Thermalright Peerless Assassin 140 Digital

Thermalright Peerless Assassin 140 Digital CPU Cooler User Manual

Model: Peerless Assassin 140 Digital

1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your Thermalright Peerless Assassin 140 Digital CPU Cooler. Please read these instructions carefully before proceeding with installation to ensure optimal performance and system stability.

2. Package Contents

Verify that all components are present in your package:

- Thermalright Peerless Assassin 140 Digital CPU Cooler (Heatsink with Digital Display)
- TL-C12C-X28 V2 120mm Fan
- TL-D14CB 140mm Fan
- Mounting Hardware for Intel (LGA1851/1700/115X/2011/1200)
- Mounting Hardware for AMD (AM4/AM5)
- Thermal Paste
- Fan Clips
- USB 9-pin Cable for Digital Display

3. Specifications

Detailed specifications for the Peerless Assassin 140 Digital CPU Cooler:

Component	Specification
Overall Cooler Size	140mm (L) x 160mm (W) x 165mm (H)

Component	Specification
Heatsink Material	Metal (Heatpipes: 6x 6mm AGHP)
TL-C12C-X28 V2 Fan Size	120mm x 120mm x 28mm
TL-D14CB Fan Size	140mm x 140mm x 27mm
TL-C12C-X28 V2 Fan Speed	1850 RPM ±10% (MAX)
TL-D14CB Fan Speed	1500 RPM ±10% (MAX)
TL-C12C-X28 V2 Airflow	82 CFM
TL-D14CB Airflow	77.8 CFM
TL-C12C-X28 V2 Static Pressure	2.1 mm H2O (MAX)
TL-D14CB Static Pressure	2.09 mm H2O (MAX)
Operating Noise	≤29.6 dB(A) (120mm fan), ≤25.6 dB(A) (140mm fan)
Fan Power Interface	4-PIN PWM
Bearing Type	S-FDB Bearing
Digital Display Interface	9-PIN USB (for power and data communication)
Compatible Sockets	**Intel:** LGA1851, LGA1700, LGA1150, LGA1151, LGA1155, LGA1156, LGA1200, LGA2011, LGA2066 **AMD:** AM4, AM5

The cooler features six 6mm AGHP (Advanced Gravity Heat Pipe) heatpipes for efficient heat transfer regardless of mounting orientation.

Image: Close-up view of the cooler's base showing the six 6mm AGHP heatpipes, designed for optimal performance in various orientations.

4. SETUP AND INSTALLATION

Follow these steps for proper installation. Refer to the included physical manual or online video guides for visual assistance.

4.1 Pre-Installation Checks

- Ensure your PC case has adequate clearance for the 165mm cooler height.
- For AMD platforms, retain your motherboard's original backplate as this product does not include one.
- Ensure the motherboard has an available 9-pin USB header for the digital display.

Image: The Peerless Assassin 140 Digital CPU Cooler installed in a PC case, highlighting memory and graphics card compatibility and clearance.

4.2 Heatsink Mounting

1. Prepare the CPU socket by cleaning any old thermal paste.
2. Apply a small amount of thermal paste to the center of the CPU IHS (Integrated Heat Spreader).
3. Install the appropriate mounting brackets for your Intel or AMD motherboard socket.
4. Carefully place the heatsink onto the CPU, aligning it with the mounting screws.
5. Secure the heatsink evenly using the provided screws, tightening in a cross pattern until snug. Do not overtighten.

4.3 Fan Installation

The cooler includes two fans: a 120mm fan (TL-C12C-X28 V2) and a 140mm fan (TL-D14CB).

- Attach the fans to the heatsink using the provided fan clips. Ensure the airflow direction is correct (typically blowing towards the rear of the case).
- Connect the 4-PIN PWM fan cables to the CPU_FAN headers on your motherboard.

Image: The two included performance fans, TL-C12C-X28 V2 (120mm) and TL-D14CB (140mm), with their respective dimensions.

4.4 Digital Display Connection

The digital display top cover is magnetic for easy attachment and removal.

1. Connect the provided 9-pin USB cable from the digital display module to an available 9-pin USB header on your motherboard.
2. Ensure the cable is securely connected for both power and data communication.

Image: The digital display panel, illustrating its capability to show CPU temperature and usage metrics.

5. OPERATING INSTRUCTIONS

5.1 Digital Display Functionality

The integrated ARGB magnetic digital display board provides real-time monitoring of CPU and GPU temperature and occupancy. The display supports addressable RGB customization.

Image: A detailed view of the digital display, showcasing its ability to present CPU temperature, frequency, and power consumption.

5.2 TRCC Control Software

For full control over the digital display's features, including color adjustment of temperature figures and detailed monitoring, download and install the TRCC Control Centre software.

- **Features:** Monitor CPU and GPU temperature and occupancy, customize display text colors.
- **Download:** The TRCC software can be downloaded from the official Thermalright website:
  https://thermalright.com/support/download/
- **Note:** Ensure the 9-pin USB cable is properly connected before installing the software.

PEERLESS ASSASSIN 140 DIGITAL BLACK

TL-C12C-X28 V2	SPECIFICATION	TL-D14CB	SPECIFICATION	HEATSINK	SPECIFICATION
Dimensions	120mm * 120mm * 28mm	Dimensions	140mm * 140mm * 27mm	Dimensions	140mm * 160mm * 165mm
Rated Speed	1850RPM±10%(MAX)	Rated Speed	1500RPM±10%(MAX)		
Rated Noise	≤29.6DBA	Rated Noise	≤25.6DBA		
Air Flow	82CFM(MAX)	Air Flow	77.8CFM(MAX)		
Static Pressure	2.1mm/H_2O(MAX)	Static Pressure	2.09mm/H_2O(MAX)		
Connector	4PIN PWM	Connector	4PIN PWM		
Bearing Type	S-FDB Bearing	Bearing Type	S-FDB Bearing		

Image: Screenshot of the TRCC Control Centre software interface, demonstrating its monitoring and customization options for the digital display.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your CPU cooler.

- **Dust Removal:** Periodically clean dust from the heatsink fins and fan blades using compressed air or a soft brush. Ensure fans are not spinning during cleaning.
- **Fan Inspection:** Check fan blades for any obstructions or damage. Ensure fans are securely mounted.
- **Thermal Paste:** If you remove the cooler for any reason, clean off old thermal paste from both the CPU and cooler base and apply a fresh layer before reinstallation.

7. TROUBLESHOOTING

If you encounter issues with your CPU cooler, refer to the following common problems and solutions:

- **No Digital Display:**
    - Ensure the 9-pin USB cable is securely connected to both the display module and the motherboard header.
    - Check motherboard BIOS settings for USB power delivery.
    - Verify TRCC software installation and proper communication.
- **High CPU Temperatures:**
    - Confirm the heatsink is properly seated and tightened evenly on the CPU.
    - Check that thermal paste was applied correctly and adequately.
    - Ensure fans are spinning and connected to the correct motherboard headers (CPU_FAN).
    - Verify fan orientation for proper airflow through the heatsink and out of the case.
    - Clean any dust accumulation from the heatsink fins and fans.

- **Fans Not Spinning/Noisy:**
  - Check fan cable connections to the motherboard.
  - Inspect for any obstructions preventing fan rotation.
  - If a fan is excessively noisy, it may indicate a bearing issue. Contact support if within warranty.

8. WARRANTY AND SUPPORT

Thermalright products are designed for reliability and performance. For warranty information, technical support, or to report issues, please visit the official Thermalright website or contact their customer service directly.

- **Official Website:** https://thermalright.com/
- **Support Page:** https://thermalright.com/support/