# 2-Disk RAID USB and eSATA External Hard Drive

**User Guide**
English

**M Verbatim.**

# Contents

# Introduction

Your Verbatim external 2-disk RAID product comes with two separate hard drives inside. "RAID" is short for "Redundant Array of Independent Disks" and is a standard method of combining two or more hard disk drives to achieve higher levels of performance, reliability, and capacity.

Before you begin to use the drive there are a few important things to learn about your new product.

## Drive Contents: IMPORTANT Notice

The RAID drive comes pre-installed with the following files and software:

• Nero BACKITUP 2 ESSENTIALS Software
• Verbatim_FAT32_tool.exe
• Formatting to FAT32.pdf

Before changing the RAID modes setting, via the switch on the real panel of the drive, save these files to another location. For example your PC hard drive.

The Verbatim 2 Disk RAID External Hard Drive comes with a factory default setting of Concatenation (also called Spanning). The switch setting for Concatenation mode is labelled "BIG" on the back of the drive.

Before you change the RAID mode at any time after using the drive in this or any other mode you will need to transfer/save all files to another location.

### Nero BACKITUP 2 Software

Nero BACKITUP 2 back up software is included on the hard drive. Double click the Nero folder on the drive and then double click the setupx file to start installation. The Nero Installation window will appear. Follow the set up wizard to install the software.
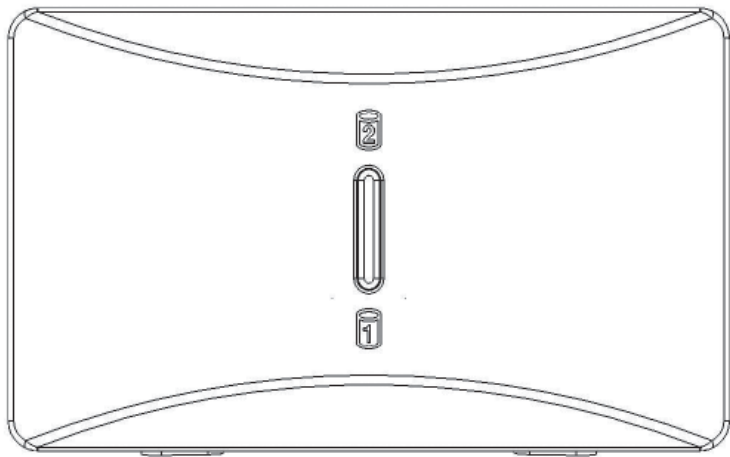
WARNING: Changing RAID mode will delete all data on the drive. Do not change the setting of the RAID Mode Switch unless you have first saved all of the data from the drive, including the bundled Nero software, to another storage location.

# Controls, Connectors and Indicators

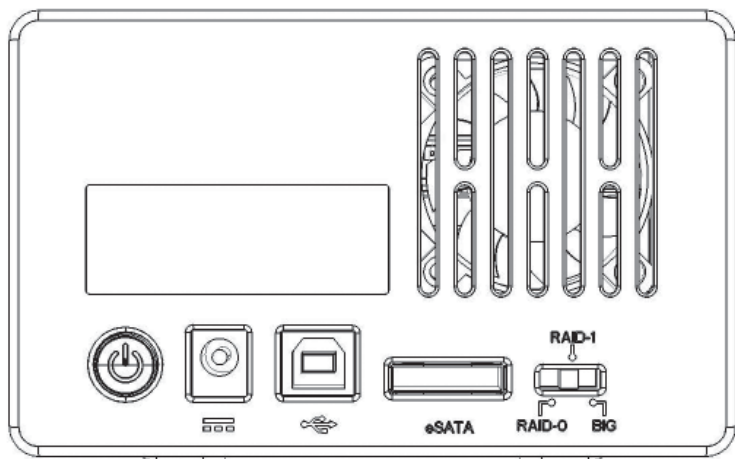First familiarize yourself with the features of the unit.

### Front Panel Area

The front panel contains two multicoloured LEDs that show through a single lens, as illustrated below. During the power-on sequence both LEDs will flash BLUE. When the power-sequence completes normally both LEDs will remain BLUE and stay fully ON. Both LEDs will flash BLUE quickly during data access.

## Rear Panel Area

Along the rear panel you will find the ON/OFF button and interface connectors. Refer to the figure below.



