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- › [Thermalright](#) /
- › [Thermalright TL-E12B-S V3 120mm ARGB Cooling Fan User Manual](#)

## Thermalright TL-E12B-S V3

# Thermalright TL-E12B-S V3 120mm ARGB Cooling Fan User Manual

## 1. INTRODUCTION

This manual provides comprehensive instructions for the Thermalright TL-E12B-S V3 120mm ARGB Cooling Fan. This fan is designed to enhance cooling performance for both CPU coolers and PC cases, featuring adjustable fan speed and customizable ARGB lighting. Please read this manual carefully before installation and use to ensure proper function and longevity of your product.



### TL-E12B-S V3 120mm Balance Performance Fan

Ideal cooling fans for your PC provide high airflow to keep components cool. With up to 72.37CFM of airflow at peak 2000 RPM, TL-E12B-S V3 Seriesfans deliver the high airflow and low noise performance.

Image 1: Thermalright TL-E12B-S V3 120mm ARGB Halo Fan overview, highlighting its performance, ARGB lighting, and 120mm size.

## 2. PRODUCT FEATURES

- **High Performance Cooling:** Features automatic speed control via a 4-pin PWM fan cable interface, allowing

the fan to adjust its speed up to 2000 RPM based on motherboard temperature for optimal cooling.

- **Vibration Absorption and Low Noise:** Equipped with four vibration-absorbing pads on each corner to reduce vibration and friction, minimizing noise for quiet operation.
- **Quality S-FDB Bearing:** Utilizes a carefully developed S-FDB (Fluid Dynamic Bearing) to prevent fan blade shaking, maintain low noise, and extend the fan's lifespan.
- **2000 RPM High Speed:** Delivers a large air volume to quickly dissipate high temperatures, ensuring a cool environment for your PC components. The PWM temperature control function eliminates the need for manual speed adjustment.
- **Optimized Design:** Designed with anti-misfiring fan blades for safety, matching shock-absorbing corner pads, and constructed from PBT+PC insulation grade material for increased durability. Includes a 55cm cable supporting PWM and ARGB series control.
- **Versatile Application:** Can be used as a case fan or paired with a CPU cooler to enhance overall system cooling by removing heat from the case and CPU.

## POWER FROM DESIGN

After years of engineering, Thermalright comes up the original design of TL-E12B-S V3, able to maximize airflow within 2000RPM fan speed. Focus on balance between airflow and static pressure performance, the Thermalright TL-E12B-S V3 fan series is an all-around choice for heatsink, radiator or computer case cooling scenarios.



Image 2: Close-up view of the fan highlighting soft-touch rubber pads for vibration absorption and the S-FDB (Stably-FDB) bearing with magnetic design for stable operation.

## CLASSIC DESIGN

Premium Brass and Steel fan motor shaft for longevity, giving it industrial fan look.



Image 3: Illustration of the fan's 7-blade airflow design, rated for 72.37 CFM at 2000 RPM, and the PWM fan speed control connector.

### 3. PACKAGE CONTENTS

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- Thermalright TL-E12B-S V3 120mm ARGB Cooling Fan
- Mounting Screws

### 4. INSTALLATION

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#### 4.1. General Installation Guide

For a visual guide on the installation process, please refer to the official video below. This video demonstrates the connection of PWM and ARGB cables, as well as proper fan orientation and mounting.

Your browser does not support the video tag.

Video 1: Thermalright case fan quick start guide. This video demonstrates the connection of PWM and ARGB cables and proper fan orientation for Thermalright case fans.

#### 4.2. Fan Speed (PWM) Connection

The fan features a 4-pin PWM connector for automatic speed control. Connect this connector to an available 4-pin fan header on your motherboard. If installing multiple fans, use the provided sharing connector to synchronize fan speeds.

1. Locate the 4-pin PWM fan power connector on the fan cable.
2. Connect the 4-pin PWM connector to a compatible fan header on your motherboard (e.g., CHA\_FAN1, CPU\_FAN).
3. To synchronize fan speeds across multiple fans, connect additional PWM connectors to the PWM sharing header.

### 4.3. ARGB Lighting Connection

The fan supports 3-pin 5V Addressable RGB (ARGB) lighting. Ensure your motherboard has a compatible +5V ARGB header. This fan does NOT support 12V 4-pin RGB headers.

