



MERCURY ELITE PRO DUAL

Assembly Manual & User Guide



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1.1 Minimum System Requirements

1.1.1 Apple Mac Requirements

- USB 3.1 Gen 1: OS X 10.6 or later
- FireWire 800: OS X 10.2 or later

1.1.2 PC Requirements

- USB 3.1 Gen 1: Windows XP or later
- FireWire 800: Windows XP or later

1.1.3 Supported Drives

- 3.5" SATA hard drives (identical model and capacity required for RAID 0 and RAID 1)

1.2 Package Contents



Mercury Elite Pro Dual



USB 3.1 Gen 1 (Standard-A to Standard-B) cable



FireWire 800 (1394b) 9-9 pin cable



Power Supply and cable

Not pictured: If the Mercury Elite Pro Dual was purchased without drives, a packet of screws is included.

1.3 About This Manual

The images and descriptions may vary slightly between this manual and the unit shipped. Functions and features may change depending on the firmware version or driver version, if applicable. Please visit the product web page for the most recent product requirements, specifications, and warranty information.



General Use Precautions

To avoid damage, do not expose the device to temperatures outside: 41° — 107° F (operating) or -40° — 149° F (non-operating)

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.



Safety Precautions

Read this user guide carefully and follow the recommended steps for assembly.

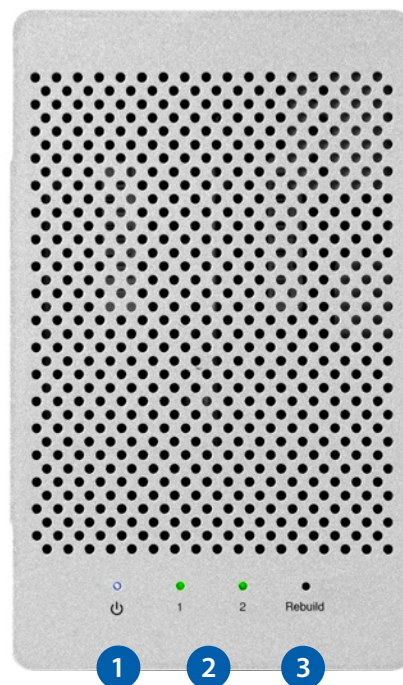
Use proper anti-static precautions while installing your hard drives into this drive enclosure. Failure to do so can cause damage to your drive mechanisms and/or the enclosure.

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, please contact 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.

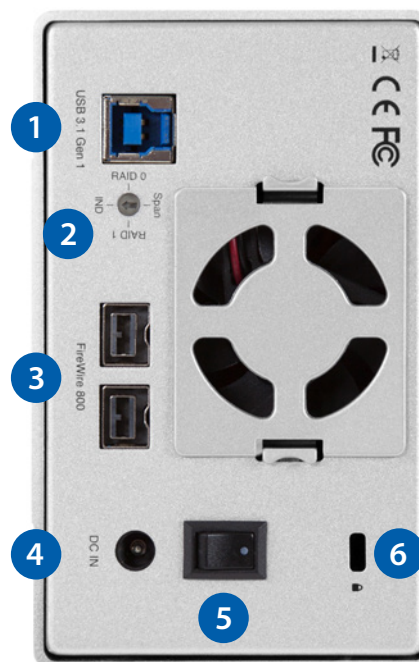
1.4 Front View

1. **Power** — This LED emits a solid blue light when the Elite Pro Dual is powered on.
2. **LEDs 1 & 2** — These LEDs represent the two drives inside the Elite Pro Dual. During normal activity, each of these LEDs will blink green when the corresponding drive is accessed. If one of the drives in the Elite Pro Dual fails, or if the drive bay is empty, the corresponding LED will turn solid red.
3. **Rebuild** — If the Elite Pro Dual is set up as a RAID 1 and one of the hard drives is being rebuilt, this LED will blink green during the rebuild process. The LED that corresponds to the hard drive being rebuilt will also blink green.



1.5 Rear View

1. **USB 3.1 Gen 1 port** — Attach the included USB 3.1 Gen 1 (Standard-A to Standard-B) cable here.
2. **RAID Dial** — Set the RAID mode here.
3. **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.
4. **DC IN** — Connect the included power supply here.
5. **ON/OFF Switch** — Turn power to the Elite Pro Dual on and off with this switch.
6. **Kensington® Security Slot** — Connect a security tether here.



