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ARCTIC ACFAN00137A

ARCTIC P12 PWM PST 120mm Case Fan Instruction Manual

Model: ACFAN00137A

Brand: ARCTIC

INTRODUCTION

The ARCTIC P12 PWM PST is a 120mm case fan designed for efficient and quiet computer cooling. This fan is optimized for static pressure, making it ideal for use on heatsinks and radiators, as well as for general case ventilation. Featuring PWM Sharing Technology (PST), it allows for synchronized control of multiple fans, ensuring optimal performance and reduced noise levels across a wide RPM range.



Image: The ARCTIC P12 PWM PST 120mm case fan, showcasing its sleek black design.

KEY FEATURES

- **Optimized for Static Pressure:** Engineered to deliver a focused airstream, providing high static pressure crucial for effective cooling through dense fins.
- **PWM Sharing Technology (PST):** Allows the fan speed to be regulated via PWM, enabling multiple fans to be daisy-chained and controlled synchronously from a single motherboard header.
- **Wide RPM Range:** Operates between 200 to 1800 RPM, with a 0 RPM mode for silent operation under low loads.
- **Efficient Motor Technology:** Powered by a Neodym-Iron-Boron-Magnet ring, ensuring high efficiency and reduced power consumption.
- **Extended Lifespan:** Designed with a low coil temperature, contributing to a significantly longer service life.
- **Low Vibration:** The newly developed ARCTIC motor minimizes vibrations, contributing to quieter operation.



Image: Diagram illustrating the fan's optimized design for static pressure, showing a focused airflow.

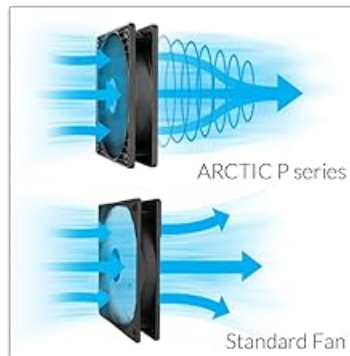


Image: Visual representation of the fan's 0dB mode, where the fan stops spinning below 5% PWM for absolute silence.

SETUP AND INSTALLATION

Package Contents

- ARCTIC P12 PWM PST Fan(s)
- Mounting Screws
- QR Code for Digital Manual (on packaging)



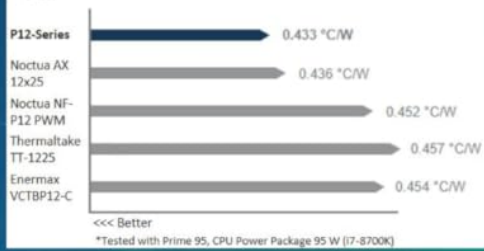
Image: The product packaging for the ARCTIC P12 PWM PST, featuring a QR code for accessing the digital manual and product information.

Installation Steps

1. Identify the desired mounting location within your PC case (e.g., front intake, rear exhaust, radiator).
2. Secure the fan to the case or radiator using the provided mounting screws. Ensure the fan's airflow direction is correct for your cooling setup.
3. Connect the fan's 4-pin PWM connector to an available fan header on your motherboard.
4. If installing multiple fans, utilize the PWM Sharing Technology (PST) by daisy-chaining the fans. Connect the main fan to the motherboard, then connect subsequent fans to the PST connector of the previous fan. This allows all connected fans to be controlled by a single motherboard header.

P12-Series

Thermal Resistance in Push-mode on Freezer 34 Heatsink @ 28dB(A) in 50 cm



Strong cooling performance

Numerous improvements, such as an updated engine technology and a newly developed fan design, have noticeably increased the performance of P-fans. In internal tests leveled to 28 dB(A), the new P-fans left many competitors behind.

Image: Diagram illustrating the PWM Sharing Technology (PST) connectors, allowing multiple fans to be daisy-chained for synchronized control.

