



OWC Mercury Elite Pro Qx2

ASSEMBLY MANUAL & USER GUIDE



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INTRODUCTION

1.1 MINIMUM SYSTEM REQUIREMENTS

1.1.1 Apple® Mac Requirements

- PowerPC G4 CPU, 128MB RAM
- eSATA (3.0Gb/s): Mac OS X 10.3 or later
- FireWire 800: Mac OS X 10.2 or later
- USB 3.0 (backwards compatible to USB 2.0): Mac OS X 10.2 or later

1.1.2 PC Requirements

- 500MHz Intel Pentium 3 CPU, 128MB RAM
- eSATA (3.0Gb/s): Windows XP or later
- FireWire 800: Windows 2000/XP or later
- USB 3.0 (backwards compatible to USB 2.0): Windows 2000/XP or later

1.1.3 Supported Hard Drives

- Up to four 3.5" SATA drives (1.5Gb/s, 3.0Gb/s, or 6.0Gb/s).
- Drives of identical model and capacity are required for all RAID modes other than span mode and independent drive mode.
- For an updated list of supported hard drives, go to: www.macsales.com/qx2

1.2 PACKAGE CONTENTS



Mercury Elite Pro Qx2



Power cable



USB 3.0 cable
(Standard-A to Standard-B)



FireWire 800 (1394b)
9-9 pin cable



eSATA (3.0Gb/s) cable



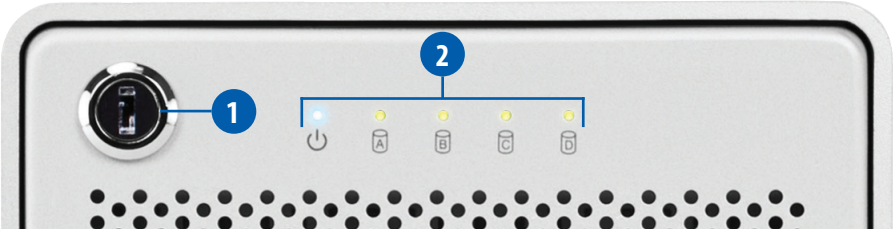
Keys

NOTE: Hard drive screws included, but not pictured.

1.3 ABOUT THIS MANUAL

Firmware, images, and descriptions may vary slightly between this manual and the unit shipped. Functions and features may change depending on the firmware version. Please visit the product webpage for the most recent product specifications.

1.4 FRONT VIEW

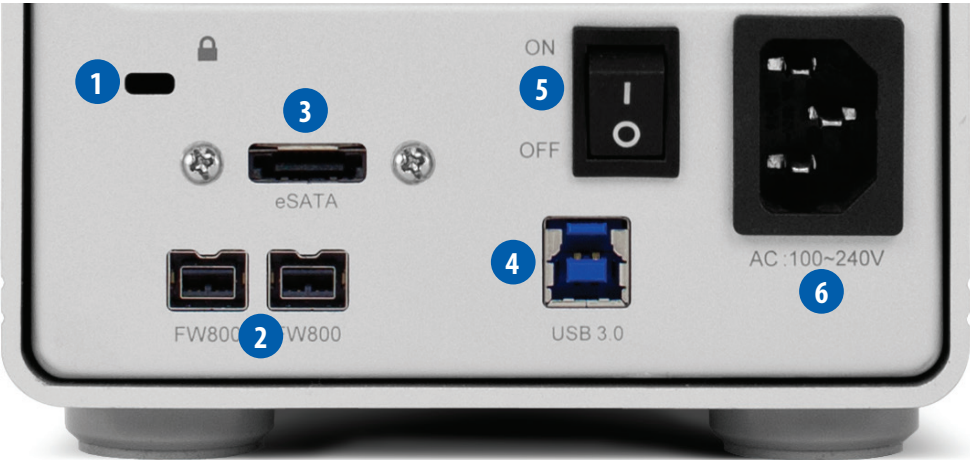


1.4.1 Front Features

- 1. Locking faceplate** — Use the included keys to lock the faceplate for security, or remove the faceplate to gain access to the drive bays and configure the RAID mode.
- 2. LED indicators** — See the following chart for information on the Qx2's LEDs.