1. ON/OFF button. Once the AC Adapter has been properly connected to the drive and an AC outlet, you can press the ON/OFF button to power on the drive. To turn off the drive, press the ON/OFF button again.

2. USB Connector. Use this connector to attach the drive to your computer via USB.

3. eSATA Connector. Use this connector to attach the drive to your computer via eSATA

4. RAID Mode Switch. Refer to the Configuring the RAID Mode section below.

**WARNING: Changing RAID mode will delete all data on the drive. Do not change the setting of the RAID Mode Switch unless you have first saved all of the data from the drive to another storage location.**

## About the Hard Drives

The product comes pre-formatted in FAT32 format. This format allows for operation with either Windows or Mac OS.

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**Note: Capacity dependent on model. 1 MB = 1,000,000 bytes/
1 GB = 1,000,000,000 bytes/1 TB = 1,000,000,000,000 bytes.
Some capacity used for pre-loaded software, formatting and other functions,
and thus is not available for data storage. As a result, and due to differing
calculation methods, your operating systems may report as fewer
megabytes / gigabytes / terabytes.**

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## Locating the Drive on your desk

Place the drive on a sturdy desk or table that is free from clutter that could block airflow around the unit. Take care not to block any air vents.

# Connecting to your computer

This Verbatim external hard drive provides both USB 2.0 and eSATA connections. You can connect your drive to a computer with either USB or eSATA, but not both at the same time.

Connecting your drive to a computer is extremely simple. Follow the steps below.

To connect to your computer follow the steps below:

1. Connect the included AC Adapter to the drive, and then to a wall outlet.

2. Next press the ON/OFF button on the back of the drive.

3. Finally, connect the data cable. Connect the included USB cable from the USB port on the drive to an available USB port on your computer. For eSATA, connect the included eSATA cable from the eSATA port on the drive to an available eSATA port on your computer.

4. The hard drive will mount automatically, and a new icon will appear in **My Computer** (Windows) or a new icon will appear on the desktop (Mac)

Depending on your computer's operating system and the interface type you are using, the following special notes may apply:

**Note 1: USB under Windows. If you are using a USB 1.1 port on your Windows computer, the following cautionary note may appear on your display: Hi-Speed USB Device plugged into non-Hi-Speed USB hub. This does not indicate a problem because the drive is compatible with both USB 1.1 and USB 2.0 ports. Simply close the message and proceed. However, in this case the drive will operate only at USB 1.1 speeds.**

**Note 2: USB under Mac OS 9.2.x. Mac OS versions 9.2.x do not support USB 2.0 Hi-Speed mode. For these Mac OS versions the drive will operate only at USB 1.1 speeds.**

**Note 3: USB or eSATA under Mac OS X 10.2. Mac OS X version 10.2 will not mount any single FAT32-formatted (MS-DOS) partition greater than 128GB. To work around this OS limitation, you may partition the drive into smaller FAT32 partitions, or you may reformat the drive to HFS+ format.**

**Note 4: eSATA. Though the eSATA interface standard provides for "hot-plugging" of the drive, some computers may not follow the standard precisely. If you find that your drive does not mount after attaching to a computer that is powered on, then shut down the computer, attach and power on the drive, and then boot up your computer.**

# Configuring the RAID Mode

This Verbatim 2-Disk RAID External Hard Drive can be set to one of three operating modes. The factory default setting is Concatenation (also called Spanning). The switch setting for Concatenation mode is labelled "BIG". If Concatenation is your desired mode, then you can jump to the next section of the manual since no further configuration is required. Sweden, Switzerland and the United Kingdom.  All other countries call +353 61 226586.

**WARNING: Changing RAID mode will delete all data on the drive. Do not change the setting of the RAID Mode Switch unless you have first saved all of the data from the drive to another storage location.**

## RAID 0

(Also called Striping) distributes data across both disks in a way which can improve throughput, while retaining full capacity. However, in case of possible failure of either disk, all data will be lost and the array will no longer mount to your computer. Available capacity is the combined capacity of both drives.

If either disk fails in RAID 0 then the LED of the failed drive will change to RED.

## RAID 1

(Also called Mirroring) stores a duplicate set of data onto both disks, so that if one disk fails all data can be recovered from the other disk. Available capacity is equal to that of only one of the two included drives.

If either disk fails in RAID 1, then the LED corresponding to the failed disk will change to RED. The remaining operational disk can continue to be used until the failed disk has been replaced. However, in this instance there is no longer any data protection provided by the second, failed drive.

