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› Yottamaster 5-Bay RAID Hard Drive Enclosure User Manual

Yottamaster PS5RU3 / PS500RC3

Yottamaster 5-Bay RAID Hard Drive Enclosure User Manual

Model: PS5RU3 / PS500RC3

Brand: Yottamaster

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Yottamaster 5-Bay RAID Hard Drive Enclosure. This device is designed to provide reliable external storage solutions for individuals and professionals, supporting various RAID configurations for data protection and performance optimization.

Please read this manual thoroughly before using the product to ensure proper functionality and to prevent data loss.

2. PRODUCT OVERVIEW

2.1 Package Contents

Verify that all items are present in the package:

- Yottamaster 5-Bay RAID Hard Drive Enclosure
- Power Adapter
- USB 3.0 Type-B to Type-A Cable
- Screws for HDD/SSD installation
- Screwdriver
- User Manual



Figure 2.1: Contents of the Yottamaster 5-Bay RAID Enclosure package.

2.2 Product Features

- Supports up to five 2.5-inch or 3.5-inch SATA HDD/SSD drives.
- Maximum capacity of 80TB (16TB per drive).
- USB 3.0 interface with data transfer speeds up to 5Gbps.
- Supports RAID 0, RAID 1, RAID 3, RAID 5, RAID 10, JBOD (SPAN), and CLONE RAID modes.
- Durable aluminum alloy casing for efficient heat dissipation.
- Integrated 80mm silent cooling fan.
- Push-open front door design for easy drive installation.
- LED indicators for drive status monitoring.
- Compatible with Windows, macOS, and Linux operating systems.

2.3 Component Identification

For 2.5"/3.5" HDD/SSDs

Support single disk up to 16TB



Figure 2.2: Front and rear view of the enclosure with labeled components.

- **Aluminum Body:** Provides structural integrity and aids in heat dissipation.
- **LED Indicator:** Displays the operational status of the enclosure and individual drives.
- **Non-slip Pad:** Ensures stability on surfaces.
- **RAID Switch:** Used to select the desired RAID mode.
- **80mm Fan:** Provides active cooling for the internal drives.
- **DC In:** Power input port for the external power adapter.
- **SET Button:** Used in conjunction with the RAID switch to confirm RAID mode settings.
- **USB 3.0 Type-B Port:** Connects the enclosure to your computer.
- **Power Button:** Turns the enclosure on or off.

3. SETUP

3.1 Installing Hard Drives

1. Gently press the front door of the enclosure to open it.
2. Pull out the desired drive trays.
3. For 3.5-inch HDDs, align the drive with the screw holes on the tray and secure it with the provided screws. For 2.5-inch

SSDs/HDDs, use the appropriate screw holes on the tray.

- Slide the loaded trays back into the enclosure until they click into place.
- Close the front door.

How to set RAID mode?