1. Identify the 3-pin 5V ARGB connector on the fan cable.
2. Connect the 3-pin ARGB connector to the +5V ARGB header on your motherboard.
3. To synchronize ARGB lighting effects across multiple fans, connect additional ARGB connectors to the ARGB sharing header.



## BUILD TOUGH, THINK ERGONOMIC

Both fan blades and frame are made with industrial grade PBT polymers, ensuring strength and stability in computer use cases. Each corner of the fan has silicone rubber pad pre-installed for noise and vibration damping.

Image 4: Details on the fan's high-quality PBT+PC material and a crucial note that it only supports 5V 3-pin ARGB, not 12V 4-pin RGB.

### 4.4. Physical Installation and Airflow Direction

Proper fan orientation is crucial for effective cooling. For normal airflow design fans, the blade side typically acts as the intake, and the frame side acts as the exhaust. Install fans according to your case's airflow direction requirements.

1. Determine the desired airflow direction within your PC case (e.g., intake for front/bottom, exhaust for rear/top).
2. Orient the fan so that the airflow matches your system's cooling strategy. The side with the fan blades exposed is typically the intake, while the side with the motor support structure is the exhaust.
3. Secure the fan to the mounting location (case or CPU cooler) using the included screws. Do not overtighten.

## LONG LASTING S-FDB BEARING

Fan Motor equipped with high durability magnetic assist S-FDB(Fluid Dynamic Bearing) bearing , proving low-friction and low-no ce life span in your PC build. Thermalright fan with S-FDB bearing is maintenance-free, please do not disassemble.



Image 5: Examples of diversified usage scenarios, showing the fan installed for case heat exhaust and on water cooling radiators.

## 5. OPERATION

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Once installed and connected, the Thermalright TL-E12B-S V3 fan will operate automatically. Fan speed is controlled by the motherboard's PWM signal, adjusting based on system temperature. ARGB lighting can be controlled via your motherboard's RGB software (e.g., ASUS Aura Sync, MSI Mystic Light Sync, Gigabyte RGB Fusion, ASRock Polychrome Sync) if connected to a compatible 5V ARGB header.

Your browser does not support the video tag.

Video 2: Thermalright TL-E12W-S V3 CPU Fan installation. This video demonstrates the installation process for a Thermalright CPU fan, including wiring and mounting.

## 6. MAINTENANCE

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To ensure optimal performance and longevity of your fan, regular maintenance is recommended:

- **Cleaning:** Periodically clean the fan blades and frame to remove dust buildup. Use a soft brush or compressed air. Ensure the fan is powered off before cleaning.
- **Inspection:** Check cables for any signs of wear or damage. Ensure all connections are secure.
- **Bearing:** The S-FDB bearing is designed to be maintenance-free. Do not attempt to disassemble the fan.

## 7. TROUBLESHOOTING

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- **Fan Not Spinning:**
  - Check if the 4-pin PWM connector is securely plugged into the motherboard fan header.
  - Ensure the motherboard fan header is enabled in the BIOS/UEFI settings.
  - Verify that the power supply is functioning correctly.

- **ARGB Lighting Not Working/Incorrect Colors:**

- Confirm the 3-pin ARGB connector is securely plugged into a **+5V ARGB header** on the motherboard.
- Ensure you are using a **+5V ARGB header**, not a 12V RGB header. Connecting to a 12V header can damage the fan's LEDs.
- Check your motherboard's RGB software for lighting control and ensure it is properly configured.
- If using multiple fans, ensure the ARGB sharing connectors are properly linked.

- **Excessive Noise:**

- Ensure the fan is securely mounted and screws are tightened appropriately.
- Check for any cables or obstructions touching the fan blades.
- Clean any dust buildup on the fan blades.

## 8. SPECIFICATIONS

Feature	Specification
Product Dimensions	4.72"L x 0.98"W x 4.72"H (120mm x 25mm x 120mm)
Brand	Thermalright
Power Connector Type	4-Pin PWM
Voltage	12 Volts
Wattage	2.16 watts
Cooling Method	Air
Compatible Devices	Desktop
Noise Level	27.7 Decibels
Material	Plastic (PBT+PC)
Maximum Rotational Speed	2000 RPM
Air Flow Capacity	72.37 Cubic Feet Per Minute (CFM)
Bearing Type	S-FDB (Fluid Dynamic Bearing)
ARGB Compatibility	3-Pin 5V Addressable RGB (ARGB)

## 9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Thermalright website or contact their customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.