1.6 Usage Notes

- Use only one interface (USB 3.1 Gen 1 or FireWire 800) at a time.
- In order for the computer to access volumes larger than 2TB, the operating system needs to support large volumes (e.g. Windows Vista or OS X 10.4 and above).
- If the enclosure is powered on but there is no active data connection, or if the computer is sleeping, both drive LEDs will display as solid red. If this happens when the drive is not sleeping and there is a cable connection present, check both ends of the data cable to ensure it is securely connected to the enclosure and the computer.
- When you want to change the data connection type from FireWire to USB or vice-versa, do the following: unmount the volume in the OS, then power off the Elite Pro Dual. Next switch the data connection, wait 10 seconds, then power on the Elite Pro Dual again to resume operation.
- For the safe removal of your drive and to ensure that no data is lost, always eject or unmount the corresponding disk(s) from your operating system before powering off. You can use the methods described below to safely unmount your disk(s).

OS X :

- Drag the icon for the disk you wish to unmount to the trash can; OR
- Right-click the disk icon on the desktop, then click “Eject”; OR
- Highlight the disk on your Desktop and press Command-E.

Windows:

1. Go to the System Tray (located in the lower right corner of your screen). Click on the “Eject” icon (a small green arrow over a hardware image).
2. A message will appear, detailing the devices that the “Eject” icon controls, i.e., “Safely remove...” Click on this prompt.
3. You will then see a message that says, “Safe to Remove Hardware.” It is now safe to disconnect the Mercury Elite Pro Dual from the computer.

2.1 Quick Start

Follow the steps below to use the OWC Drive Guide utility to format your Mercury Elite Pro Dual for Mac (OS X 10.6 and later) or Windows (XP and later). If you installed your own drives, please use the formatting method you are most familiar with or check **Section 3.1** for a link to our online formatting tips.

1. Power on the Mercury Elite Pro Dual and plug it into your computer using the proper data cable. If you prefer to use a different formatting utility, do so at this time and skip the rest of these steps.
2. The disk will mount and your operating system will display it as “OWC SETUP”. Open the disk icon to view its contents.
3. Double-click the OWC Drive Guide application.
4. Follow the simple on-screen instructions to complete the formatting process. Once the formatting is finished the drive is ready to use.

2.2 Assembly

NOTE: these assembly instructions are written for users who purchased the Mercury Elite Pro Dual as an empty enclosure. The instructions show how to open the enclosure in order to install drives. **If you purchased the Mercury Elite Pro Dual with drives already installed, opening the enclosure before the expiration of the original warranty will VOID the warranty.** If you wish to remove or replace the drives after the expiration of the original warranty, you may do so at that time. You should start with Step 9 in that case and work backwards.

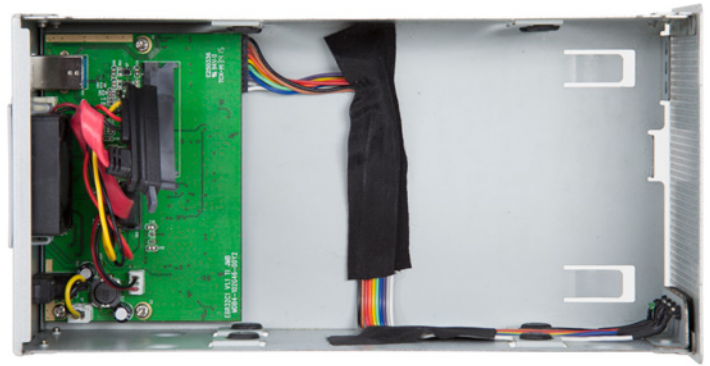
1. Remove the Mercury Elite Pro Dual from its packaging, then set the enclosure on its side. Use a Phillips PH2 driver to remove the two screws shown at right.



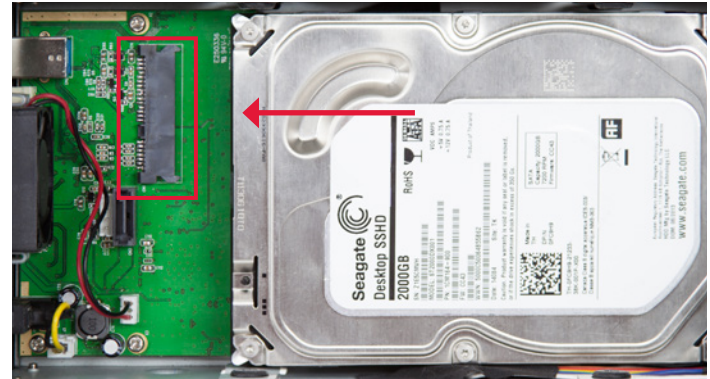
2. Slide the inner chassis out the front of the outer enclosure, as shown at right. Start by pushing on the back cover, then grip the front grill and pull the chassis the rest of the way.



