulting from errors or omissions in this document, or from the use of the information contained herein. Other World Computing reserves the right to make changes or revisions in the product design or the product manual without reservation and without obligation to notify any person of such revisions and changes.

#### **FCC Statement:**

Warning! Modifications not authorized by the manufacturer may void the user's authority to operate this device.

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

**NOTE:** 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 a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

#### **Health And Safety Precautions**

- Use proper anti-static precautions while performing the installation of your hard drives into this drive enclosure. Failure to do so can cause damage to your drive mechanisms, and / or the hard drive enclosure.
- Read this User's Guide carefully, and follow the correct procedure when setting up the device.
- 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 hard drive contains no user-serviceable parts. If it appears to be malfunctioning, have it inspected by a qualified Other World Computing Technical Support representative.
- Never expose your device to rain, or use it near water, or in damp or wet conditions. Never place objects containing liquids on the drive, as they may spill into its openings. Doing so increases the risk of electrical shock, short-circuiting, fire or personal injury.

#### **General Use Precautions:**

- Do not expose the hard drive to temperatures outside the range of 5° C to 40° C (41° F to 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). Inversely, placing your drive in an environment that is too cold or humid may damage the unit.
- 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.
- Use only the power supply shipped with the device.
- Do not use the hard drive near other electrical appliances such as televisions, radios or speakers. Doing so may cause interference which will adversely affect the operation of the other products.
- 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 excessive force on your drive. If you detect a problem, consult the Troubleshooting section in this manual.
- Protect your hard drive from excessive exposure to dust during use or storage. Dust can build up inside the device, increasing the risk of damage or malfunction.
- Other World Computing recommends the use of normal glass cleaning products to keep the high lustre finish at it's finest with this product. Be sure to not get any moisture inside the holes and if you do, allow time to air dry before use.
- Do not block the ventilation outlets on the rear of the drive. These help to keep your drive cool during operation. Blocking the ventilation outlets may cause damage to your drive and cause an increased risk of short-circuiting or fire.



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