

ASUS ROG Strix XF120

ASUS ROG Strix XF120 120mm PWM Fan Instruction Manual

Model: ROG Strix XF120

1. PRODUCT OVERVIEW

The ASUS ROG Strix XF120 is a 120 mm 4-pin pulse-width modulation (PWM) cooling fan engineered to provide ultra-quiet acoustic profiles across various performance demands and applications. It offers an optimal combination of airflow (up to 62.5 cubic feet per minute) and static pressure (up to 3.07 mm H₂O), making it versatile for case cooling or static pressure applications, such as radiators or CPU coolers.

Key features include:

- **Optimal Airflow and Static Pressure:** Suitable for PC cases, radiators, or CPU coolers.
- **MagLev Bearing:** Stabilizes the rotor for reduced friction and noise, contributing to a 400,000-hour lifespan.
- **Minimized Acoustic Profile:** Operates at a whisper-quiet 22.5 dB(A) with a smooth and stable sound frequency.
- **Aerodynamic Design:** Fan blade and frame design minimizes turbulence and maximizes airflow.
- **Extensive Operating Range:** 250 – 1800 RPM range for flexible fan curves, allowing the fan to spin down at 0% PWM utilization.
- **Anti-Vibration Pads and Mounts:** Reduces vibration and prevents rattling.



Figure 1: ASUS ROG Strix XF120 fan, showcasing its design and branding.

2. INSTALLATION

Follow these steps to properly install your ROG Strix XF120 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. **Identify Mounting Location:** Determine where you will install the fan (e.g., PC case, radiator, CPU cooler). Ensure the fan's airflow direction aligns with your cooling strategy (intake or exhaust).
3. **Mount the Fan:** Secure the fan to the desired location using the provided screws. The fan includes anti-vibration pads to minimize noise and rattling. Ensure a snug fit without overtightening.
4. **Connect Power:** Locate an available 4-pin PWM fan header on your motherboard. Connect the fan's 4-pin cable to this header. This allows for precise speed control via your motherboard's BIOS or software.
5. **Cable Management:** Route the fan cable neatly to avoid interference with other components and to maintain good airflow within the case.
6. **Close Case and Power On:** Close your PC case, reconnect the power, and power on your system.

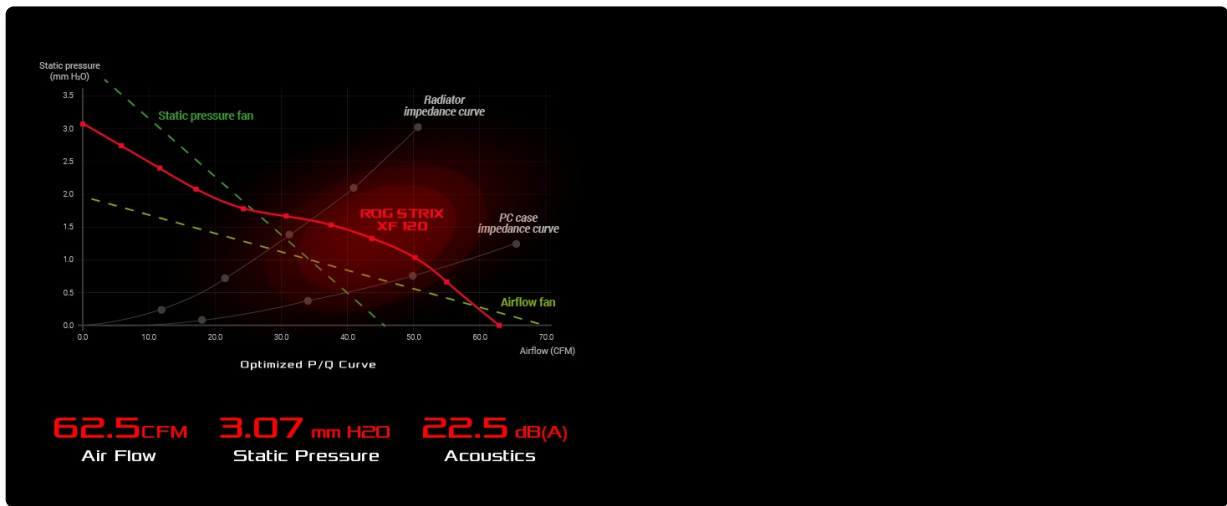


Figure 2: Anti-vibration pads and mounts prevent rattling and noise.

3. OPERATION

The ROG Strix XF120 fan utilizes a 4-pin PWM connection, allowing for dynamic speed control based on system temperature. This ensures efficient cooling when needed and quiet operation during lighter loads.

- **Automatic Speed Control:** By default, your motherboard's BIOS will manage the fan speed based on CPU or system temperatures.
- **Custom Fan Curves:** You can customize fan speed profiles through your motherboard's BIOS settings or dedicated fan control software (e.g., ASUS Fan Xpert). This allows you to balance cooling performance and noise levels according to your preferences.
- **Quiet Operation:** The fan's MagLev bearing and aerodynamic design contribute to its whisper-quiet operation, even at higher RPMs. The fan can spin down to 0% PWM utilization for silent operation under low thermal loads.