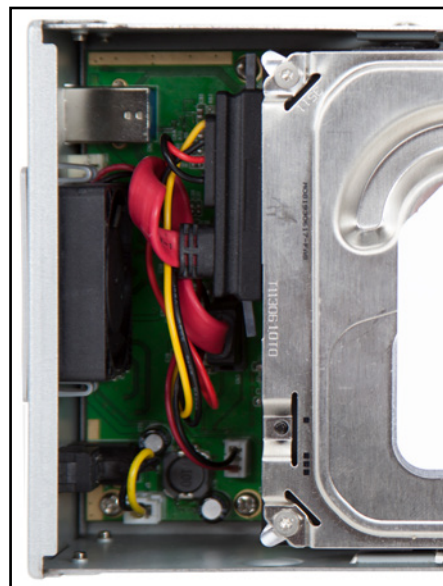
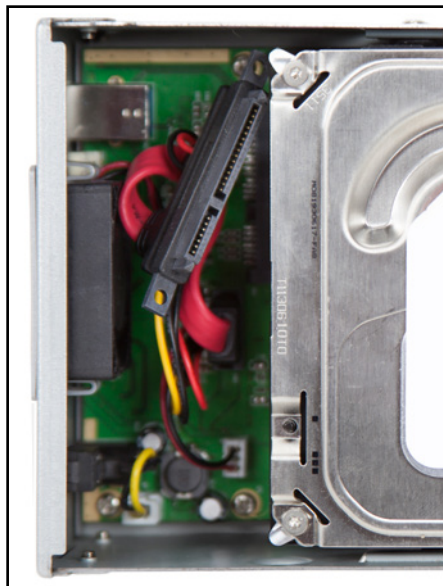
- When removed from the outer enclosure, the inner chassis will appear as shown at right. There will also be a packet of screws inside (not shown). Remove this packet and use the screws as directed in subsequent assembly steps.



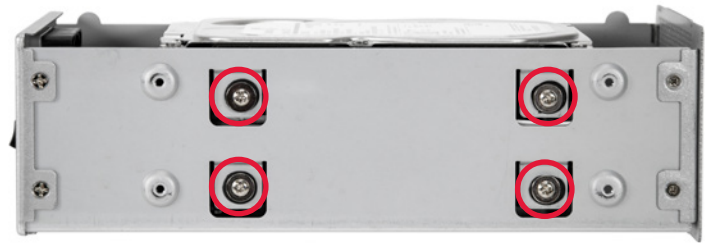
- Install the first hard drive (Drive 1), as shown at right. Slide the SATA connector on the hard drive into the black SATA connector (shown in red). Make sure the drive is firmly seated on the black SATA connector before proceeding. NOTE: the red SATA cable used to connect the second hard drive has been removed in order to provide a better image. Do not remove any cables from the Elite Pro Dual.



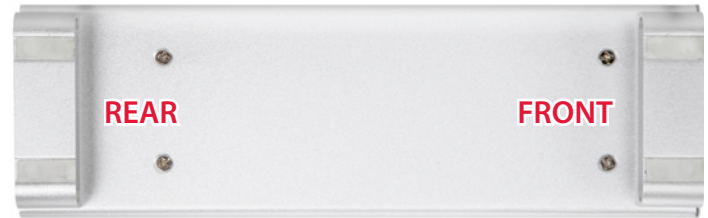
- Install the second hard drive (Drive 2), as shown below. Insert the SATA connector from the red cable into the SATA connector on the hard drive. Make sure the SATA connectors are firmly seated. NOTE: Make sure that the flat red cable is twisted as shown (below-right) in order to avoid interfering with the exhaust fan.



- Using eight of the larger screws from the packet you removed in Step 1, fasten the inner chassis to the hard drives. There are four screw holes on each side of the inner chassis, as shown below.



