MERCURY ELITE PRO DUAL

Assembly Manual & User Guide

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INTRODUCTION

1.1 MINIMUM SYSTEM REQUIREMENTS

1.1.1 Apple Mac Requirements

- USB 2.0: OS X 10.2 or later
- USB 3.1 Gen 1: OS X 10.6 or later
- Thunderbolt™ : OS X 10.6 or later

1.1.2 PC Requirements

- USB 2.0: Windows® XP or later
- USB 3.1 Gen 1: Windows XP or later
- Thunderbolt: Windows 7 or later

NOTE: Boot Camp not supported using the Thunderbolt connection.

1.1.3 Supported Drives

- 3.5” SATA hard drives

NOTE: Drives of identical model and capacity are required for RAID 0 and RAID 1.

1.2 PACKAGE CONTENTS

Mercury Elite Pro Dual

Power Supply and cable

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

Thunderbolt cable

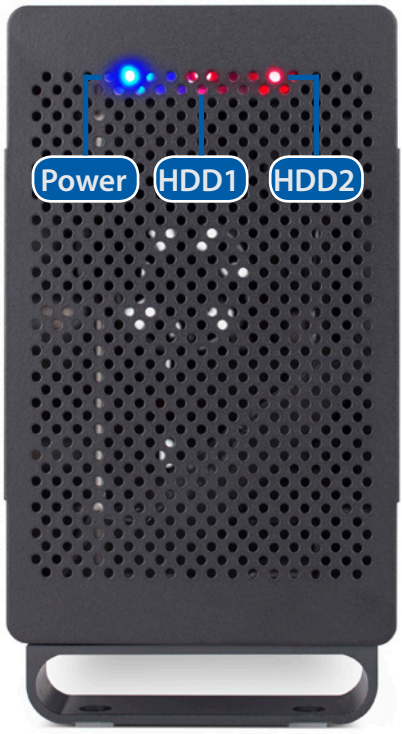
1.3 ABOUT THIS MANUAL

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

1.4 FRONT VIEW

Power LED — This LED will emit a solid blue light when the Mercury Elite Pro Dual is on. During drive activity the LED will blink blue steadily, and during a rebuild the LED will pulse blue slowly.

HDD1 / HDD2 LEDs— These LEDs represent the two hard disk drives (HDDs) inside the Mercury Elite Pro Dual. During normal activity, these LEDs will remain off. If one of the hard drives inside the Mercury Elite Pro Dual fails, or if one of the drives is removed without the RAID mode being reset, the corresponding LED will blink red.



1.5 REAR VIEW

1.5.1 Rear Features

1. **USB 3.1 Gen 1 port —** Attach the included USB 3.1 Gen 1 (Standard-A to Standard-B) cable here.
2. **Confirm button —** Press this button to confirm a newly selected RAID mode.
3. **RAID dial —** Adjust the position of the dial to change to a new RAID mode.
4. **Thunderbolt ports —** Attach the included Thunderbolt cable to one of these ports and to a computer or a display, or to another Thunderbolt device. Use the other Thunderbolt port to add more Thunderbolt devices to the chain.
5. **DC IN —** Connect the included power supply here.
6. **Kensington® Security Slot —** Connect a security tether here.

1.5.2 Connectivity Notes

- Only one interface (USB 3.1 Gen 1 or Thunderbolt) at a time can be used.
- To change the data connection type from Thunderbolt to USB or vice-versa, 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.
- Thunderbolt device chains can support up to six Thunderbolt devices.
- There is no power switch on the Mercury Elite Pro Dual. As long as the power supply is connected, the device will power on when it receives a data signal through the interface cable (USB 3.1 Gen 1 or Thunderbolt). If there is no interface cable connected, or if the computer is off or in a sleep or hibernation mode, the device will power off.
- For the safe removal of your drive and to assure that no data is lost, always eject or unmount the drive from your operating system before unplugging the drive.
- 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).

DEVICE SETUP

2.1 QUICK START

If you purchased the OWC Mercury Elite Pro Dual as an empty enclosure, proceed to **Section 2.2, Assembly**. If you purchased the Mercury Elite Pro Dual with drives, the drives ship as a RAID 0 array with the OWC Drive Guide pre-installed to assist with the formatting process. Follow the steps below to use Drive Guide to format your drives for Mac (OS X 10.4 and later) or Windows (XP and later). IMPORTANT: if the RAID mode is changed first, it will destroy all data on the drives, including Drive Guide.

