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Thermalright PA120 V MAX ARGB

Thermalright Peerless Assassin 120 Vision MAX ARGB CPU Air Cooler User Manual

Model: PA120 V MAX ARGB

1. Introduction

Thank you for choosing the Thermalright Peerless Assassin 120 Vision MAX ARGB CPU Air Cooler. This high-performance cooling solution features a dual-tower radiator design, two high-airflow fans, and an integrated 5-inch IPS LCD screen for real-time system monitoring and customization. This manual provides detailed instructions for installation, operation, maintenance, and troubleshooting to ensure optimal performance and longevity of your cooler.

2. Package Contents

Please verify that all components are present before proceeding with installation:

- Thermalright Peerless Assassin 120 Vision MAX ARGB Heatsink with Integrated IPS Screen
- 2 x TL-K12 120mm ARGB Fans
- Intel Mounting Kit (LGA1851/1700/115x/1200)
- AMD Mounting Kit (AM4/AM5)
- Thermal Paste
- Fan Clips
- USB 9-pin Cable (for LCD screen data and power)
- PWM Fan Splitter Cable
- ARGB Splitter Cable

3. Installation Guide

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

3.1 Prepare the Motherboard

For Intel Platforms (LGA1851/1700/115x/1200):

1. Install the appropriate Intel backplate behind the motherboard.
2. Secure the standoffs onto the motherboard from the front side.

For AMD Platforms (AM4/AM5):

1. *Note: AMD platforms require using the motherboard's original backplate.* Remove the plastic retention brackets around the CPU socket, keeping the original backplate in place.
2. Install the appropriate AMD standoffs onto the motherboard.

3.2 Apply Thermal Paste

Clean the CPU surface with isopropyl alcohol. Apply a small, pea-sized amount of thermal paste to the center of the CPU's integrated heat spreader (IHS). Do not spread the paste manually; the pressure from the heatsink will distribute it evenly.

3.3 Mount the Heatsink

1. Carefully place the heatsink onto the CPU, aligning the mounting holes with the standoffs.
2. Secure the heatsink using the provided mounting screws, tightening them in a diagonal pattern until snug. Do not overtighten.

3.4 Install the Fans

The top cover of the heatsink is magnetically attached, allowing for easy access during fan installation.



Image: The magnetic top cover can be easily removed for fan installation or maintenance.

1. Attach the two TL-K12 fans to the heatsink using the provided fan clips. Ensure the fans are oriented to pull air through the front tower and push air through the rear tower towards the rear of your PC case.
2. Connect the 4-pin PWM fan cables to the provided Y-splitter cable, then connect the splitter to a CPU_FAN header on your motherboard.
3. Connect the 5V 3-pin ARGB cables from the fans to the provided ARGB splitter cable, then connect the splitter to a 5V 3-pin ARGB header on your motherboard.

3.5 Connect the IPS Screen

1. Connect the included 9-pin USB cable from the heatsink's IPS screen to an available 9-pin USB header on your motherboard. This provides power and data communication for the display.
2. Ensure all cables are properly connected and routed to avoid interference with other components or case fans.

4. Operation

4.1 Initial Power-On

After installation, power on your system. The IPS screen should illuminate and display default system information. The ARGB lighting on the fans will also activate, typically in a default pattern or synchronized with your motherboard's RGB software.

4.2 TRCC Control Software

To unlock the full potential of your IPS screen, including real-time monitoring, custom backgrounds, and video playback, you must install the Thermalright Control Center (TRCC) software.

1. **Download:** Visit the official Thermalright website (thermalright.com/support/download/) and download the latest version of the TRCC software for your operating system.
2. **Installation:** Follow the on-screen instructions to install the software.
3. **Usage:** Launch TRCC. The software allows you to:
    - Monitor CPU temperature, frequency, and other system parameters.
    - Select dynamic or static background themes for the IPS screen.
    - Upload custom images or GIF animations.
    - Play short video clips on the display.
    - Adjust display orientation and brightness.



Image: The TRCC software interface for customizing the IPS screen display.

5. Maintenance

Regular maintenance ensures optimal cooling performance and extends the lifespan of your CPU cooler.

- **Dust Removal:** Periodically (every 3-6 months, depending on environment) use compressed air to clean dust from the heatsink fins and fan blades. Ensure the fans are not spinning rapidly during cleaning to prevent damage to the bearings.
- **Fan Inspection:** Check fan blades for any obstructions or damage. Ensure fan cables are securely connected.
- **Thermal Paste:** While not frequently required, if you remove the heatsink for any reason, it is recommended to clean off old thermal paste from both the CPU and heatsink base and apply fresh thermal paste before

reinstallation.

- **Screen Cleaning:** Gently wipe the IPS screen with a soft, dry, microfiber cloth if it becomes dusty. Avoid using harsh chemicals.

6. Troubleshooting

6.1 Fans Not Spinning or ARGB Not Lighting Up

- Ensure the 4-pin PWM fan cables are securely connected to the motherboard's CPU_FAN header (via splitter).
- Verify the 5V 3-pin ARGB cables are correctly connected to a compatible ARGB header on your motherboard. Check for correct polarity.
- Check your motherboard's BIOS/UEFI settings to ensure fan headers are enabled and configured correctly.
- If using motherboard RGB software, ensure it is installed and configured to control the ARGB headers.

6.2 IPS Screen Not Displaying or Not Detected

- Confirm the 9-pin USB cable is securely connected to both the heatsink and an available 9-pin USB header on your motherboard.
- Ensure the TRCC software is correctly installed and running.
- Try connecting the USB cable to a different internal USB header on your motherboard.
- Restart your computer.

6.3 High CPU Temperatures

- Verify that the heatsink is securely mounted and making proper contact with the CPU.
- Ensure thermal paste was applied correctly and sufficiently.
- Check fan orientation; they should be pushing air through the heatsink and out of the case.
- Clean any dust accumulation from the heatsink fins and fans.
- Ensure adequate airflow within your PC case.

7. Specifications

Feature	Specification
Model	Thermalright Peerless Assassin 120 Vision MAX ARGB
Heatsink Dimensions (LxWxH)	125mm x 135mm x 164mm (4.92"L x 5.31"W x 6.46"H)
Fan Dimensions	120mm x 120mm x 25mm
Fan Speed	2150 RPM ±10% (Max)
Airflow	69 CFM
Noise Level	≤27 dB(A)
Fan Bearing Type	S-FDB V2 Bearing

Heat Pipes	6 x 6mm Pure Copper (AGHP Gen 5.0 Technology)
Base Material	Nickel-plated Copper
Power Connector	4-pin PWM (Fan), 9-pin USB (Screen)
RGB Interface	5V 3-pin ARGB
IPS Screen Size	5-inch
IPS Screen Resolution	480x854
Compatible Sockets	Intel: LGA1851/1700/1150/1151/1155/1156/1200 AMD: AM4/AM5

8. Warranty and Support

Thermalright products are manufactured to the highest quality standards. For warranty information, please refer to the warranty card included with your product or visit the official Thermalright website. If you encounter any issues or have questions not covered in this manual, please contact Thermalright customer support through their official website's support section.

Official Website: thermalright.com

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