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Thermalright C12RW-S V2

Thermalright TL-C12RB-S V2 CPU Fan Instruction Manual

Model: TL-C12RB-S V2

1. INTRODUCTION

Thank you for choosing the Thermalright TL-C12RB-S V2 CPU Fan. This 120mm ARGB case cooler is designed to provide efficient and quiet cooling for your computer system. Featuring a 4-pin PWM connector for automatic speed control and S-FDB bearings for enhanced durability, this fan is ideal for various PC cooling applications. This manual provides detailed instructions for installation, operation, and maintenance to ensure optimal performance and longevity of your fan.

2. SAFETY INFORMATION

- Always disconnect power from your computer before installing or handling internal components.
- Handle the fan by its frame to avoid damaging the fan blades or wiring.
- Ensure proper grounding to prevent electrostatic discharge (ESD) damage to components.
- Keep out of reach of children.
- Do not attempt to disassemble the fan.
- Ensure correct polarity when connecting power and ARGB cables to avoid damage to the fan or motherboard. Specifically, do not connect 3-pin 5V ARGB fans to 4-pin 12V RGB sockets, as this will damage the fan lights.

3. PACKAGE CONTENTS

- Thermalright TL-C12RB-S V2 CPU Fan
- Mounting Screws
- Fan Splitter Cable (for PWM)
- ARGB Splitter Cable (for lighting)
- SATA Powered RGB Controller (optional, for non-motherboard ARGB control)

4. PRODUCT OVERVIEW



Front view of the Thermalright TL-C12RB-S V2 CPU Fan, showcasing its vibrant ARGB lighting.

TL-C12RB-S V2

120mm Reverse Airflow Performance Fan



*Dual Side
Rubber Damping*

*LED
5V ARGB Control*

*Low Noise
S-FDB Bearing*

Overview of the TL-C12RB-S V2 fan, highlighting its 120mm reverse airflow, dual side rubber damping, 5V ARGB control, and low noise S-FDB bearing.

Focus on performance from an engineering perspective

Airflow 9 blade design outputs rated 58CFM at 1500RPM
With airflow exhaust side at fan blade



Support PWM Fan Speed Control

Detailed view of the fan's 9-blade design, optimized for 58CFM airflow at 1500RPM, and the included PWM fan speed control cable.

Soft-Touch Rubber pads provide vibration absorption



S-FDB (Stably-FDB) Bearing with magnetic design, stabilizes fan blade in motion.

Close-up illustrating the soft-touch rubber pads for vibration absorption and the S-FDB (Stably-FDB) bearing with magnetic design for stable motion.

High quality PBT material
High brightness LED, and 5V ARGB control



The fan's high-quality PBT material, high brightness LED, and 5V ARGB control capabilities.

POWER FROM DESIGN

TL-C12RB-S V2



Case Heat Exhaust



Direction Of Airflow

Diagram showing the fan's reverse airflow design, suitable for case heat exhaust and maintaining consistent lighting effects when installed as intake.



Illustration of the reverse fan blade performance, indicating counter-clockwise rotation for reversed air outlet.



Close-up of the fan's industrial-grade PBT material for strength and stability, and pre-installed silicone rubber pads for noise and vibration damping.



Diagram of the S-FDB (Fluid Dynamic Bearing) which ensures low-friction, low-noise operation, and extended lifespan, designed to prevent blade shaking.

5. SETUP AND INSTALLATION

5.1. Fan Installation

The Thermalright TL-C12RB-S V2 fan features a reverse airflow design, meaning the fan blade surface is the direction of the wind. This is particularly useful for chassis air ducts and maintaining light effect unity when installed as an intake fan.

For Case Intake:

Use the included screws to install the fan on your PC case for intake. For a more secure installation, long screws and nuts can be used.

Your browser does not support the video tag.

Video: Installation guide for TL-C12R Series CPU cooler. This video demonstrates the process of installing the fan as an intake fan in a PC case, including securing it with screws and showing the airflow direction.

For Heatsink/Radiator Exhaust:

When installing the fan on a heatsink or radiator, ensure the fan is positioned to exhaust air away from the component.

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Video: Installation guide for TL-C12R Series CPU cooler. This video also illustrates how to install the fan on a heatsink or radiator for exhaust, showing the correct orientation for airflow.