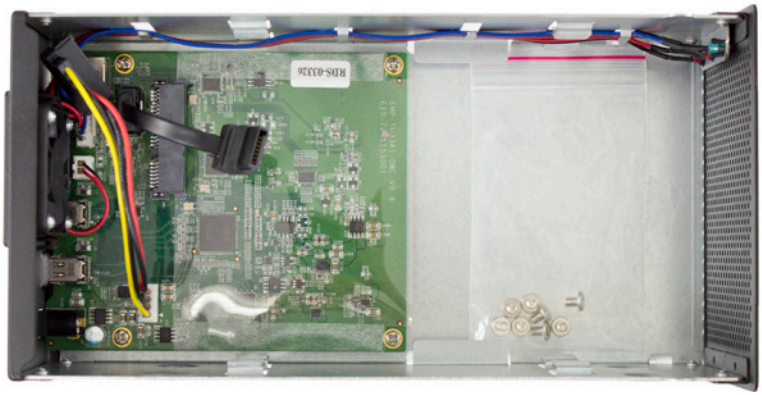
1. Plug in the device, then connect it to your computer using the proper cable. If you prefer to use a different formatting utility, do so at this time, skipping the remaining instructions.
2. Your drive will show up as “OWC SETUP”. Open your drive to view its contents.
3. Double-click the OWC Drive 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.

2.2 ASSEMBLY

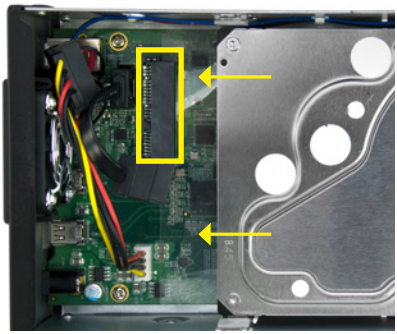
NOTE: The following assembly instructions are written for users who purchased the Mercury Elite Pro Dual as an empty enclosure. The instructions show how to open the Mercury Elite Pro Dual in order to install drives. If you purchased the Mercury Elite Pro Dual with drives already installed, **opening the Mercury Elite Pro Dual 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.

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

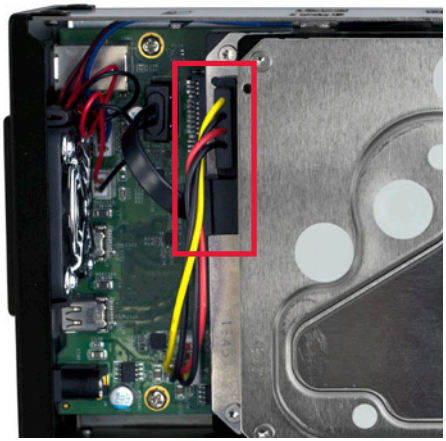
3. Remove the packet of screws from the inner chassis and set them aside; they will be used in upcoming steps. Note: the plastic shield over the circuit board is there by design and should not be removed.



4. Install the lower hard drive (HDD2), as shown below. Slide the SATA connector on the hard drive into the black SATA connector highlighted below-left. Make sure the drive is firmly connected to the SATA port before continuing.



5. Install the upper hard drive (HDD1), as shown below. Insert the SATA power and SATA data cables from the Mercury Elite Pro Dual into the SATA connectors on the hard drive (NOTE: do not twist the black SATA data cable). Next, slide the hard drive to line up the screw holes in the hard drive with those on the inner chassis. Make sure the SATA connectors are seated firmly before continuing.



6. Using eight of the larger screws from the packet you removed earlier, fasten the hard drives to the inner chassis. There are four screw holes on each side.

7. The inner chassis can fit into either end of the outer enclosure, but only one end works for the assembly process. To determine the correct end, turn the outer enclosure on its side and look at the bottom. As shown below, the screw holes at the front of the outer enclosure are close to the silicone feet. The screw holes at the rear of the outer enclosure are farther away from the silicone feet.

8. Once you have determined the correct side for inserting the inner chassis, slide it back into the outer enclosure, as shown at left.

9. Once the front grill of the inner chassis sits flush with the edge of the outer enclosure, turn the Mercury Elite Pro Dual on its side again. The screw holes in the outer enclosure should 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 of the Mercury Elite Pro Dual is now complete.

WARNING: CHANGING THE RAID MODE WILL CREATE A NEW ARRAY AND DESTROY ALL DATA ON THE DRIVES. CHANGING THE RAID MODE WILL ALSO REQUIRE YOU TO REFORMAT THE ARRAY AFTERWARD.

2.3.1 Changing the RAID Mode

The RAID mode is controlled by a dial on the rear of the unit, as shown below. The dial has four positions, each labeled with a different RAID mode. WARNING: changing the RAID mode will destroy all data on the drives. To change the RAID mode, simply follow these steps:

1. Adjust the RAID dial so that the arrow is pointing at the desired RAID mode. A small flathead screwdriver works the best to adjust the dial.

2. If the power supply is connected to the Mercury Elite Pro Dual, use a paperclip to press the 'confirm' button next to the RAID dial. This will power cycle the device, powering it off and back on. You do not need to hold down the 'confirm' button; just press once and release.

3. If the power supply is not connected you do not need to press the confirm button. Simply connect the power supply to power on the device. NOTE: a data cable must be connecting a computer to the Mercury Elite Pro Dual in order for it to power on.

4. Once the device powers up, it will be set to the new RAID mode. You can now format the device. See **Section 2.3.2, RAID Modes** for more information on each RAID mode.

NOTE: If you switch from RAID 1 mode to Independent mode, the computer will mount two separate volumes with identical names and identical copies of the data from the RAID 1 volume.

