Phanteks PH-F120T30_BG

Phanteks T30-120 High-Performance PWM Fan User Manual

Model: PH-F120T30_BG

1. Introduction

The Phanteks T30-120 fan is engineered for superior cooling performance in various computing environments. This fan features a robust Liquid Crystal Polymer (LCP) construction and offers flexible fan profiles to suit different operational needs, from silent computing to extreme performance. This manual provides essential information for the proper installation, operation, and maintenance of your T30-120 fan.

Image 1: Phanteks T30-120 Fan overview.

2. Product Features

- **Reinforced Liquid Crystal Polymer (LCP) Material:** Both the fan blades and frame are constructed from LCP, providing exceptional rigidity and durability. This material allows for tighter tolerances and enhanced performance.
- **Versatile Fan Profiles:** An integrated switch allows users to select between three distinct fan profiles: Hybrid, Performance, and Advanced, catering to silent, balanced, or extreme cooling requirements.
- **Optimized Acoustic Performance:** Designed to deliver efficient airflow with a lower frequency range, contributing to a quieter operation.
- **30mm Thickness:** The fan's 30mm thickness, compared to standard 25mm fans, allows for a larger blade surface area, resulting in enhanced airflow and static pressure.
- **Dual Vapo Bearing:** Ensures silent and durable operation.
- **3-Phase Motor:** Provides smooth and stable fan operation.

- **Magnetic Levitation Plate:** A contactless stabilizer for improved longevity and reduced friction.

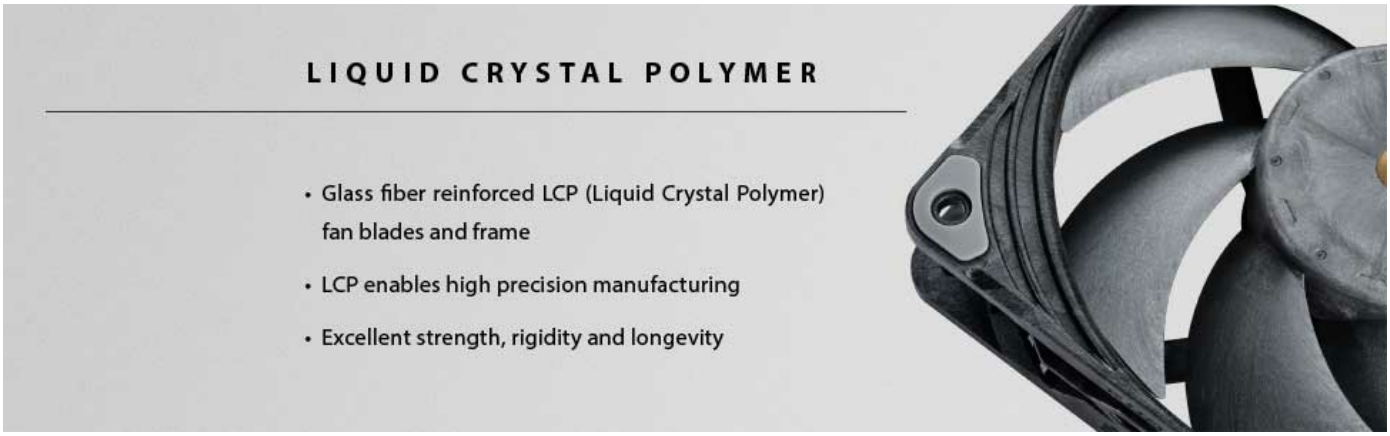

Image 2: Illustration of Liquid Crystal Polymer (LCP) construction for enhanced rigidity and durability.

Image 3: Diagram detailing the PWM profile switch and its three modes: Hybrid, Performance, and Advanced.

3. Package Contents

Verify that all components are present in the package:

- 1x Phanteks T30-120 Fan
- 4x Fan Mounting Screws (M3, typically 36mm or 39mm length to accommodate 30mm thickness)
- 1x 500mm Extension Cable

Image 4: Phanteks T30-120 Single Fan.