LED	COLOR	QX2 ON	QX2 SLEEPING	DRIVE ACTIVITY	DRIVE BAD/ BAY EMPTY	DRIVE REBUILD
Power	Blue	Solid blue	Off	Solid blue	N/A	N/A
Drive (A, B, C, D)	Green/ Orange	Solid green (all four)	Off (all four)	Flashing green	Off	Flashing orange

1.5 REAR VIEW



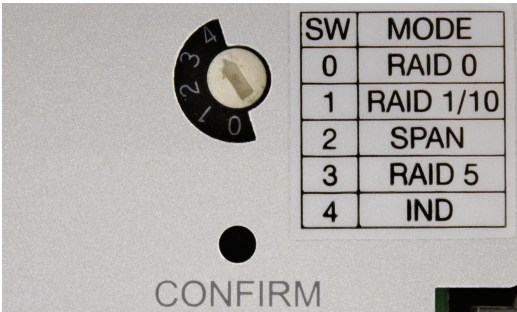
1.5.1 Rear Features

- 1. Kensington® Security Slot** — Connect a security tether here.
- 2. FireWire 800 ports** — Attach the included 9-9 pin FireWire 800 cable to one of these ports and to your computer. Use the other FireWire 800 port to daisy chain other FireWire 800 devices.
- 3. eSATA (3.0Gb/s) port** — Attach an eSATA cable here. (Cable not included.)

- 4. USB 3.0 port** — Attach the included USB 3.0 (Standard-A to Standard-B) cable here.
- 5. On/off switch** — Turn on and off the Mercury Elite Pro Qx2 here.
- 6. Power input** — Connect the included power cable here.

NOTE:

- Only one interface (FireWire 800, USB 3.0, eSATA) at a time can be used. When more than one interface cable is connected, the fastest interface has priority.
- For the safe removal of your drive and to assure that no data is lost, always eject or un-mount the drive from your operating system before powering off.
- In order for the computer to access volumes larger than 2TB, the operating system needs to support large volumes (e.g., Windows Vista or Mac OS X 10.4 and above).



1.5.2 RAID Selector Dial

To adjust your RAID settings, there is a dial on the front panel of the Qx2, behind the locking faceplate.

Use the silkscreened chart as a guide when adjusting the dial to the desired RAID setting. Proceed to section 2.3 for instructions on changing the RAID levels on the Qx2.

SYSTEM SETUP

2.1 HARD DRIVE INSTALLATION

Follow these steps to install hard drives into your Mercury Elite Pro Qx2, or to replace existing drives. Repeat steps 1 through 8 as necessary for the number of drives you are installing.



1. Insert one of the included keys into the lock on the top left of the faceplate.
2. Turn the key clockwise, then pull the key towards you. The faceplate will swing open, as shown.
3. Once the faceplate has swung open as far as it will go, pull up to remove it.
4. On the drive tray you wish to remove, turn the thumbscrew counter-clockwise until you no longer feel resistance. Then hold onto the thumbscrew and pull the drive tray out.
5. Set the drive tray as shown on your work surface. If you are replacing an existing hard drive, unscrew it from the drive tray at this time. If your Qx2 was purchased without drives, each drive tray will have a plastic bar to help the drive tray keep its shape during shipping. Unscrew the plastic bar and discard it before proceeding.
6. Place your hard drive inside the drive tray as shown. The label should face up and the SATA connectors should be on the far rear corner of the drive.
7. Fasten the drive into the drive tray using six of the included screws.
8. Slide the drive tray back into the rails in the Qx2 and push until it is seated fully. Then, push in on the thumbscrew and turn it clockwise until it stops moving.

NOTE: Be careful when sliding the drive tray back into the Qx2. If you encounter resistance, do not force the drive tray. Remove it, check to make sure there are no obstructions and that the drive tray is lined up correctly, and slide it in again.

2.2 QUICK START

If your Mercury Elite Pro Qx2 was purchased as a preconfigured solution with drives included, it has been configured in the following way. A software bundle and the OWC Drive Guide formatting utility have been installed on your Qx2, and it has been set to RAID 5 mode. If you wish to change the RAID mode (see section 2.3), doing so before you use the OWC Drive Guide formatting utility will erase the software bundle and formatting utility from your Qx2. If you wish to keep the software bundle, run the OWC Drive Guide utility first, move the software bundle to a different drive, then change the RAID mode.

2.2.1 OWC Drive Guide

Before your Qx2 can be put to use, it needs to be formatted. To help with the formatting process, the OWC Drive Guide formatting utility has been installed on your Qx2. Follow these steps to use the OWC Drive Guide to format your Qx2 for Mac OS X (10.4 and later) or Windows (XP and later).

1. Connect your drive to your computer using the proper cable, then turn on your drive. If you prefer to use a different formatting utility, do so at this time and skip the rest of these instructions.
2. Your drive will show up as "OWC HD". Open your drive to view its contents.
3. Open the "Macintosh Setup" or "Windows Setup" folder, depending on the computer's operating system, then double-click the OWC Drive Guide application.
4. Follow the simple on-screen instructions to complete the formatting process.
5. Once the formatting is finished the drive is ready to use.

