GLYPH
PRODUCTION TECHNOLOGIES

Blackbox PRO RAID™ User Guide

Tabletop USB-C (3.1, Gen2)
enclosure with RAID 0, RAID 1, JBOD, & SPAN

Contacting Glyph

Please use the following contact information to contact Glyph and its distributors.
Glyph USA offers phone support Monday through Friday, 8:00 am to 5:00 PM Eastern Time.

Note: DO NOT ship any return goods to the mailing addresses below unless you have a valid RMA number. All goods will be refused delivery unless a valid RMA number is displayed on the outside of the package.

United States of America

Glyph Technologies
3736 Kellogg Rd.
Cortland, NY 13045 USA
Phone: +1 607-275-0345, 1(800) 335-0345
Fax: +1 607-275-9464
www.glyphtech.com

Sales Contact:
sales@glyphtech.com

Technical Support:
tech@glyphtech.com

Unpacking Your Blackbox PRO RAID

Your Glyph Blackbox PRO RAID and accessories are packaged in a sturdy shipping container. Please inspect the container for evidence of shipping damage and mishandling. If the container is damaged, file a report with the carrier or dealer immediately. Do not attempt to unpack and operate your Blackbox PRO RAID until the carrier or dealer confirms the damage. If the container is in good condition, proceed with unpacking Blackbox PRO RAID. Verify that all the items described in the next section are present and in good condition. If any of the items you expect to find in your container are missing or damaged, contact the dealer before proceeding any further. In any case, do keep the shipping container and all packing materials in a safe place.

The Blackbox PRO RAID package includes:

Blackbox PRO RAID Enclosure with 2 Drives
USB-C to USB-C Cable
USB-C to USB-A Cable
Rugged removable cover
External Power Supply

About the Blackbox PRO RAID and RAID Modes

Blackbox PRO RAID enclosure contains two hard disk drives, which function as one single volume. It supports four drive modes: RAID 1 (mirroring), RAID 0 (striping), and CLEAR (JBOD – just a bunch of disks), and BIG (spanning). Each drive mode has its own advantages, depending upon the application.

RAID 0 is the default shipping RAID mode. In RAID 0 (striping) mode, the two drives are seen by the computer as one large drive, and reading and writing occurs on both drives simultaneously. RAID 0 is designed to increase the performance and data throughput of the drive system. The Blackbox PRO RAID's built-in RAID controller splits each piece of data across both of the drives in segments and distributes the I/O burden. Since data is written without any form of parity data checking, it allows for the fastest data transfer of all other RAID modes. However, if one drive becomes damaged, the data on both drives can become corrupted. RAID 0 is not redundant or fault tolerant like RAID 1, but the trade-off is that it's the fastest of all RAID levels.

RAID 1 (mirroring) offers data redundancy and real-time backup by writing the same data to the two hard drives at the same time. Should a drive failure happen, data is still available on the remaining drive. In RAID 1 mode, the two drives are seen by the computer as one volume but with half the capacity. For example, a 8TB Blackbox PRO RAID will be seen as a single 4TB drive. Reading and writing occurs on both drives simultaneously so that each of the drives contains exactly the same data, mirroring each other.

In CLEAR (JBOD - just a bunch of disks), both hard drives are used independently. You may choose which hard drive you would like to save data on since each drive will mount individually to your computer.

BIG (SPANNING) combines multiple hard drives into a single logical unit. Unlike Striping, Spanning writes data to the first physical drive until it reaches full capacity. When the first disk reaches full capacity, data is written to the second physical disk.

MAKE SURE TO BACKUP YOUR DATA OFTEN!

Using the Blackbox PRO RAID with 32bit Operating Systems

Older versions of Windows, such as XP 32-bit, use Master Boot Record, which doesn't support volumes larger than 2.2TB. When the total capacity of the RAID is 2.2TB or higher, you must format the array using GUID Partition Table (GPT). GPT format is only supported by Windows XP 64-bit Edition and above, and Mac OS X 10.4 and above. GPT format will not work with XP 32-bit or older Windows operating systems. If you want to use older 32-bit systems, your total capacity must be less than 2.2TB in RAID 0 (currently not available smaller than 4TB) or less than 4TB in RAID 1 (mirrored to 2TB).

Blackbox PRO RAID Ports

The original Blackbox PRO RAID contains a single USB-C 3.1 port in the back for connectivity with the hub having an additional CFAST 2.0, SD card slot and a single USB Type-A port. The Thunderbolt 3 version has two Thunderbolt 3 ports in the back for daisy chain capabilities with the hub having an additional CFAST 2.0, SD card slot and a single USB Type-A port.

Front Panel LED

The Blackbox PRO RAID front panel has a single bi-color LED. The LED will display solid blue when power is on. The LED will flash blue when there is disk activity. The LED will flash or display a solid red color (or fuchsia) when error conditions exist with the drives inside the array.

Setting up the Blackbox PRO RAID

Start by connecting the device and verifying that your computer recognizes the Blackbox PRO RAID, and it mounts. If you're using Windows see the Windows formatting instructions on page 5. If you intend to use the device in RAID 0 (i.e., the fastest mode with no redundancy) then the device is set up. If you wish to change the RAID mode see below for changing the raid modes of the device.

Blackbox PRO RAID Quickstart

Here are instructions for changing the RAID mode of your Blackbox PRO RAID.

Note: By following these instructions you will be erasing any data previously stored on Blackbox PRO RAID. Please back up your data before proceeding.
1.   Make sure the device is on and connected to your computer.
2.   Look on the back of the unit near the fan for the diagram of the different RAID-mode settings.
3.   Align the pins with how you want the device configured. RAID 0 (speed); RAID 1 (redundancy); BIG (continuous); CLEAR (both drives act independently).
4.   Press and hold the "SET" button for four seconds. You will see the drive eject from your computer. It will then return with the set RAID mode.

