



MERCURY ELITE PRO DUAL MINI

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 10.7 or later *

1.1.2 PC Requirements

- USB 3.1 Gen 1: Windows 7 or later
- USB 3.1 Gen 2: Windows 8.1 or later

* There is no Mac equipped with USB 3.1 Gen 2 at the time of this writing.

1.1.3 Supported Drives

- (2) 2.5" SATA drives
 - Supports drive heights up to 12.5 mm.
 - Identical model and capacity required for RAID 0 and RAID 1.

1.2 Package Contents



OWC Mercury Elite Pro
Dual mini



USB 3.1 Gen 2 Type-C to
Type-C cable



USB 3.1 Gen 2
Standard-A to Type-C cable



Power supply
and cable

Not pictured: If the Mercury Elite Pro Dual mini 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.

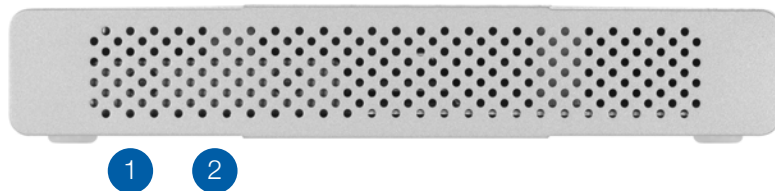
1.4 Front View

1 & 2

LEDs — these LEDs represent the two drives inside the Mercury Elite Pro Dual mini. When the device is powered on but there is no drive activity, the LEDs will display **solid blue**. When there is drive activity for one or both, the LED(s) will **blink blue**.

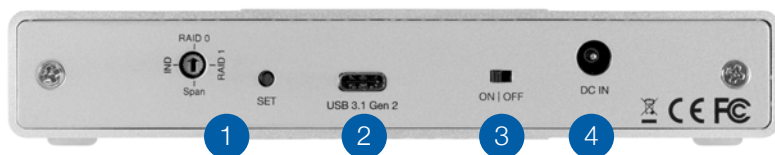
If a drive fails or is not connected, the LED will display **solid red**.

When a RAID 1 is being rebuilt, both LEDs will blink **red** and **blue**.



1.5 Rear View

1. **RAID dial & SET button**— set the RAID mode by using these items.
2. **USB 3.1 Gen 2 port** — attach one of the included USB 3.1 cables to this port, based on your computer type. The Type-C to Type-C cable is recommended for best performance.
3. **ON/OFF Switch** — power the Mercury Elite Pro Dual mini on and off using this switch.
4. **DC IN** — connect the power supply here.



1.6 Usage Notes

- Identical drives (model, capacity, firmware) are required for RAID 0 and RAID 1 configurations.
- When operating in Independent Mode, if only one drive is installed, either port can be used and there is no boot limitation. However if two drives are installed, only the drive connected to Port 2 can be used as a boot disk. The Startup Disk screen in OS X System Preferences will show both drives, however when the Option-boot screen appears, the drive connected to Port 1 will not be visible.
- If your USB-C host supports the USB Power Delivery 2.0 specification, it can bus-power the Mercury Elite Pro Dual mini. Other USB hosts may be able to bus-power this device as well. If you find that your chosen host does not bus-power the device, please use the included power supply.
- Booting in RAID 0, RAID 1, and SPAN mode are supported without limitation.
- The following limitations apply when booting in Independent mode:
 - Only the disk connected to Port 2 is bootable when both drives are installed.
 - If only one drive is installed, the disk will boot regardless of which port it is connected to. See Section 2.2 for more information on ports and drive connections.
- 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 the Mercury Elite Pro Dual mini. You can use the methods described below to safely unmount your disk(s).
- Currently the Mercury Elite Pro Dual mini is not compatible with the USB-C port on the OWC USB-C Dock. Please connect to one of the USB Standard-A ports instead. *Performance is identical on all USB ports on the USB-C Dock.*

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 mini from the computer.

2.1 Quick Start

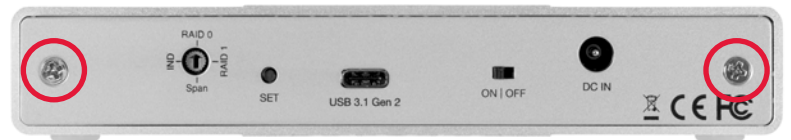
Follow the steps below to use the OWC Drive Guide utility to format your Mercury Elite Pro Dual mini for Mac OS X or Windows. If you installed your own drives, please use the formatting method you are most familiar with or check **Section 3.1** for a link to our online formatting tips.