2.3.2 RAID Modes

Independent Drive Mode:

Each drive appeara as an individual disk in the OS. If you are using drives of differing capacity or model, or for single drive setups, this is the best option.

NOTE: Due to the incomplete support in OS X for the chipsets used in the Mercury Elite Pro Dual, independent drive mode has the following limitations:

1. When connected over Thunderbolt in OS X 10.8.3 and earlier, only HDD2 appears. Independent drive mode does not have this limitation when used over USB or when used in OS X 10.8.4 and later.
2. When two hard drives are installed, only HDD2 will be available as a startup drive in OS X. This happens in all versions of OS X and with both Thunderbolt and USB. HDD1 can be used normally after the computer has started; HDD1 is only unavailable during the startup process. If only one drive is installed in the Mercury Elite Pro Dual, it can be used in either the HDD1 or HDD2 position and it will be available as a startup drive.

Span Mode:

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 a configuration (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:

The drives show up as one large single volume with a size equal to the combined capacities of both drives. 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 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 can become corrupted and data will be lost. Always maintain a backup of your data!

RAID 1 "Drive Mirroring" Mode:

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.

2.4 DRIVE FAILURE

In the event that one of the drives fails, the corresponding drive LED will blink 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 cannot be used. For Span setups, data recovery software may aid in retrieving files from the remaining functional drive. If the drives were configured independently, then the data on the drive that did not fail will remain fully intact.

2.4.1 Drive Replacement

If the drive was part of a RAID 1, it can be replaced and the array will be rebuilt. In the meantime, the data will remain accessible through the other drive in the RAID 1. If the Mercury Elite Pro Dual was purchased with drives already installed and it is still under warranty, see **Section 3.6** for information on how to contact OWC technical support to arrange for replacement.

If the warranty has expired or if the Mercury Elite Pro Dual was purchased without drives, follow the assembly instructions in **Section 2.2** to access and replace the failed drive. If the HDD2 LED is blinking 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 HDD1 LED is blinking red, the failed drive is the one on the top, connected using cables (see **Section 2.2**, step 5).

NOTE: the failed drive must be replaced with a drive of identical model and capacity if being used in a RAID 0 or RAID 1.

If the Mercury Elite Pro Dual is set up as a span or as a RAID 0, the array must be reformatted before it can be used again. If the device is set up in independent drive mode, you do not need to reformat the existing drive or the new drive. If the new drive had data on it before being installed in the Mercury Elite Pro Dual, that data will remain intact. See **Section 2.4.2** for information on rebuilding after drive replacement in a RAID 1.

2.4.2 Rebuilding a RAID 1

After the failed drive is replaced, if the device is configured as a RAID 1, the array will automatically begin the rebuild process when it is turned on. This process may take from several hours up to more than a day, based on the capacity of the drives. During the rebuild process, the power LED will pulse blue slowly. It is recommended to leave the Mercury Elite Pro Dual turned on during the entire rebuild process, but if power is interrupted, the unit will continue rebuilding automatically when power is restored. Once the rebuild process is complete, the power LED will resume normal activity. See **Section 1.4** for more information on the behavior of the LEDs on the front of the Mercury Elite Pro Dual.

NOTE: The Mercury Elite Pro Dual needs an active data signal to remain on. If it goes to sleep, if it is disconnected from the computer, or if the computer goes to sleep or turns off, the device will turn 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.

SUPPORT RESOURCES

3.1 FORMATTING

For our recommended formatting tips, visit: www.owcdigital.com/format

3.2 UNMOUNTING DRIVES

To properly unmount any connected drives from your computer, try the following:

OS X:

There are several methods to unmount disks with OS X systems.

- Drag the icon for the disk you wish to unmount to the trash can
- Right-click the disk icon on the desktop, then click “Eject”.
- Eject the disk in the sidebar of a Finder window, or select the drive icon on the 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.

3.3 TROUBLESHOOTING

Begin your troubleshooting by verifying that the power cable is connected to the Mercury Elite Pro Dual 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 Mercury Elite Pro Dual. If the Mercury Elite Pro Dual is still not working properly, try connecting to another interface (USB or Thunderbolt) and see if the device works properly. You can also connect the Mercury Elite Pro Dual to a different computer. Remember that the Mercury Elite Pro Dual needs an active data signal to remain on. If it goes to sleep, if it is disconnected from the computer, or if the computer goes to sleep or turns off, the Mercury Elite Pro Dual will turn off.

If problems persist, consult **Section 3.6** for assistance contacting OWC technical support.

3.4 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, and affiliates be held liable for loss of the use of data including compensation of any kind or recovery of the data.

3.5 ONLINE RESOURCES

To access our online help resources, including things like FAQs, formatting tips, and a step-by-step walkthrough of our recommended method for migrating your data from an old drive to a new one, please visit: www.owcdigital.com/support/faq

3.6 CONTACTING TECHNICAL SUPPORT

HOURS OF OPERATION

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

(866) 692-7100 (North America)
+1 (815) 338-4751 (International)

Live chat is available during normal business hours at:
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 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 OWC 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 web page.

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