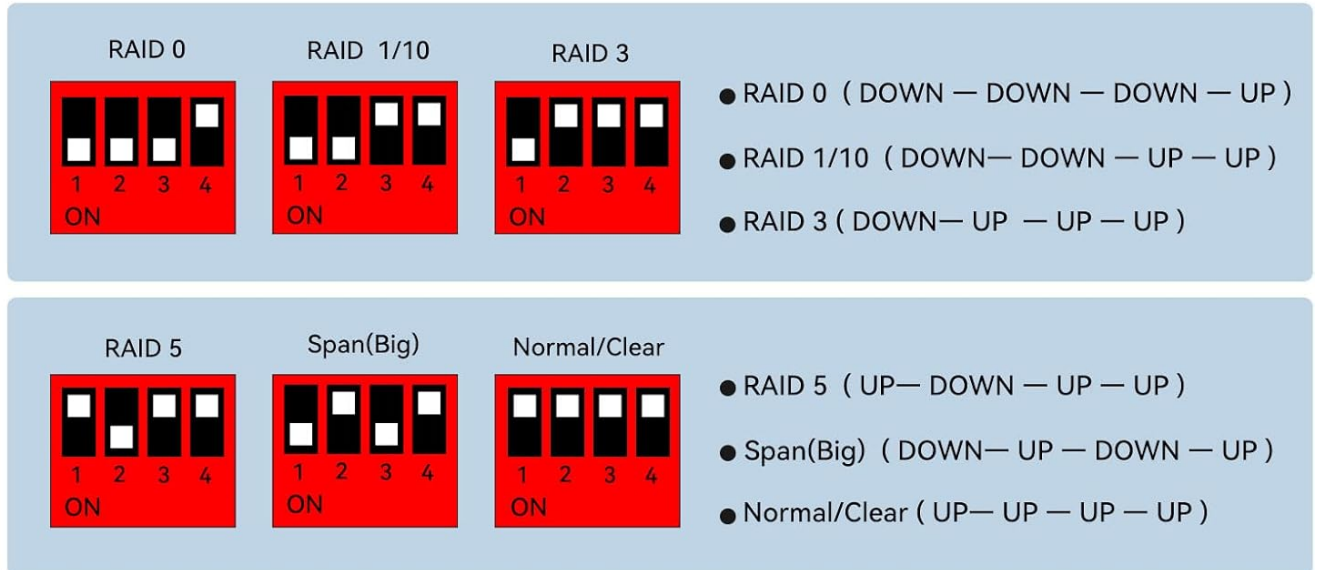


Figure 3.1: Installing drives into the enclosure trays.

3.2 Connecting to Your Computer

- Connect the power adapter to the "DC In" port on the back of the enclosure and plug it into a power outlet.
- Connect one end of the USB 3.0 cable to the "USB 3.0 Type-B" port on the enclosure and the other end to an available USB 3.0 port on your computer.
- Press the power button on the enclosure to turn it on. The LED indicators will light up.

12V6.5A External Power Supply



Figure 3.2: Connecting the enclosure to a computer and power.

Note: For optimal performance, ensure your computer has a USB 3.0 port. The enclosure is backward compatible with USB 2.0, but transfer speeds will be limited.

4. OPERATING

4.1 Understanding RAID Modes

The Yottamaster 5-Bay RAID enclosure supports multiple RAID configurations, allowing you to optimize for speed, data redundancy, or a combination of both.

Table 4.1: RAID Mode Descriptions

RAID Mode	Description	Minimum Drives	Benefits
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RAID Mode	Description	Minimum Drives	Benefits
RAID 0 (Striping)	Data is split into blocks and written across all drives.	2	Highest performance, maximum capacity. No data redundancy.
RAID 1 (Mirroring)	Data is duplicated on two drives.	2	High data redundancy. Capacity is limited to the size of one drive.
RAID 3 (Striping with dedicated parity)	Data is striped across drives with one dedicated parity drive.	3	Good performance for large files, single drive failure tolerance.
RAID 5 (Striping with distributed parity)	Data is striped across drives with parity information distributed among all drives.	3	Good balance of performance, capacity, and data redundancy (single drive failure tolerance).
RAID 10 (Striping of Mirrors)	Combines RAID 0 and RAID 1. Data is mirrored, then the mirrors are striped.	4	High performance and high data redundancy (multiple drive failure tolerance).
JBOD (Just a Bunch Of Disks) / SPAN	Drives are concatenated to form one large logical volume.	2	Maximizes capacity by combining all drives into a single volume. No redundancy.
CLONE (Normal/Clear)	Each drive is recognized as an independent volume.	1	No RAID functionality. Each drive operates independently.

4.2 Setting RAID Mode

The RAID mode is set using the DIP switches on the back of the enclosure.

1. **Power off** the enclosure and disconnect it from your computer.
2. Locate the DIP switches on the rear panel.
3. Refer to the diagram below and the table in Section 4.1 to set the switches to the desired RAID configuration.
4. After setting the switches, use a small pointed object (like the provided screwdriver) to press and hold the **SET button** for approximately 3-5 seconds until the enclosure restarts or the LEDs flash, indicating the new configuration has been applied.
5. Reconnect the enclosure to your computer and power it on.
6. *Important:* After changing RAID modes, the drives will need to be re-initialized and formatted. This process will erase all data on the drives. **Backup any important data before changing RAID modes.**

80mm Cooling Fan Inside

Improved airflow pattern



Figure 4.1: DIP Switch settings for various RAID modes.