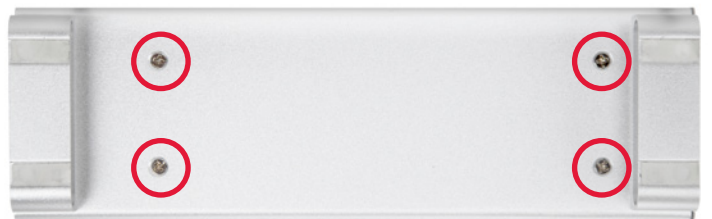
- Slide the inner chassis back into the outer enclosure. Note that while the inner chassis can slide into both sides of the outer enclosure, there is only one correct way that will allow the screw holes to line up correctly. To determine the correct orientation relative to the outer enclosure, turn the outer enclosure on its side and look at the bottom. The screw holes at the front of the outer enclosure are close to the silicone feet, while the screw holes at the rear of the outer enclosure are farther away from the silicone feet.



- Once you have determined the correct orientation, slide the inner chassis back into the outer enclosure, as shown below.



- Once the front grill of the inner chassis sits flush with the edge of the outer enclosure, turn the Elite Pro Dual on its side again to look at the screw holes on the bottom. You should see that the screw holes in the outer enclosure line up with the screw holes in the inner chassis. Use the four smaller screws to fasten the inner chassis to the outer enclosure, as shown below.



The assembly process is now complete.

2.3 RAID Settings

2.3.1 Changing the RAID Mode

The RAID mode is controlled by a dial on the rear of the unit, as shown below-left. The dial has four positions, each labeled with a different RAID mode. To change the RAID mode, follow the simple steps below.

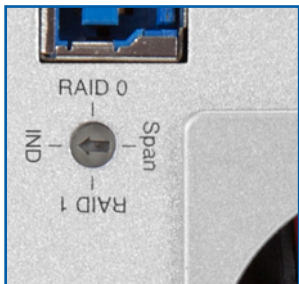
Warning

Changing the RAID mode will destroy the data on the drives. Be sure to back up your data first! See Section 3.4 for information on proper backup strategies.

Note

Changing the RAID mode for the Mercury Elite Pro Dual requires an active USB or FireWire connection.

Adjust the RAID dial so that the arrow is pointing at the desired RAID mode. Each time the arrow is aligned with a new mode, you will feel a slight click. A small flathead screwdriver works the best to adjust the dial.



When starting from a power on state, rotate the dial on the back of the enclosure to the desired RAID mode, then unmount the drive and power off the Elite Pro Dual. Next power on the Elite Pro Dual. The LEDs on the front will blink for a brief time; once the blinking stops the drive is ready to use.

When starting from a power off state, rotate the dial on the back of the enclosure to the desired RAID mode, then power on the Elite Pro Dual. The LEDs on the front will blink for a brief time; once the blinking stops the drive is ready to use.

NOTE: changing the RAID mode for the Mercury Elite Pro Dual requires an active USB or FireWire connection. See Section 2.3.2 - "RAID Modes" for more information on each RAID mode that can be used, and how it differs from the others.

2.3.2 RAID Modes

Warning

Drives of identical model and capacity are required for RAID 0 and RAID 1. Always maintain a full and separate backup of your RAID disks, especially RAID 0 disks.

RAID 0 "Drive Striping" Mode:

The two drives show up as a single large disk with a size equal to the combined capacities of both drives. RAID 0 is used when speed is the primary objective; it does not provide data redundancy for protection. The reading and writing of data files is spread across both drives to gain speed by distributing the workload. This allows for the fastest data transfer rates, but if one drive fails the whole array becomes corrupted. The data will be lost.

RAID 1 "Drive Mirroring" Mode:

The two drives show up as a single disk with a size equal to the capacity of a single drive from the array. RAID 1 copies (or "mirrors") the data from the first drive to the second drive. This is useful when reliability and redundancy are more important than capacity or maximum speed. When one drive fails, it can be replaced and the data can be rebuilt automatically from the other functioning drive. See Section 2.4 for more details on the drive replacement and rebuild process.

Span Mode:

Both drives show up as a single large disk, but one which functions differently than RAID 0. The total size will depend on the drives installed; unlike RAID 0 or RAID 1 you can use drives of different capacities. A Span is an array (but not a RAID) in which the data is written sequentially across the drives. When one drive becomes full, subsequent data is written to the second drive. This combines the capacities of the drives, but it does not provide any performance or data redundancy benefits.