1. Power on the Mercury Elite Pro Dual mini and plug it into to your computer using one of the included data cables. 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

These assembly instructions are written for users who purchased the Mercury Elite Pro Dual mini as an empty enclosure. The instructions show how to open the enclosure in order to install drives. **IMPORTANT: opening an enclosure with pre-installed drives will VOID the warranty. You may replace the drives after the expiration of the original warranty.** You should start with Step 13 in that case and work backwards.

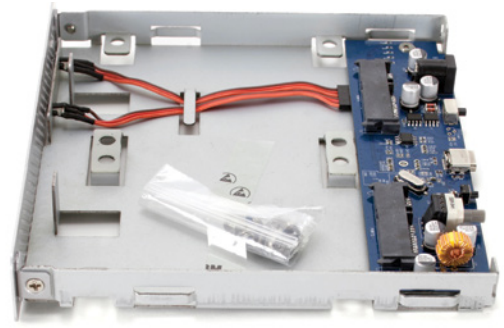
1. Remove the Elite Pro Dual mini from its packaging, set it on your work surface and remove the two screws attached to the rear cover (highlighted at right). Note: once you remove the screws, the back plate will fall out of the enclosure as shown in the next step.



2. Grasp the front grill and gently pull the inner chassis from the outer enclosure, as shown at right.



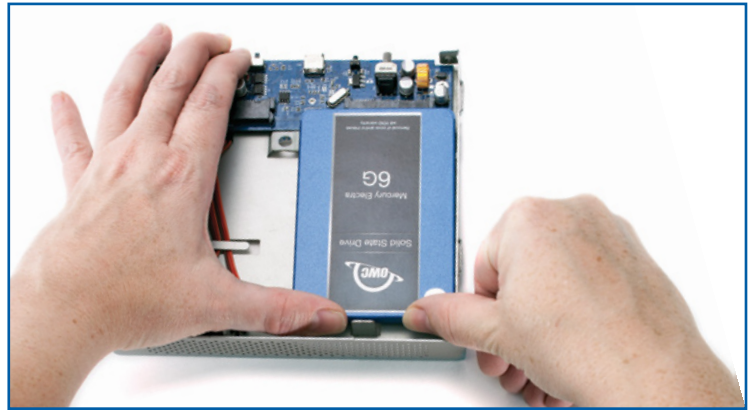
3. Pull the inner chassis the rest of the way out and remove the screw packet.



4. Hold the first SATA drive at a slight angle and line up the SATA connectors on the drive with the SATA ports on the printed circuit board, as shown at right. Once aligned, slide the drive into the ports just enough so the drive can be set down flat inside the inner chassis, as shown in **Step 5**.



5. Use your thumbs to gently press the drive forward, until it is fully connected to the SATA ports on the printed circuit board. Repeat **Steps 4 and 5** with the second SATA drive.



6. Flip the outer enclosure so that its rubber feet are facing up and oriented as shown above.



7. Turn the inner chassis over and set it on the outer enclosure so that the drives rest on two of the feet and slightly overhang the edge of the enclosure, as shown at right.



8. Take the larger screws from the packet and insert them in the row of screw holes at the back of the chassis, then partially tighten them.



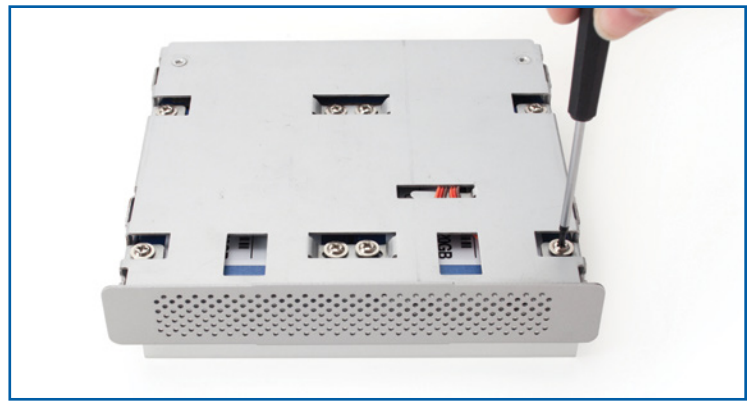
9. Take the rest of the large screws and insert them in the remaining screw holes, partially tightening them.



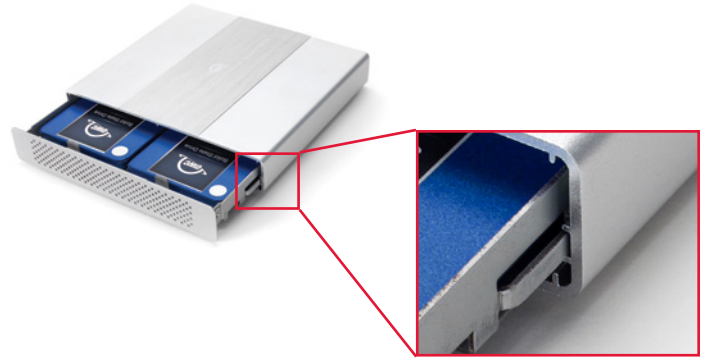
10. Turn the inner chassis over and visually inspect the two drives to ensure they are properly aligned before moving on to the next step.