4.3 Initializing and Formatting Drives

After setting the RAID mode, the new logical volume must be initialized and formatted by your operating system.

For Windows:

1. Right-click on "This PC" (or "My Computer") and select "Manage".
2. In the Computer Management window, select "Disk Management" under "Storage".
3. You should see the new disk listed as "Unallocated" or "Not Initialized". Right-click on it and select "Initialize Disk". Choose MBR or GPT partition style (GPT is recommended for drives larger than 2TB).
4. After initialization, right-click on the unallocated space and select "New Simple Volume". Follow the wizard to format the drive with a file system (e.g., NTFS) and assign a drive letter.

For macOS:

1. Open "Disk Utility" from Applications > Utilities.
2. Select the Yottamaster enclosure's volume from the sidebar.
3. Click "Erase" from the top menu.
4. Choose a Name, Format (e.g., APFS or Mac OS Extended (Journaled)), and Scheme (GUID Partition Map). Click "Erase" to format.

For Linux:

1. Use a disk management tool like GParted or `fdisk/mkfs` commands to partition and format the new volume.

5. MAINTENANCE

5.1 Cleaning

To maintain optimal performance and longevity, regularly clean the enclosure.

- Disconnect the enclosure from power and your computer before cleaning.
- Use a soft, dry cloth to wipe the exterior.
- For dust accumulation in the ventilation holes or fan, use compressed air.
- Do not use liquid cleaners or abrasive materials.

5.2 Fan Maintenance

The integrated 80mm cooling fan helps maintain optimal operating temperatures.