To format the disk on Mac, search Spotlight for the Disk Utility application and click on Blackbox PRO RAID and then erase. We recommend Mac OS Extended Journaled for the partition and GUID for the scheme. For Windows, right click on your start menu and select disk management. Initialize as GPT, and right click on the big black space at the bottom. Click "create new simple volume" and follow the wizard and default settings.

Your Blackbox PRO RAID should now show up in Disk Utility (on Mac) or Disk Management (on Windows) and be ready to format. You can always call us at 800-335-0345 for more information.

Formatting Instructions for Windows:

Caution: This procedure will destroy any data currently on the drive. Before formatting a drive, save any important data it contains.
Navigate to Disk Management:
1.   Right-click My Computer and click Manage.
2.   In the Computer Management window, under Storage, click Disk Management. You can also type Disk Management into the search bar in later versions of Windows.
3.   Find the Glyph drive in Disk Management. It should contain an EFI partition, a primary partition and some unallocated space, which is usually few hundred megabytes. Please right click on the primary partition and click delete volume, you should receive a warning that this volume was created by another operating system, proceed anyways.
4.   In Disk Management, right click the Unallocated partition near the bottom of the window that corresponds to the capacity of Blackbox PRO RAID (often Disk 1). Click "New Simple Volume" and the Write Signature Wizard pops up.
5.   Use the Wizard to write a signature to the new drive. If you want only one partition we suggest using a primary partition and selecting the maximum size. In most cases you'll want to use NTFS volumes, this is the default for Windows. Ensure "Perform a Quick Format" is checked. If you need the device to work on multiple operating systems please consider software based solutions to view file systems with journals across multiple operating systems (Paragon, MacDrive, etc.).
 Formatting will take a few minutes after which your drive will be ready to use.

Mac OS X 10.11 Formatting Instructions

(Once Blackbox PRO RAID is connected)
(for older version levels, contact us or contact Apple)
Since your Blackbox PRO RAID comes pre-formatted for Mac you don't need to format it on installation. If you decide to reformat or partition your drive at a later date, use Disk Utility (supplied with the Mac OS X operating system).
Caution: This procedure will destroy any data currently on the drive. Before formatting a drive, save any important data it contains.
1.   Open Disk Utility:
·   Double click on your internal hard drive mounted on the desktop.
·   Open Applications Folder > Utilities Folder > double click on Disk Utility.
2.   Select your Blackbox PRO RAID drive from the list on the left. The top entry represents the device and the entry underneath it represents the volume associated with that device. Click on the Volume level.
3.   Click on the Erase Tab.
4.   Give the drive a name that will represent the volume.
5.   Ensure that the format is "Mac OS Extended (Journaled)" from the drop down list.
6.   Click the Erase button.
7.   Affirm that you wish to erase this volume and reformat with the settings applied.
8.   Formatting will take a few moments after which your drive is ready to use.

Warranty Information

3 Year Hardware Warranty
2 Year Free Basic Data Recovery Attempt (we cannot guarantee our data recovery attempts will be successful)
1 Year Advance Replacement within 48 Continental U.S. States only (if Technical Support cannot resolve your issue via phone).

Your purchase of Blackbox PRO RAID from an authorized Glyph reseller includes a comprehensive three-year warranty.
Glyph warrants that your Blackbox PRO RAID is free from material and mechanical defects. Proof of purchase may be required to receive warranty service. If you are unable to provide a valid proof of purchase, the warranty period will be calculated based on the manufacture date derived from the enclosure serial number.

What is not covered?
The Blackbox PRO RAID warranty does not cover damage or accidental damage caused by misuse, modification, alteration, tampering, an unsuitable operating environment, improper care, or failure caused by another product for which Glyph is not responsible.

What is the warranty procedure?
1.   Contact Glyph Technical Service (see below) and obtain an RMA (Return Merchandise Authorization) number.
2.   Carefully pack and ship your Blackbox PRO RAID to the address provided by the Glyph service representative. There is no need to include cables of any kind, just the Blackbox PRO RAID unit. Be sure the box is clearly labeled in several places with your RMA number.

Warranty & Technical Support
If at any time you have questions regarding the Blackbox PRO RAID, please contact us using one of these methods:

Phone support:
855.335.0345 (toll-free U.S. only)
607.275.0345 (international or local)
Email:
tech@glyphtech.com
Web:
www.glyphtech.com/support

Contact Us
NOTE: Before contacting Glyph support, we recommend you gather the following information about your configuration:
• Blackbox PRO RAID serial number (located on the bottom of your Blackbox PRO RAID)
• Operating System (Windows 11, or Mac Ventura 13.2.1, etc.)

Blackbox PRO RAID Specifications

Part Number   BBPRxxxxRAID (xxxx is equal to total capacity)

Interfaces   USB-C (3.1, Gen2)

                        (Compatible with USB 3.0)

Maximum Transfer Rate   Up to 550 MB/s

Dimensions   8.25" x 5.5" x 4.25"

Optional Hub   CFast 2.0, SD (UHS-II), USB Type-A (10Gb)

RAID Modes   RAID 0, 1, JBOD, SPAN (No Software Required)

Compatibility   Formatted for MAC

                        Compatible with Windows (via reformat)

                        Modern Unix based, Linux, or BSD

Warranty   3 Year Hardware Warranty

                        2 Year Free Basic Data Recovery Attempt (we cannot guarantee
our data recovery attempts will be successful)

                        1 Year Advance Replacement within 48 Continental U.S. States
only

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