If you have been using RAID 1 mode and there is a subsequent failure of either of the two drives, you can disassemble the enclosure and replace the failed drive with a new drive. After reassembling the enclosure, leave it disconnected from your computer and power it up. When the new drive is detected during the power-on sequence, the full data of the original drive will be rebuilt onto the new drive. This rebuilding procedure can take many hours (more than 5!) to complete. During the rebuilding procedure, the LED of the original good drive will flash BLUE, while the LED of the new replacement drive will flash RED. After the array has rebuilt successfully both LEDs will change to BLUE.

# Concatenation

(RAID Mode Switch Setting = "BIG") combines both physical disk drives into a single virtual disk. Available capacity is the combined capacity of both drives.

This mode provides no data redundancy. If either disk fails in Concatenation mode, then the array will no longer mount to your computer.

If either disk fails in Concatenation mode, then the LED corresponding to the failed disk will change to RED.
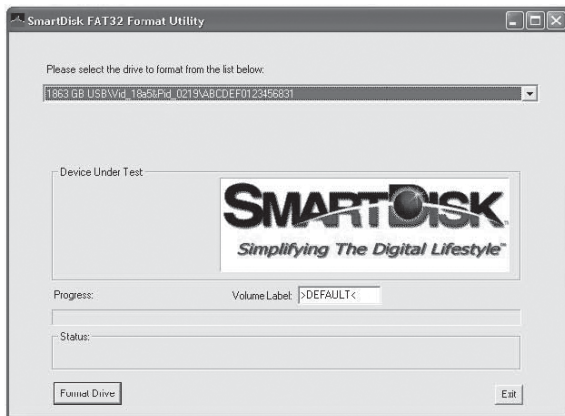
## To change RAID mode, follow these steps:

1. If you have any important data stored on the drive, first save the data to another storage location. Then safely remove the drive and turn off the power to the drive.

2. While power is OFF, use a pen or other instrument to slide the RAID Mode Switch to the desired position.

3. Power up the drive. The LEDs will flash BLUE while the internal firmware is reconfiguring the RAID mode. When flashing turns to solid BLUE the drive has successfully reconfigured, though remains initialised, unpartitioned and unformatted.

4. Attach the drive to your host computer using either USB or eSATA. Your computer may show it as an unknown device, which confirms that the drive remains initialised, unpartitioned, and unformatted.

5. Format the drive. For NTFS or HFS+ use the computer's operating system to reformat. If you prefer to use FAT32, then you can use the FAT32 formatting utility that was supplied to you as a file saved on your hard drive (Verbatim_FAT32_tool.exe).

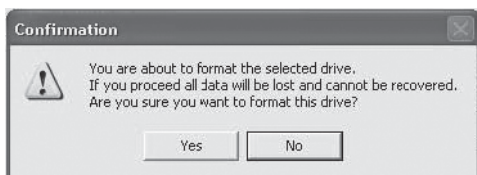### To Format the drive using Verbatim FAT32 formatting utility:

Locate Verbatim_FAT32_tool.exe on your hard drive, double click the file to run it. You will see a screen like this
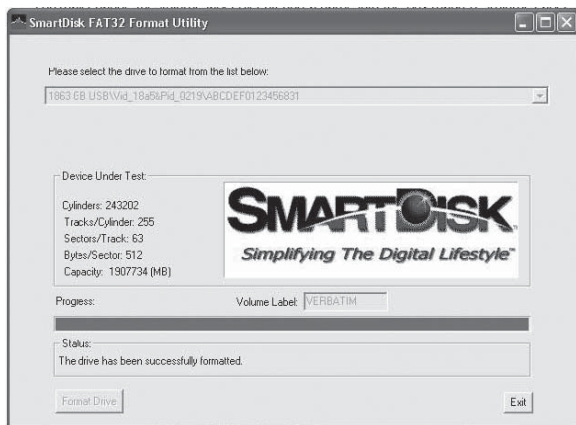
You should select the drive on your system from the pull down menu. Please be very careful to select the RAID drive, if you select the incorrect drive you may inadvertently cause information to be lost.

You may change the volume label by entering a name into the box marked "Volume Label" and then click on "Format Drive"

You will then see the message below asking you to confirm that you are about to format the selected drive. If you proceed all data will be lost and cannot be recovered. Are you sure you want to format this drive? Click on "Yes" to confirm.