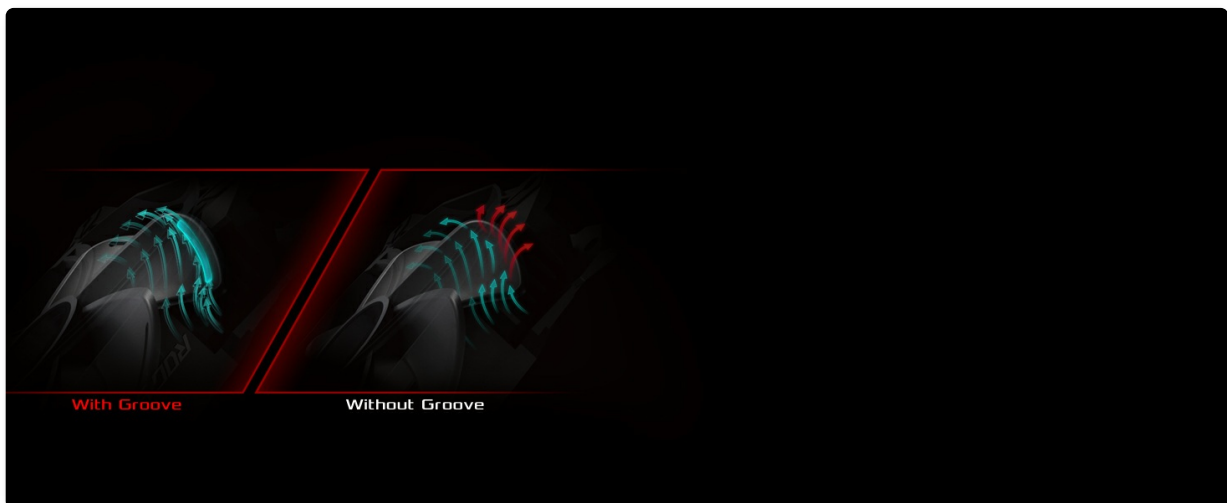


Figure 3: Optimized P/Q curve illustrating the fan's balance of airflow and static pressure.

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Video 1: An official video from ASUS showcasing the features and performance of the ROG Strix XF120 fan, including its quiet operation and design elements.

4. MAINTENANCE

Regular maintenance ensures optimal performance and extends the lifespan of your ROG Strix XF120 fan.

- **Dust Cleaning:** Periodically inspect the fan blades and frame for dust accumulation. Use compressed air or a soft brush to gently remove dust. Ensure the fan is powered off and disconnected before cleaning.
- **Bearing Longevity:** The MagLev bearing is designed for a long lifespan (up to 400,000 hours) and typically requires no lubrication or special maintenance.
- **Cable Inspection:** Occasionally check the fan cable for any signs of wear or damage.

5. TROUBLESHOOTING

If you encounter issues with your ROG Strix XF120 fan, refer to the following common troubleshooting steps:

- **Fan Not Spinning:**
 - Ensure the 4-pin PWM cable is securely connected to the motherboard header.
 - Check your motherboard's BIOS settings to confirm the fan header is enabled and configured correctly (e.g., not set to 0% PWM at idle temperatures).
 - Test the fan on a different fan header or with a fan controller if available.
- **Excessive Noise:**
 - Verify that the fan is securely mounted and the anti-vibration pads are properly seated. Loose mounting can cause rattling.
 - Clean any dust buildup on the fan blades or frame.
 - Adjust the fan speed curve in your BIOS or software to reduce RPMs at lower temperatures.
- **Poor Cooling Performance:**
 - Ensure the fan is oriented correctly for optimal airflow (intake or exhaust) within your PC case or on your radiator/CPU cooler.
 - Check for obstructions to airflow inside your case.
 - Increase the fan speed through your motherboard's BIOS or software.

6. SPECIFICATIONS

Feature	Specification
Product Dimensions	4.7"L x 4.7"W x 0.9"H (120mm x 120mm x 22.5mm)
Brand	ASUS
Power Connector Type	4-Pin PWM
Voltage	12 Volts
Wattage	1.08 watts
Cooling Method	Air

Feature	Specification
Compatible Devices	PC, Radiators, CPU
Noise Level	22.5 Decibels (dB(A))
Material	Copper (referring to internal components/motor)
Maximum Rotational Speed	1800 RPM
Air Flow Capacity	62.5 Cubic Feet Per Minute (CFM)
Item Weight	200 Grams
Unit Count	1.0 Count

7. WARRANTY AND SUPPORT

The ASUS ROG Strix XF120 fan comes with a **5-Year Warranty**. For warranty claims, technical assistance, or further support, please contact ASUS customer service or visit the official ASUS support website. Ensure you retain your proof of purchase for warranty validation.