11. Turn the inner chassis over and set it on the outer case as before, then fully tighten all eight screws from **Steps 8 and 9**.



12. Set the inner chassis aside, turn the outer enclosure over and orient it as shown at right. Next, align the guides on the chassis with the guide rails in the enclosure. Note that the rails extend to the edge on only one side of the enclosure. Slide the chassis in until the front grill contacts the enclosure.



13. Pick up the rear cover, carefully align the cutouts with the ports on the back of the inner chassis, then re-affix the two screws.



This completes the assembly process.

2.3 RAID Settings

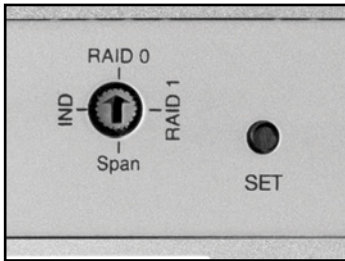
Warning

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 mini requires an active USB connection.

2.3.1 Changing the RAID Mode



The RAID mode is controlled by a dial on the rear of the unit, as shown at left. The dial has four positions, each labeled with a different RAID mode. To change the RAID mode, follow the simple steps below. When adjusting the RAID mode, turn the dial so that the arrow is pointing at the desired setting. A small flathead screwdriver works the best to adjust the dial. Each time the arrow is aligned with a new mode, you will feel a slight click.

When starting from a powered-on state, first unmount the disk, then rotate the RAID dial to the desired mode and hold down the SET button for 3 seconds. The LEDs on the front will blink for a brief time; once the blinking stops, the new array has been built. You can access and format the disk in the OS at this time.

When starting from a powered-off state, rotate the dial on the back of the enclosure to the desired RAID mode, then power on the Mercury Elite Pro Dual mini and immediately press the SET button for three seconds. The LEDs on the front will blink; once the blinking stops the new array has been built. You can access and format the disk in the OS at this time.

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.

2.3.2 RAID Modes

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

If one of the drives fails, the corresponding drive LED will turn solid red. If the Mercury Elite Pro Dual mini was configured as a RAID 0 or Span, the data on the array is lost and the disk 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 retrieve the data from the other drive. 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 Mercury Elite Pro Dual mini 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 array is rebuilt with a new drive. If the enclosure was purchased with drives and it is still under warranty, contact OWC technical support for assistance (see Section 3.5). 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 LED 1 is solid red, the failed drive is the one connected to the drive **shown on the right in Section 2.2 Step 10**. If the LED 2 is solid red, the failed drive is the one connected to the drive **shown on the left in Section 2.2 Step 10**.

Once the drive has been replaced, if the Mercury Elite Pro Dual mini is configured as a RAID 1, the array will automatically begin to rebuild when the enclosure is powered 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 new drive will blink blue, then blink red.

If possible, leave the Mercury Elite Pro Dual mini powered on during the entire rebuild process; if power is interrupted (or the computer sleeps), the unit will continue rebuilding automatically when power is restored. Once the rebuild process is complete, both LEDs will display as a solid blue. See Section 1.4 for more information on the behavior of the LEDs.

Note

The Mercury Elite Pro Dual mini 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 mini for Mac or Windows, go to: www.owcdigital.com/format

3.2 Troubleshooting

If you are powering the Mercury Elite Pro Dual mini with the included power supply, begin by verifying that the power cable is properly connected to the device and to the power outlet. 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 Mercury Elite Pro Dual mini. If you are still having trouble, try connecting the other USB cable that was included (or a different cable of the same type as the one you originally used) to see if the drive works properly. If this does not resolve the issue, you can also connect the device to a different computer.

If one of the drive LEDs is solid red, then that drive is either not properly connected, is missing, or has failed. **If you purchased the Mercury Elite Pro Dual mini as an empty enclosure, or, if the enclosure shipped with drives installed but is past the three year warranty period**, unmount the disk from the OS, power off, then check the drive connections on the inner chassis. See **Section 2.4** for steps on how to replace a drive (including how to rebuild a RAID 1 array) if you are sure the drive has failed. If the Mercury Elite Pro Dual mini is not past the three year warranty period, or if you need assistance for other reasons, **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 mini 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 mini 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 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.

Warranty:

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

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