5.2. Wiring Connections

Proper wiring is crucial for both fan operation and ARGB lighting. The fan uses a 4-pin PWM connector for speed control and a 3-pin +5V ARGB connector for lighting.

PWM Fan Connection:

Connect the 4-pin PWM fan cable to a 4-pin fan header on your motherboard. Up to three fans can be connected to one motherboard fan socket using the provided fan splitter cable. Ensure to connect the fan header with the sense pin to the motherboard for proper speed detection.

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Video: Case fan RGB series Connection socket video tutorial. This video provides a detailed guide on connecting the fan's PWM cable to the motherboard and using the splitter cable for multiple fans.

ARGB Lighting Connection:

Connect the 3-pin +5V ARGB lighting cable to a compatible 3-pin +5V ARGB header on your motherboard. Align the arrow on the header to the +5V power pin. If your motherboard does not have an ARGB header, you can use the included SATA powered RGB controller for lighting effects.

IMPORTANT: DO NOT connect 3-pin 5V ARGB fans to 4-pin 12V RGB sockets. This will permanently damage the fan lights.

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Video: Case fan RGB series Connection socket video tutorial. This video demonstrates how to connect the ARGB lighting cable to the motherboard's 3-pin +5V ARGB header and also shows the use of the SATA powered RGB controller.

6. OPERATING INSTRUCTIONS

Once installed and connected, the Thermalright TL-C12RB-S V2 fan will operate automatically. The 4-pin PWM connection allows your motherboard to control the fan speed based on system temperature, ensuring optimal cooling performance and minimal noise.

6.1. Fan Speed Control (PWM)

The fan's speed is automatically regulated by the motherboard via the 4-pin PWM cable. This allows the fan to adjust its speed (up to 1500RPM) according to the motherboard's temperature readings, providing efficient cooling only when needed, thus reducing noise during lighter loads.

6.2. ARGB Lighting Control

The ARGB lighting can be controlled through your motherboard's compatible software (if connected to a 3-pin +5V ARGB header) or via the included SATA powered RGB controller. The fan supports up to 17 modes of ARGB lighting effects, allowing for extensive customization.

7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your fan.

- **Cleaning:** Periodically clean the fan blades and frame to remove dust buildup. Use a soft, dry cloth or compressed air. Ensure the fan is powered off before cleaning.
- **Bearing:** The S-FDB bearing is maintenance-free and does not require lubrication. Do not attempt to disassemble the fan for bearing maintenance.
- **Inspection:** Regularly check cables for any signs of wear or damage. Ensure all connections remain secure.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Fan not spinning	No power, incorrect connection, faulty fan header.	Check 4-pin PWM connection to motherboard. Ensure motherboard fan header is enabled in BIOS. Test fan on a different header or with a known working power source.
ARGB lights not working	Incorrect ARGB connection, incompatible header, faulty ARGB controller/software.	Ensure 3-pin +5V ARGB connection is correct (arrow aligned). Verify motherboard ARGB header is 5V, not 12V. If using controller, ensure it's powered and functioning. Check motherboard software settings.
Fan is too loud	High fan speed, dust buildup, loose mounting.	Adjust fan curve in motherboard BIOS/software to lower speeds. Clean fan blades. Ensure fan is securely mounted with rubber pads.
Insufficient cooling	Incorrect airflow direction, dust buildup, low fan speed.	Verify correct fan orientation for desired airflow (intake/exhaust). Clean fan blades and heatsink/radiator. Adjust fan curve in BIOS/software for higher speeds.

9. SPECIFICATIONS

Feature	Specification
Model	TL-C12RB-S V2
Dimensions	120 x 120 x 25 mm (4.72"L x 0.98"W x 4.72"H)
Speed	1500 RPM \pm 10%
Noise Level	\leq 23.2 dBA
Air Flow	58 CFM
Air Pressure	1.31 mm H ₂ O
Connector	4-pin PWM
Current	0.15 A
Voltage	12 Volts (DC)
Wattage	1.8 watts
Bearing Type	S-FDB (Fluid Dynamic Bearing)
Material	Plastic (PBT)
Lighting	Addressable RGB (5V 3-pin)

10. WARRANTY AND SUPPORT

Thermalright products are manufactured to the highest quality standards. For warranty information and technical support, please refer to the official Thermalright website or contact your local distributor. Please retain your proof of purchase for warranty claims.