Once the hard disks have been formatted and verified you will see a confirmation message like this:



Click "Exit" and you are now ready to use your drive.

# Disconnecting Your Hard Drive

Your external hard drive is hot-swappable. It can be connected and disconnected without restarting your computer. To disconnect your drive at any time, perform the following steps.

You can also disconnect your hard drive at any time while your computer is powered off.

> **Note: Please be careful to follow the correct procedure when disconnecting your unit. Simply unplugging the unit without first following the instructions below may result in damage to your unit and/or loss of data.**

### For Windows Users:

1.  If you have files located on your drive open in any applications, close them.

2.  Click the **Unplug or Eject Hardware** button in the System Tray.



3.  Select your drive from the menu that appears.

4.  After a moment, Windows will display a message that your hardware can be safely removed.

### For Mac OS Users:

1.  If you have files located on your drive open in any applications, close them.

2.  Locate the icon for your drive on the desktop, and drag it to the trash.

# Technical Support

If you are experiencing difficulty installing or using your Verbatim product, please visit the main Verbatim Technical Support website at www.verbatim-europe.com. From this page you can access our library of user documentation, read answers to frequently asked questions, and download available software updates. Although most of our customers find this content sufficient to put them back on the right track, this page also lists ways in which you can contact the Verbatim Technical Support Team directly.

Europe: For technical support in Europe e-mail drivesupport@verbatim-europe.com or call 00 800 3883 2222 in the following countries: Austria, Belgium, Denmark, Finland, France, Germany, Hungary, Italy, Luxemburg, Monaco, Netherlands, Norway, Poland, Portugal, Republic of Ireland, Spain, Sweden, Switzerland and the United Kingdom. All other countries call +353 61 226586.

# Limited Warranty Terms

Verbatim Limited warrants this product to be free from defects in material and workmanship for a period of 2 years from date of purchase. This warranty excludes batteries. If this product is found to be defective within the warranty period, it will be replaced at no cost to you. You may return it with your original cash register receipt to the place of purchase or contact Verbatim.

In the following European countries, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Luxembourg, Monaco, Netherlands, Norway, Poland, Portugal, Republic of Ireland, Spain, Sweden, Switzerland, and the United Kingdom call 00 800 3883 2222. All other European countries call +353 61 226586. You can email drivesupport@verbatim-europe.com.

Product replacement is your sole remedy under this warranty, and this warranty does not apply to normal wear or to damage resulting from abnormal use, misuse, abuse, neglect or accident, or to any incompatibility or poor performance due to the specific computer software or hardware

used. VERBATIM WILL NOT BE LIABLE FOR DATA LOSS OR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, HOWEVER CAUSED, FOR BREACH OF WARRANTIES OR OTHERWISE. This warranty gives you specific legal rights and you may also have other rights which vary from state to state or country to country

# WEEE Notice

The Directive on Waste Electrical and Electronic Equipment (WEEE), which entered into force as European law on 13th February 2003, resulted in a major change in the treatment of electrical equipment at end-of-life.



The WEEE logo (shown at the left) on the product or on its box indicates that this product must not be disposed of or dumped with your other household waste. For more information about electronic and electrical waste equipment disposal, recovery, and collection points, please contact your local municipal household waste disposal service or shop from where you purchased the equipment.

# FCC Compliance

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 to 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 into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

# CE Declaration

EC DECLARATION OF CONFORMITY

It is hereby declared that this product complied with the essential protection requirements of Council Directive 89/336/EEC and its amendments on the approximation of the laws of the Member States relating to electromagnetic compatibility.

This declaration applies to all specimens manufactured identical to the model submitted for testing/evaluation.

EN 55022: 1998 + A1: 2000 +A2: 2003

EN 61000-3-3:1995 + A1: 2001

EN 55024: 1998 + A1: 2001 + A2: 2003

IEC 61000-4-2: 1995 + A1: 1998 + A2:  2000

IEC 61000-4-3: 2002 + A1: 2002

IEC 61000-4-4: 1995 + A1: 2000 + A2: 2001

IEC 61000-4-5: 1995 + A1: 2000

IEC 61000-4-6: 1996 + A1: 2000

IEC 61000-4-8: 1993 + A1: 2000

IEC 61000-4-11: 1994 + A1: 2000

# RoHS Compliance

This product is in compliance with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003, on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) and its amendments.