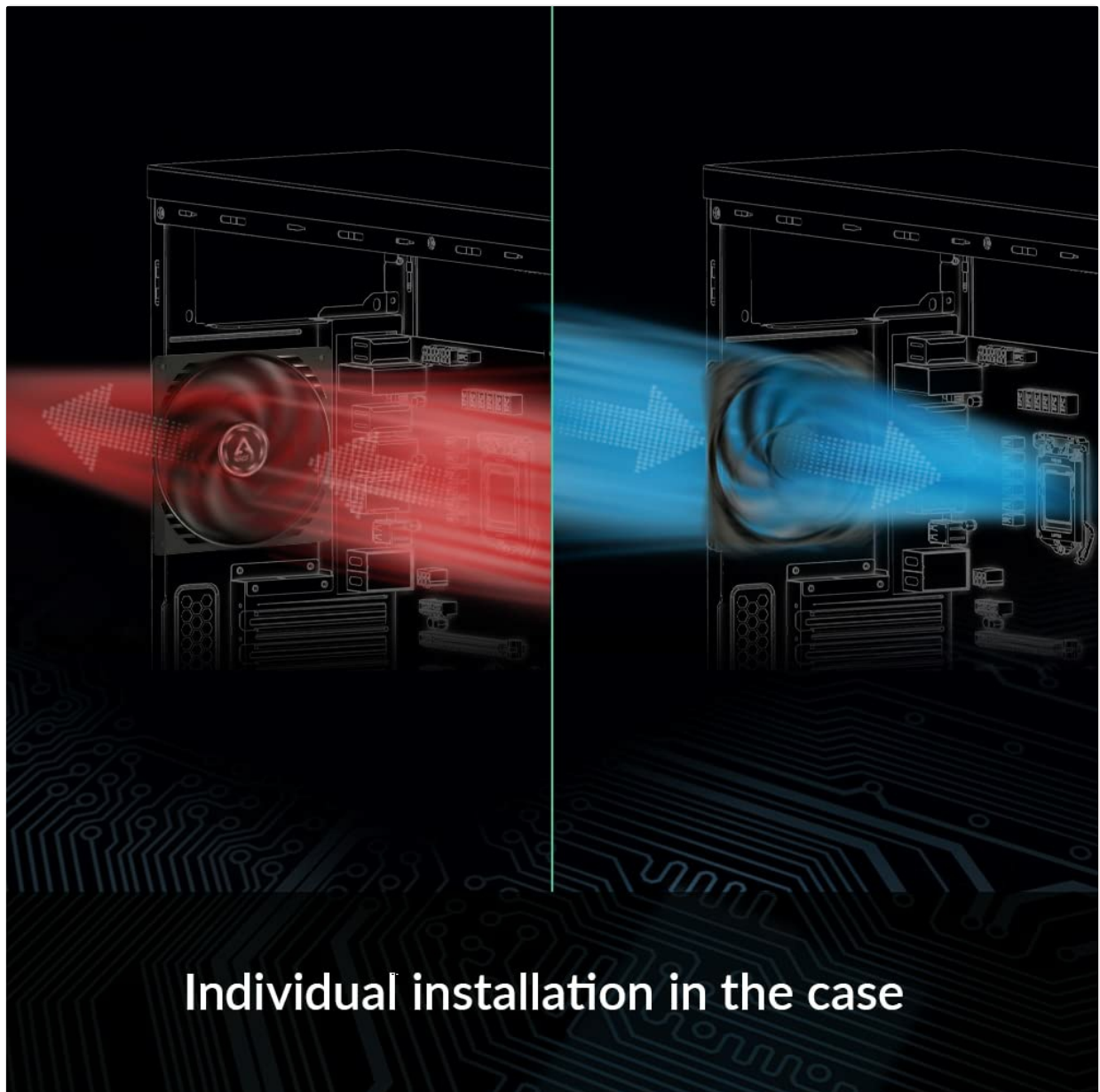


Image: Diagram showing recommended fan installation for optimal airflow within a PC case, indicating intake and exhaust configurations.

Installation Video Guide

Your browser does not support the video tag.

Video: An overview of the ARCTIC P12 Series fan, demonstrating its design and the PWM PST connector for easy setup.

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Video: A comprehensive review of the ARCTIC P12 PWM PST, including insights into its installation, performance, and noise levels in a PC build.

OPERATING INSTRUCTIONS

PWM Control

The ARCTIC P12 PWM PST fan's speed is controlled via a 4-pin PWM signal from your motherboard. This allows for dynamic adjustment of fan speed based on system temperature, ensuring efficient cooling when needed and quiet operation during lighter loads. The fan supports a wide RPM range from 200 to 1800 RPM, and can even enter a 0 RPM mode (below 5% PWM) for absolute silence when cooling demands are minimal.

Airflow Direction

Ensure the fan is oriented correctly to achieve the desired airflow within your PC case. Typically, the side with the ARCTIC logo on the hub is the intake side, and air flows towards the side with the support struts.

MAINTENANCE

The ARCTIC P12 PWM PST is designed for long-term reliability with minimal maintenance. Its high-quality fluid dynamic bearing and low coil temperature contribute to an extended lifespan. Periodically, inspect the fan blades for dust accumulation and gently clean them with a soft brush or compressed air to maintain optimal airflow and performance.



Image: Cross-section diagram of the fan's fluid dynamic bearing, highlighting the components that contribute to its extended lifespan and smooth operation.

TROUBLESHOOTING

If you encounter issues with your ARCTIC P12 PWM PST fan, consider the following:

- **Fan Not Spinning:** Check if the 4-pin PWM connector is securely attached to the motherboard header. Ensure the motherboard's BIOS/UEFI settings are configured to supply power to the fan header.
- **Excessive Noise:** Verify that the fan is securely mounted and not vibrating against the case. Check for any obstructions to the fan blades. Adjust fan curves in your motherboard's software or BIOS to reduce RPMs at lower temperatures.
- **Poor Cooling Performance:** Confirm correct fan orientation for optimal airflow (intake/exhaust). Ensure no dust buildup on fan blades or radiator fins.

TECHNICAL SPECIFICATIONS

Specification	Value
Fan Speed	200–1800 rpm (0 rpm <5 %)
Airflow	56.30 cfm 95.65 m³/h
Noise Level	0.3 Sone
Static Pressure	2.20 mmH ₂ O
Power Connector Type	4-Pin PWM
Voltage	12 Volts (DC)
Wattage	1.2 watts
Product Dimensions	4.72"L x 4.72"W x 0.98"H
Item Weight	5.1 ounces
Material	Lead
Compatible Devices	Desktop

WARRANTY AND SUPPORT

The ARCTIC P12 PWM PST comes with an extended 10-year warranty, reflecting its robust design and durability. For detailed warranty information, technical support, or to access the latest digital manual, please visit the official ARCTIC product page:

<http://www.arctic.ac/p12pwmpst>

You can also find additional support and product information on the ARCTIC website.