4. Installation

Follow these steps to install your Phanteks T30-120 fan:

1. **Prepare Your System:** Power off your computer and disconnect it from the power source. Open your PC case to access the fan mounting locations.
2. **Check Clearance:** The T30-120 fan has a 30mm thickness, which is 5mm thicker than standard 25mm fans. Ensure sufficient clearance in your desired mounting location (e.g., case fan mounts, radiator mounts) to avoid interference with other components.
3. **Mount the Fan:** Position the fan in the desired location. Use the provided mounting screws to secure the fan to the case or radiator. Ensure the fan is oriented correctly for optimal airflow (intake or exhaust).
4. **Connect Power:** Connect the fan's 4-pin PWM connector to an available 4-pin fan header on your motherboard or fan controller. If the cable length is insufficient, use the provided 500mm extension cable.
5. **Set Fan Profile:** Locate the small switch on the side of the fan frame. This switch allows you to select one of three fan profiles: Hybrid, Performance, or Advanced. Refer to Section 5 for details on each mode. Set the desired profile before closing your case.
6. **Close Case and Power On:** Once the fan is securely mounted and connected, close your PC case, reconnect the power, and power on your system.

5. Operation

The Phanteks T30-120 fan features a PWM profile switch that allows you to select between three operational modes:

- **Hybrid Mode (Up to 1200 RPM):** Designed for ultimate silence. In this mode, the fan can stop completely (0 RPM) when the PWM signal is below 50%, providing passive cooling for minimal noise.
- **Performance Mode (Up to 2000 RPM):** Recommended for a balanced operation between cooling performance and noise levels. This mode offers efficient cooling suitable for most general computing and gaming scenarios.
- **Advanced Mode (Up to 3000 RPM):** Provides extreme cooling performance for demanding tasks and high-heat environments. This mode maximizes airflow and static pressure at higher RPMs.

Adjust the fan profile switch on the fan frame to select your preferred mode. The fan speed within each mode will then be controlled by the PWM signal from your motherboard or fan controller.

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Video 1: Official product video demonstrating the features and performance of the Phanteks T30-120 fan, including its LCP construction, 30mm thickness, and various operating modes.

6. Maintenance

Regular maintenance ensures optimal performance and longevity of your fan:

- **Dust Removal:** Periodically clean dust from the fan blades and frame using compressed air or a soft brush. Ensure the fan is powered off and disconnected before cleaning.
- **Inspection:** Check for any obstructions around the fan blades or unusual wear on the cables.
- **Avoid Liquids:** Do not use liquid cleaners directly on the fan.

7. Troubleshooting

If you encounter issues with your Phanteks T30-120 fan, refer to the following common troubleshooting steps:

- **Fan Not Spinning:**
  - Ensure the 4-pin PWM connector is securely plugged into the motherboard or fan controller.
  - Check your motherboard's BIOS/UEFI settings or fan control software to ensure the fan header is enabled and receiving a sufficient PWM signal.
  - In Hybrid Mode, the fan may stop at low PWM signals (below 50%). This is normal operation for silent performance. Increase the PWM signal or switch to Performance/Advanced mode if continuous spinning is desired.
- **Excessive Noise:**
  - Verify the fan is securely mounted and not vibrating against the case or other components.
  - Check for any cables or debris obstructing the fan blades.
  - Ensure the fan profile switch is set to a lower RPM mode (e.g., Hybrid or Performance) if noise is a concern. Advanced Mode operates at higher RPMs and will naturally produce more sound.
- **Poor Cooling Performance:**
  - Confirm the fan is oriented correctly for desired airflow (intake or exhaust).
  - Ensure the fan profile switch is set to a higher RPM mode (e.g., Performance or Advanced) for increased cooling.
  - Clean any dust accumulation on the fan blades or radiator fins.
- **Physical Fitment Issues:**
  - The T30-120 fan is 30mm thick. If it does not fit, verify your case or radiator has adequate clearance for this dimension.

8. Specifications

Feature	Specification
Model Number	PH-F120T30_BG
Fan Size	120mm x 120mm x 30mm
Fan Connector	4-Pin PWM (Daisy-Chain)
Cable Length	130mm (Fan), 500mm (Extension Cable)
Rated Voltage	DC 12V
Operating Voltage Range	DC 10.2-13.2V
Max Current	0.36A
Max Power	4.32W
Maximum Rotational Speed	3000 RPM (Advanced Mode)
Bearing Type	Dual Vapo Bearing
Material	Liquid Crystal Polymer (LCP)
MTTF (Mean Time To Failure)	150,000 hours
Insulation Type	UL Class A
Flame Retardancy	UL-94V-0

9. Warranty and Support

Phanteks stands behind the quality of its products. The T30-120 fan comes with a **6-year warranty** from the date of purchase, covering manufacturing defects and material flaws under normal use.

Image 5: Phanteks 6-year warranty information.

For technical support, warranty claims, or further assistance, please visit the official Phanteks website or contact their customer service department. Keep your proof of purchase for warranty validation.