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› Yottamaster FS5RU3 5-Bay RAID Enclosure User Manual

Yottamaster FS5RU3

Yottamaster FS5RU3 5-Bay RAID Enclosure User Manual

Model: FS5RU3

1. INTRODUCTION

This manual provides comprehensive instructions for the Yottamaster FS5RU3 5-Bay RAID Enclosure. It covers product features, installation, RAID configuration, operation, maintenance, and troubleshooting to ensure optimal performance and data management.



Image 1.1: Yottamaster FS5RU3 5-Bay RAID Enclosure, front-side view.

2. PRODUCT FEATURES

The Yottamaster FS5RU3 is a professional-grade 5-bay hardware RAID enclosure designed for efficient and scalable data storage solutions. Key features include:

- **Professional Hardware RAID Controller:** Supports RAID 0, 1, 3, 5, 10, JBOD, SPAN, and PM (Normal) modes for flexible storage configurations.
- **High Storage Capacity:** Accommodates up to five 18TB hard drives, totaling a maximum capacity of 90TB.
- **Versatile Drive Compatibility:** Designed for both 2.5-inch SSDs/HDDs and 3.5-inch HDDs.
- **Fast Data Transfer:** Utilizes USB 3.0 protocol, offering transfer speeds up to 5Gbps.
- **Efficient Cooling System:** Features a built-in 80mm silent fan and strategically placed cooling holes for effective heat dissipation.
- **Stable Power Supply:** Integrated 150W power supply with multiple protection mechanisms (short circuit, overvoltage, overheat, overcurrent, open circuit).
- **Hot-Swapping Support:** Allows for easy installation and replacement of drives without powering down the enclosure.

150W LARGE POWER SUPPLY INSIDE

Meet Multi-Bay Electricity demands Ensure Stable Data Transfer



Short circuit
protection



Overvoltage
protection



Overheat
protection



Overcurrent
protection



Open circuit
protection



Image 2.1: The enclosure supports up to 90TB total capacity, compatible with 2.5" HDDs, 3.5" HDDs, and 2.5" SSDs.

BUILT-IN 80mm SILENT FAN

Front and Rear with Meteor Cooling Holes
Provide Great Heat-dissipation Performance



Low Noise



High speed



Low power
consumption



Image 2.2: Rear panel illustrating the built-in 80mm silent fan and meteor cooling holes for optimal heat dissipation.

90TB COLOSSAL CAPACITY

Single Disk Up to 18TB
Meet the Needs of Large Capacity Storage



2.5"HDD



3.5"HDD



2.5"SSD



Image 2.3: The enclosure features a 150W internal power supply with multiple safety protections, ensuring stable data transfer.

3. PACKAGE CONTENTS

Please verify that all items are present in your package:

- Yottamaster FS5RU3 5-Bay RAID Enclosure
- Power Adapter

- USB 3.0 Data Cable
- Drive Trays (5 units)
- Screws for 2.5" and 3.5" drives
- Screwdriver
- User Manual (this document)

4. PHYSICAL COMPONENTS

4.1. Front Panel



Image 4.1: Front panel features of the Yottamaster FS5RU3.

- **Press Design:** Mechanism for ejecting drive trays.
- **Meteor Holes:** Ventilation holes for airflow.
- **LED Light:** Indicates drive activity and status for each bay.
- **Non-slip Pad:** Provides stability and prevents movement.

4.2. Rear Panel



Image 4.2: Rear panel features of the Yottamaster FS5RU3.

- **80mm Silent Fan:** Provides active cooling for internal drives.
- **Power Switch:** Controls the power supply to the enclosure.
- **AC Power Input:** Connects to the power adapter.
- **USB 3.0 Interface:** Connects the enclosure to your computer.
- **RAID Mode Switches (DIP Switches):** Used to select the desired RAID mode.

- **SET Button:** Used to confirm RAID mode changes.

5. SETUP AND DRIVE INSTALLATION

5.1. Installing Hard Drives

The enclosure supports both 2.5-inch SSDs/HDDs and 3.5-inch HDDs. Follow these steps to install your drives:

1. Gently press the release button on the front panel of an empty drive bay to eject the drive tray.
2. For 3.5-inch HDDs, align the screw holes on the side of the drive with the corresponding holes on the drive tray. Secure the drive using the provided screws.
3. For 2.5-inch SSDs/HDDs, align the screw holes on the bottom of the drive with the corresponding holes on the drive tray. Secure the drive using the provided screws.
4. Slide the loaded drive tray back into the enclosure until it clicks securely into place.
5. Repeat for all desired drives.

Note: Ensure drives are securely fastened to prevent vibration and potential damage.

5.2. Initial Connection

1. Connect the power adapter to the AC power input on the rear panel and then to a power outlet.
2. Connect the USB 3.0 data cable from the enclosure's USB 3.0 interface to an available USB port on your computer.
3. Turn on the enclosure using the power switch on the rear panel.

6. RAID CONFIGURATION

WARNING: Changing RAID modes will erase all data on the installed drives. Always back up your data before attempting any RAID configuration changes.

The Yottamaster FS5RU3 supports various RAID modes, JBOD, SPAN, and PM (Normal) modes. The configuration is done via DIP switches and a SET button on the rear panel.