2.3 RAID SETTINGS

2.3.1 Changing the RAID Mode

IMPORTANT NOTE: Drives of identical model and capacity are required for all RAID types other than independent drive mode and span mode.



WARNING: Changing the RAID mode will require you to reformat the drives. Reformatting will delete all of the existing data on the drives!



To switch RAID modes, follow these three steps (continued on next page):

1. With the Mercury Elite Pro Qx2 turned off, adjust the RAID dial so that the arrow is pointing to the desired RAID level (see section 1.5.2, RAID Selector Dial).
2. While using a paperclip or small screwdriver to hold down the "Confirm" button, turn on the Qx2. The Qx2 will build the newly selected RAID, during which time the LEDs on the Qx2 will flash. This process will take 20-30 seconds. When the LEDs stop flashing, release the "Confirm" button. The Qx2 will show up on your computer as an unfor-

matted volume (or individual disks if you selected independent drive mode).

3. Format the new volume. Formatting instructions can be found at:
www.macsales.com/format

2.3.2 RAID Modes

IMPORTANT NOTE: Drives of identical model and capacity are required for all RAID types other than independent drive mode and span mode.



WARNING: Changing the RAID mode will destroy the data on the drives. Be sure to back up your data first! See section 3.2 for information on proper backup strategies.



Independent Drive Mode (One to Four Drives Installed)

Dial position: 4

Each drive will appear as a single volume. If you intend to use hard drives of differing capacity and model, this is the mode to use. To swap or replace drives, first unmount all drives and turn off the Mercury Elite Pro Qx2.

NOTE: Independent drive mode is not supported over USB. To use independent drive mode, the Qx2 must be connected over FireWire or eSATA (port multiplication required for independent drive mode over eSATA).

Span Mode (Two to Four Drives Installed)

Dial position: 2



The drives show up as one large single volume. The total size will depend on the drives installed; you can use drives of different capacities. A span is an array (not RAID) in which the data is written sequentially across the drives. This combines the capacities of the drives, but it does not provide any performance or redundancy benefits.

RAID 0 “Drive Striping” Mode (Two to Four Drives Installed)

Dial position: 0



The drives show up as one large single volume with a size equal to the combined capacities of all the drives used in the array. RAID 0 is used when speed is the primary objective, but it does not have any redundancy for protection. Data is alternated very quickly across two or more drives to gain speed by distributing the workload. This allows for the fastest data transfer rates, since data is written without pausing to check parity information, but if one drive fails, the whole array can become corrupted and data will be lost. Always maintain a backup of your data!

RAID 1 “Drive Mirroring” Mode (Two Drives Installed)

Dial position: 1



The drives show up as one volume with a size equal to the capacity of one of the two drives used in the array. RAID 1 copies (or “mirrors”) a set of data from the first drive to the second drive. This is useful when reliability and redundancy are more important than capacity. When one drive fails, it can be replaced and the data will be rebuilt automatically.

RAID 10 “Drive Mirroring with Striping” Mode (Four Drives Installed)

Dial position: 1



The drives show up as one volume with a size equal to the combined capacities of half of the drives used in the array. RAID 10 creates an exact copy (or “mirror”) of a set of data but also uses a RAID 0 “stripe” for speed. When one drive fails, it can be replaced and the data will be rebuilt automatically.

RAID 5 “Drive Striping with Parity” Mode (Three or Four Drives Installed)

Dial position: 3



The drives show up as one volume with a size equal to the combined capacities of all the drives in the array, minus one drive. RAID 5 uses block-level striping with parity data distributed across all disks and therefore provides the perfect balance between high performance and data integrity. When one drive fails, it can be replaced and the data will be rebuilt automatically.

2.4 CHANGING DRIVES

2.4.1 Adding and Removing Drives in Independent Mode

When the Mercury Elite Pro Qx2 is set to independent mode, you can add or remove any drive without needing to create a new RAID set.

IMPORTANT NOTE: To avoid data corruption it is essential to unmount all drives and turn off the Qx2 before removing or adding a new drive. If you physically remove a drive from the Qx2 without turning off the Qx2 first, any mounted drives will improperly unmount from the computer.

2.4.2 Adding Drives to an Existing RAID Set

It is not possible to add more drives to an existing RAID set. In order to add drives, a new RAID set must be created, which will destroy the data on the existing RAID set. If you wish to add more drives, shut off the Mercury Elite Pro Qx2, then add the drives. Once all of the drives that you wish to use are installed, go through the steps in section 2.3.1 to create the new RAID set.