Independent Drive Mode

Each drive will appear individually without being combined. If you are using drives of differing capacity and model, or if you are using only one drive, this is the mode to use.

2.4 Drive Failure

In the event that one of the drives fails, the corresponding drive LED will turn **solid red**. If the Mercury Elite Pro Dual was configured as a RAID 0 or Span, the data on the array is lost and the volume is no longer usable. In a span, only the data stored on the failed drive is lost, although data recovery software will be required to recover the data from the other drive in the Span. If the drives were configured independently, then the data on the drive that did not fail will remain intact.

2.4.1 Replacing Drives

If the Elite Pro Dual is set up as a RAID 1, a drive that has failed can be replaced. The data will remain accessible via the functioning drive, until the RAID 1 array is rebuilt with a new drive. If the Elite Pro Dual was purchased with drives already installed and it is still under warranty, see **Section 3.5** to contact OWC technical support and arrange for replacement. If the unit is outside its warranty or was purchased without drives, follow the assembly instructions in **Section 2.2** to access and replace the failed drive.

If the Drive 1 LED is solid red, the failed drive is the one on the bottom, connected directly to the black SATA connector on the circuit board (see **Section 2.2**, step 4). If the Drive 2 LED is solid red, the failed drive is the one on the top, connected using a SATA cable (see **Section 2.2**, step 5).

Note

A failed drive must be replaced with an identical drive (model, capacity, firmware).

Once the drive has been replaced, if the Elite Pro Dual is configured as a RAID 1, the array will automatically begin the rebuild process when it is turned on. This process may take several hours to more than a day, based on the capacity of the drives. During the rebuild process, the LED for the drive being rebuilt (Drive 1 or Drive 2) will **blink green**, and the rebuild LED will **blink green**.

It is recommended to leave the Elite Pro Dual turned on during the entire rebuild process, but if power is interrupted (or the computer sleeps), the unit will continue rebuilding automatically when power is restored. Once the rebuild process is complete, the rebuild LED will turn off and the LED for the rebuilt drive will resume normal activity. See **Section 1.4** for more information on the behavior of the LEDs on the front of the Elite Pro Dual.

Note

The Mercury Elite Pro Dual needs an active data signal to remain powered on. If it is disconnected from the computer, or if the computer goes to sleep or turns off, the device will power off. To minimize the total rebuild time, it is recommended to keep the device connected to the computer (with the computer powered on), and disable any hard drive sleep settings on the computer for the duration of the rebuild process.

3.1 Formatting

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

3.2 Troubleshooting

Begin your troubleshooting by verifying that the power cable is connected to the Elite Pro Dual and to a power source. If the power cable is connected to a power strip, make sure that the power strip switch is in the ON position. Next, verify that both ends of the data cable are properly plugged into the computer and the Elite Pro Dual.

If you are still having trouble, try connecting a different type of data cable and see if the Elite Pro Dual works properly; you can also connect the device to a different computer or use different cables of the same type. Sometimes the cables themselves can have flaws.

If one of the drive LEDs (Drive 1 or Drive 2) is solid red, then that drive has failed. See Section 2.4 for instructions on how to proceed. If the Elite Pro Dual is configured as a RAID 1 and the rebuild LED is blinking, simply wait for the rebuild process to complete. If the rebuild LED is still blinking after more than 48 hours, contact tech support for assistance. If problems persist, Section 3.5 provides information for contacting technical support.

3.3 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 Dual 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 Mercury Elite Pro Dual is the sole responsibility of the user, and under no circumstances may OWC, its parents, partners, affiliates, officers, employees, or agents be held liable for loss of the use of data including compensation of any kind or recovery of the data.

3.4 Online Resources

To access our online knowledge base, which includes topics like migrating your data from an old drive to a new one, please visit: www.owcdigital.com/faq

3.5 Contacting Technical Support

8am - 5pm (CT) Monday - Friday

Contact us by phone at:

(866) 692-7100 (North America only)

+1 (815) 338-4751 (International)

Live chat is available during business hours:

www.owcdigital.com/support

Email support is available at:

www.owcdigital.com/support

Changes:

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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 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.

Warranty:

The Mercury Elite Pro Dual has a 3 Year OWC Limited Warranty if it was bundled with drives. Mercury Elite Pro Dual enclosures that do not ship with drives have a 1 Year OWC Limited Warranty. Please visit the web site for warranty details.

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