6.1. Understanding RAID Modes

RAID Mode	Min. Disks	Max. Capacity	Security	Speed
RAID 5	3	(N-1) x N	Middle	Medium
RAID 0	2	100%	Low	High
RAID 1	2	50%	High	Low
RAID 3	3	(N-1) x N	Middle	Medium
RAID 10	4	50%	High	Medium
Combine (SPAN)	2	100%	Low	Low
Clear-RAID	1	100%	Middle	Middle
Normal (PM)	1	100%	Middle	Middle

Note: N stands for the quantity of hard drives. Assuming that each hard drive has the same capacity for optimal RAID performance.

6.2. Setting RAID Mode



Image 6.1: Visual guide for DIP switch settings and RAID mode configuration steps.

1. **Ensure Normal Mode:** Before setting or changing any RAID mode, ensure the hard drive enclosure is in "Normal" (PM) mode.
2. **Toggle RAID Mode Switches:** Refer to Image 6.1 and the table above to set the DIP switches on the rear panel to your desired RAID mode.
3. **Hold "SET" Key:** With the enclosure powered OFF, hold down the "SET" button.
4. **Power On:** While still holding the "SET" button, turn on the power switch. Continue holding the "SET" button for approximately 6 seconds until the indicator lights flash red and blue alternately.
5. **Release "SET" Key:** Release the "SET" button.
6. **Disk Management & Format:** Access your computer's Disk Management (Windows) or Disk Utility (macOS) to find and initialize/format the newly configured RAID volume.

Note: For optimal performance and data integrity, it is recommended to use drives of the same capacity and type within a RAID array.

7. OPERATION

7.1. Hot-Swapping Drives

The Yottamaster FS5RU3 supports hot-swapping, allowing you to replace or add drives without powering down the entire enclosure. Ensure your operating system and RAID configuration (if applicable) support hot-swapping before performing this action. Always safely eject or unmount the drive from your operating system before physically removing it.

7.2. Power Management

The enclosure is designed to spin down drives and the cooling fan after approximately 10 minutes of inactivity to conserve

power and reduce wear. Drives will automatically spin up within a few seconds when accessed. Yottamaster may provide software to adjust this sleep function or disable it; please check the official Yottamaster website for available utilities.

8. MAINTENANCE

- **Cleaning:** Regularly clean the exterior of the enclosure with a soft, dry cloth. Ensure ventilation holes are free from dust and debris to maintain optimal airflow. Do not use liquid cleaners directly on the device.
- **Airflow:** Ensure the enclosure is placed in a well-ventilated area, away from direct sunlight or heat sources, to prevent overheating.
- **Firmware Updates:** Periodically check the Yottamaster official website for any available firmware updates for your model. Firmware updates can improve performance, stability, and add new features.

9. TROUBLESHOOTING

If you encounter issues with your Yottamaster FS5RU3, please refer to the following common problems and solutions:

- **Drives Not Recognized:**
 - Ensure all drives are securely seated in their trays and the trays are fully inserted into the enclosure.
 - Verify the USB cable is properly connected to both the enclosure and your computer. Try a different USB port or cable.
 - Check Disk Management (Windows) or Disk Utility (macOS) to see if the drives are detected but uninitialized or unformatted. New drives require initialization and formatting.
 - If using drives previously used in a Linux-based NAS, they may need to be formatted to FAT or NTFS on a Windows or macOS system before the Yottamaster enclosure can recognize them.
- **RAID Configuration Issues:**
 - Double-check the DIP switch settings against the RAID mode table (Section 6.1).
 - Ensure the "SET" button procedure (Section 6.2) was followed correctly.
 - Remember that changing RAID modes will erase data. If data loss occurred unexpectedly, ensure you had a backup.
 - For Linux users, hardware RAID management software may not be readily available. Consider using software RAID (e.g., mdadm) if hardware RAID configuration is problematic.
- **Drives Spinning Up/Down Repeatedly:**
 - This behavior can indicate power instability or communication errors. Ensure the power cable is firmly connected.
 - Try connecting the enclosure to a different power outlet.
 - Check for any available firmware updates for the enclosure, as these can address power management issues.
 - If the issue persists, contact Yottamaster support.
- **Enclosure Not Identified in System Resources:**
 - While the individual drives should be identifiable, the enclosure itself might not always appear as a distinct device in some system utilities. This is often normal behavior.
 - Focus on ensuring the individual drives or the configured RAID volume are accessible.

10. SPECIFICATIONS

Brand	Yottamaster
Model Number	FS5RU3
Interface	USB 3.0
Data Transfer Rate	Up to 5 Gbps
Supported Drives	2.5" / 3.5" SATA HDD & SSD
Number of Bays	5
Max Single Drive Capacity	18 TB
Max Total Capacity	90 TB
RAID Modes	RAID 0, 1, 3, 5, 10, JBOD, SPAN, PM (Normal)
Material	Aluminum
Cooling System	Built-in 80mm Silent Fan
Power Supply	150W Internal Power Supply
Compatible Operating Systems	Windows, macOS, Linux

11. WARRANTY AND SUPPORT

For detailed information regarding warranty coverage, technical support, and customer service, please refer to the official Yottamaster website or the documentation provided with your purchase. You can typically find contact information and FAQs on their support pages.

Yottamaster Official Website: www.yottamaster.com

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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