2.4.3 Replacing Drives

When one of the drives fails, the corresponding LED will turn off. If only one drive has failed and the RAID mode is set to RAID 1, RAID 10, or RAID 5, the data on the RAID set will still be accessible, but it is strongly suggested that you replace the failed drive immediately with another drive of identical model and capacity to assure the continued safety of your data.

If more than one drive fails at the same time, or if one drive fails and the RAID mode is set to RAID 0 or span, the data is lost (in span mode, only the data stored on the failed drive is lost) and the volume cannot be accessed again until the failed drives are replaced and a new RAID set is created.

When a drive fails, follow these steps:

1. Identify the failed drive and replace it (see section 2.1 for instructions). The LED that is off indicates the failed drive. You do not need to turn off the Mercury Elite Pro Qx2 to do this.
2. For RAID 1, RAID 10, and RAID 5, the RAID set will rebuild automatically. During the rebuild process, the LED of the drive being rebuilt will flash orange. Depending on the capacity of the drives being used, the rebuild process will last from several hours to a few days. Once the rebuild is complete, the drive LED will turn green and flash with activity as normal.
3. For RAID 0 and span, the drive LED will turn green, showing that the failed drive has been replaced and the new drive is ready to be used. You will need to go through the steps in section 2.3.1 to create a new RAID set before the Qx2 can be used again.

NOTE: We recommend that you do not turn off the power during the rebuild process, but if power is interrupted, the data will continue rebuilding from where it left off as soon as power is restored. The Mercury Elite Pro Qx2 does not need to be connected to a computer for the rebuild process to take place.

APPENDIX

3.1 TROUBLESHOOTING

Begin your troubleshooting by verifying that the power cable is connected to the Mercury Elite Pro Qx2 and to a power source. If the power cable is connected to a power strip, make sure that the power switch on the strip is turned on.

Then, simply verify that both ends of your cables are properly plugged into the computer and the Qx2. If the Qx2 is still not working properly, try connecting to another interface such as the USB connection and see if the device works properly. You can also connect the Qx2 to a different computer.

If you are still experiencing problems, consult our online list of frequently asked questions at www.macsales.com/FAQ or see section 3.4 for information on contacting OWC technical support.

3.2 ABOUT DATA BACKUP

To ensure that your files are protected and to prevent data loss, we strongly suggest that you keep two copies of your data: one copy on your Mercury Elite Pro Qx2 and a second copy on either your internal drive or another storage medium, such as an optical backup, or on another external storage unit. Any data loss or corruption while using the Qx2 is the sole responsibility of the user, and under no circumstances will Other World Computing be held liable for compensation or the recovery of any lost data.

3.3 ONLINE RESOURCES

Formatting:

For formatting information, including instructions on how to format your Mercury Elite Pro Qx2 for Mac or Windows, go to: www.macsales.com/format

Data Migration:

For a step-by-step walkthrough of our recommended method for migrating your data from an old drive to a new one, go to: www.macsales.com/migration

FAQs:

Access our online collection of frequently asked questions for this and other products at: www.macsales.com/FAQ

3.4 TECHNICAL SUPPORT HOURS AND CONTACT INFORMATION

8AM - 8PM (CT) Monday - Friday
9AM - 4PM (CT) Saturday

Telephone:

(800) 275-4576 (North America)
(815) 338-8685 (International)

Live Chat:

www.macsales.com/livechat

Email:

www.macsales.com/ts_email

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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 with 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 with radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to 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 to 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 guide carefully and follow the correct procedures when setting up the device.
- Do not attempt to disassemble or modify the device. To avoid any risk of electrical shock, fire, short-circuiting or dangerous emissions, never insert any metallic object into the device. If it appears to be malfunctioning, contact Other World Computing technical support.
- 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:

- To avoid damage, do not expose the device to temperatures outside the range of 5° C to 40° C (41° F to 104° F).
- Always unplug the device 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.
- Do not use the device 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 device near sources of magnetic interference, such as computer displays, televisions or speakers. Magnetic interference can affect the operation and stability of hard drives.
- Do not place heavy objects on top of the device.
- Protect your device from excessive exposure to dust during use or storage. Dust can build up inside the device, increasing the risk of damage or malfunction.
- Do not block any ventilation openings on the device. These help to keep the device cool during operation. Blocking the ventilation openings may cause damage to the device and cause an increased risk of short-circuiting or fire.
- For up-to-date product and warranty information, please visit the product webpage.

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