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› Cooler Master MasterAir Pro 4 CPU Air Cooler Instruction Manual

Cooler Master MAY-T4PN-220PK-R1

Cooler Master MasterAir Pro 4 CPU Air Cooler Instruction Manual

Model: MAY-T4PN-220PK-R1 | Brand: Cooler Master

1. INTRODUCTION

The Cooler Master MasterAir Pro 4 CPU Air Cooler is designed to provide efficient cooling for your processor. It features Continuous Direct Contact Technology 2.0, which increases the contact area between heatpipes and the CPU by 45% for improved heat dissipation. The cooler includes a 120mm fan, 4 heatpipes, and stacked fins to optimize airflow and direct ventilation to critical areas. Its intuitive fan bracket design simplifies fan upgrades and removal, and installation is made easier with options for a sturdy X-bracket or a push-pin bracket for motherboard attachment.



Figure 1: Cooler Master MasterAir Pro 4 CPU Air Cooler

2. SETUP AND INSTALLATION

Before beginning installation, ensure your system is powered off and unplugged. Refer to your motherboard manual for specific CPU socket information.

2.1. Prepare the Motherboard

- For Intel sockets, install the appropriate backplate from the rear of the motherboard.
- For AMD sockets, remove any existing plastic retention brackets from around the CPU socket, but retain the motherboard's original backplate.

2.2. Install Mounting Hardware

- Place the correct standoffs (provided in the mounting hardware kit) onto the motherboard's CPU socket holes.
- Secure the metal mounting brackets onto these standoffs using the appropriate screws or nuts. Ensure they are tightened evenly to prevent uneven pressure on the CPU.

2.3. Apply Thermal Compound

Apply a small amount of thermal compound (not included with this specific model, but generally recommended) to the center of your CPU's Integrated Heat Spreader (IHS). A pea-sized dot is usually sufficient. Do not spread it manually; the pressure from the heatsink will distribute it evenly.

2.4. Mount the Heatsink

- Carefully place the MasterAir Pro 4 heatsink onto the CPU, aligning the mounting screws on the heatsink with the holes on the installed mounting brackets.
- Tighten the screws in a diagonal pattern (e.g., top-left, bottom-right, top-right, bottom-left) until snug. Do not overtighten.



Figure 2: Close-up of Continuous Direct Contact Technology 2.0 heatpipes.

2.5. Install the Fan

- Attach the 120mm fan to the heatsink using the provided fan clips. Ensure the fan is oriented to push air through the heatsink towards the rear or top of your PC case.
- Connect the fan's 4-pin PWM cable to the "CPU_FAN" header on your motherboard.



Figure 3: Illustration of airflow through the heatsink and fan.

3. OPERATING INSTRUCTIONS

Once installed, the Cooler Master MasterAir Pro 4 operates automatically, controlled by your motherboard's fan speed settings. The 4-pin PWM connection allows the motherboard to adjust fan speed based on CPU temperature, ensuring optimal cooling performance and noise levels.

- **Initial Power-On:** After installation, power on your system and enter the BIOS/UEFI settings to verify that the CPU fan is detected and operating correctly.
- **Temperature Monitoring:** Use system monitoring software (e.g., HWMonitor, CPU-Z) to observe CPU temperatures during idle and load conditions. Ensure temperatures remain within safe operating limits as specified by your CPU manufacturer.
- **Fan Speed Control:** Most motherboards offer fan control options in the BIOS/UEFI or through dedicated software. You can customize fan curves to balance cooling performance and acoustic levels according to your preference.

4. MAINTENANCE

Regular maintenance helps ensure optimal performance and longevity of your CPU cooler.

- **Dust Removal:** Periodically (every 3-6 months, depending on environment) clean dust from the heatsink fins and fan blades

using compressed air. Ensure the fan is held stationary during cleaning to prevent damage to the bearings.

- **Thermal Paste:** The thermal paste typically lasts for several years. If you notice a significant increase in CPU temperatures, consider reapplying fresh thermal paste. This involves carefully removing the heatsink, cleaning off old paste from both the CPU and heatsink base, and applying new paste.
- **Fan Inspection:** Check the fan for any signs of wear, unusual noises, or reduced rotational speed. Replace the fan if necessary. The intuitive fan bracket design makes upgrading and removing MasterFans easy.

5. TROUBLESHOOTING

If you encounter issues with your MasterAir Pro 4, refer to the following common troubleshooting steps:

- **Fan Not Spinning:**
 - Check if the fan's 4-pin PWM cable is securely connected to the "CPU_FAN" header on the motherboard.
 - Verify fan settings in BIOS/UEFI. Ensure fan control is enabled and not set to a very low RPM that might prevent it from starting.
 - Test the fan by connecting it to another fan header if available, or try a different fan to rule out a faulty fan.
- **High CPU Temperatures:**
 - Ensure the heatsink is properly seated and making full contact with the CPU. Re-tighten mounting screws in a diagonal pattern if necessary.
 - Check if thermal paste was applied correctly and is evenly spread. Reapply if unsure.
 - Clean any dust accumulation from the heatsink fins and fan blades.
 - Verify proper airflow within your PC case. Ensure case fans are correctly oriented to provide adequate intake and exhaust.
- **Excessive Noise:**
 - Check for loose fan cables or other components vibrating against the fan or heatsink.
 - Adjust fan speed settings in BIOS/UEFI to a lower RPM if temperatures allow.
 - Inspect the fan for any obstructions or damage to the blades.

6. SPECIFICATIONS

Feature	Detail
Brand	Cooler Master
Model Number	MAY-T4PN-220PK-R1
Power Connector Type	4-Pin
Voltage	12 Volts
Cooling Method	Fan
Compatible Devices	Desktop
Noise Level	30 Decibels
Maximum Rotational Speed	2500 RPM
Item Weight	1.71 pounds
Product Dimensions (LxWxH)	3.3 x 5.07 x 6.24 inches

UPC	884102029271
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7. WARRANTY AND SUPPORT

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

Manufacturer: Cooler Master USA, Inc.

For the most up-to-date support resources, visit: www.coolermaster.com

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question