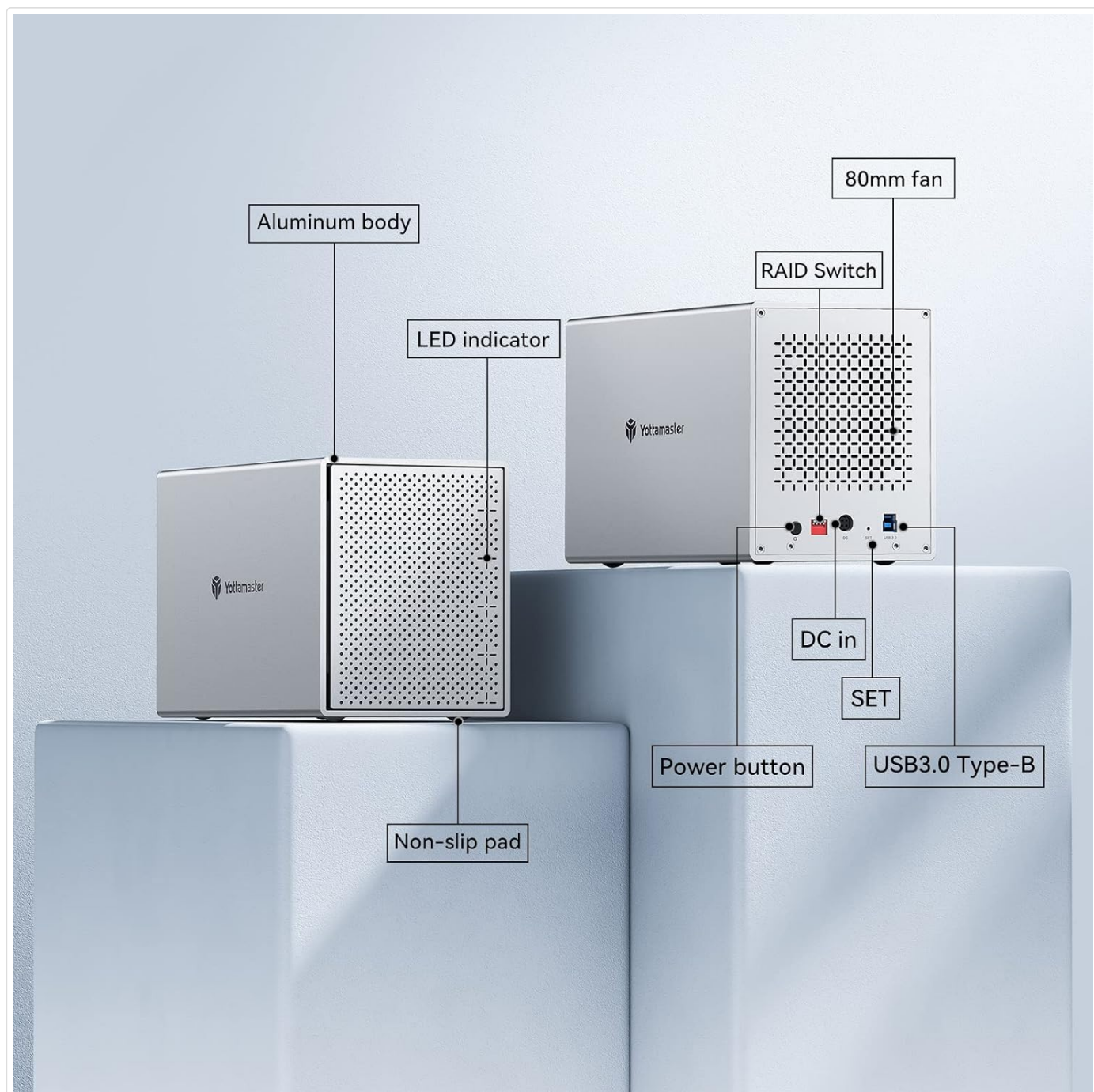


Figure 5.1: Internal 80mm cooling fan.

- Ensure the fan vents are not obstructed.
- If you notice increased fan noise or reduced cooling, inspect the fan for dust buildup and clean as described above.

5.3 Drive Handling

- Always safely eject or unmount the enclosure from your operating system before disconnecting the USB cable or powering off the device.
- Avoid sudden power loss to prevent data corruption.
- When replacing drives, handle them carefully to avoid static discharge or physical damage.

6. TROUBLESHOOTING

Table 6.1: Common Issues and Solutions

Problem	Possible Cause	Solution
Enclosure not recognized by computer.	Loose cable connection, insufficient power, driver issue, incorrect RAID setting.	• Check all cable connections (USB, power). • Ensure the power adapter is correctly plugged in and the enclosure is powered on. • Try a different USB port or cable. • Verify the RAID mode is correctly set and the drives are initialized/formatted (see Section 4.3). • Restart your computer.
Slow data transfer speeds.	Connected to USB 2.0 port, drive performance limitations, fragmented data.	• Ensure the enclosure is connected to a USB 3.0 port on your computer. • Check the health and speed of the installed drives. • Defragment drives (for HDDs) or ensure TRIM is enabled (for SSDs).
Drives not appearing after RAID setup.	Drives not initialized or formatted.	• Follow the steps in Section 4.3 to initialize and format the drives. • Ensure the SET button was pressed after changing DIP switch settings.
Enclosure overheating.	Poor ventilation, fan malfunction.	• Ensure the enclosure is placed in a well-ventilated area. • Check if the 80mm cooling fan is operating correctly and not obstructed. Clean if necessary (see Section 5.2).

7. SPECIFICATIONS

Table 7.1: Product Specifications

Feature	Detail
Model	PS5RU3 / PS500RC3
Drive Bays	5
Compatible Drives	2.5" / 3.5" SATA HDD/SSD
Max Single Drive Capacity	16TB
Max Total Capacity	80TB
Interface	USB 3.0 Type-B

Feature	Detail
Transfer Speed	Up to 5Gbps
RAID Modes	RAID 0/1/3/5/10/JBOD (SPAN)/CLONE
Cooling	80mm Silent Fan
Material	Aluminum Alloy
Power Supply	12V 6.5A External Power Adapter
Dimensions (L x W x H)	Approximately 252 x 136 x 168 mm
Supported OS	Windows, macOS, Linux

8. WARRANTY AND SUPPORT

Yottamaster products typically come with a standard manufacturer's warranty. Please refer to the warranty card included in your package or visit the official Yottamaster website for detailed warranty terms and conditions.

For technical support, troubleshooting assistance, or warranty claims, please contact Yottamaster customer service through their official website or the contact information provided in your product documentation.

Website: www.yottamaster.com

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

