TRIPP LITE LR2000

Tripp Lite LR2000 Line Conditioner User Manual

Model: LR2000

1. Introduction

The Tripp Lite LR2000 Line Conditioner is designed to protect your high-voltage equipment from power fluctuations, including brownouts and overvoltages, without relying on battery power. It automatically adjusts incoming AC power to provide stable, computer-grade electricity, meeting ANSI C84.1 specifications. This device is ideal for sensitive electronics, audio/video components, and equipment with high current draws that can disrupt the AC line, such as laser printers or large power tools. By filtering out EMI/RFI line noise, the LR2000 helps extend the lifespan of connected devices and prevents data corruption.

2. Key Features

- **Automatic Voltage Regulation (AVR):** Corrects brownouts as low as 175V and overvoltages up to 281V back to a nominal 230V.
- **High Capacity:** Provides 2000 watts of continuous power.
- **Multiple Outlets:** Features six AC outlets (2 NEMA 5-15R, 2 NEMA 6-15R, 2 IEC-320) for versatile connectivity.
- **International Compatibility:** Includes one UNIPLUG adapter to accommodate various country-specific plug types.
- **EMI/RFI Line Noise Filtering:** Suppresses electromagnetic and radio frequency interference to prevent hardware damage and performance issues.
- **Diagnostic LEDs:** Five front-panel LEDs indicate incoming voltage status (Very Low, Low, Normal, High, Very High).
- **Compact Design:** Space-saving form factor with a 6.5-ft. (2m) power cord for flexible placement.

3. Package Contents

Verify that all items are present upon opening the package:

- LR2000 Line Conditioner Unit
- 2m C13 to NEMA 6-15P Cord Set
- One UNIPLUG International Plug Adapter
- Instruction Manual and Warranty Information (this document)

4. Setup and Installation

4.1 Unpacking and Placement

Carefully remove the LR2000 Line Conditioner from its packaging. Place the unit on a stable, flat surface in a well-ventilated area. Ensure that the unit is not obstructed and has adequate airflow around it. The compact design allows for placement in various environments, including desktops, home theater setups, or lab benches.

Figure 1: Front view of the Tripp Lite LR2000 Line Conditioner, showing the diagnostic LEDs on the right side and ventilation grilles.

4.2 Connecting Equipment

1. **Power Off Devices:** Before connecting any equipment, ensure all devices you intend to connect to the LR2000 are powered off.
2. **Connect LR2000 to Wall Outlet:** Plug the LR2000's attached 6.5-ft. (2m) power cord into a properly grounded 230V AC wall outlet.
3. **Connect Devices:** Plug your electronic equipment into the available outlets on the rear of the LR2000. The unit provides six outlets: two NEMA 5-15R, two NEMA 6-15R, and two IEC-320. Use the included UNIPLUG adapter if your device has a country-specific plug type not directly supported by the standard outlets.
4. **Power On LR2000:** Locate the On/Off switch on the rear of the unit and switch it to the "On" position.
5. **Power On Devices:** Once the LR2000 is powered on, you can power on your connected equipment.

Figure 2: Rear view of the Tripp Lite LR2000 Line Conditioner, illustrating the six AC outlets (NEMA 5-15R, NEMA 6-15R, IEC-320) and the power switch.

5. Operation

The LR2000 operates automatically to regulate incoming voltage and filter line noise. No user intervention is typically required during normal operation.

5.1 Automatic Voltage Regulation (AVR)

The unit continuously monitors the incoming AC power. If the voltage deviates from the nominal 230V, the LR2000 will automatically engage its multi-level voltage stabilization to correct under-voltages (brownouts) down to 175V and over-voltages up to 281V. This ensures that connected equipment receives a stable and safe power supply, preventing damage and performance issues.

5.2 EMI/RFI Line Noise Filtering

The LR2000 incorporates advanced filtering technology to suppress electromagnetic interference (EMI) and radio frequency interference (RFI) present on the AC line. This noise can originate from various sources and

can cause incremental hardware damage, data corruption, and audio/video performance degradation. The filter ensures clean power delivery to your sensitive electronics.

6. Diagnostic LEDs

The front panel of the LR2000 features five diagnostic LEDs that provide real-time status of the incoming AC power. These indicators help you monitor the power quality and understand when the unit is actively conditioning the line.

- **Very Low:** Indicates severe under-voltage condition.
- **Low:** Indicates under-voltage condition.
- **Normal:** Indicates incoming voltage is within the acceptable range.
- **High:** Indicates over-voltage condition.
- **Very High:** Indicates severe over-voltage condition.

When the unit is actively correcting voltage, the corresponding LED will illuminate, providing visual feedback on the power conditioning process.

7. Maintenance

The Tripp Lite LR2000 Line Conditioner is designed for maintenance-free operation. To ensure optimal performance and longevity:

- **Keep Clean:** Periodically wipe the exterior of the unit with a soft, dry cloth. Do not use liquid or aerosol cleaners.
- **Ensure Ventilation:** Ensure that the ventilation grilles are not blocked to prevent overheating.
- **Avoid Overloading:** Do not exceed the unit's 2000-watt capacity.

8. Troubleshooting

If you experience issues with your LR2000 Line Conditioner, refer to the following common troubleshooting steps:

- **No Power to Connected Devices:**
  - Ensure the LR2000's power switch is in the "On" position.
  - Verify that the LR2000 is securely plugged into a functioning wall outlet.
  - Check if the total wattage of connected equipment exceeds the 2000W capacity. Disconnect some devices if overloaded.
- **Diagnostic LEDs Indicate Abnormal Voltage:**
  - If "Very Low" or "Very High" LEDs are consistently lit, the incoming utility power may be severely unstable. The LR2000 is actively working to correct this. If the issue persists and affects equipment performance, contact your utility provider.
  - "Low" or "High" LEDs indicate minor fluctuations that the LR2000 is correcting. This is normal operation.
- **Interference with Audio/Video Equipment:**

- Ensure all cables are properly shielded and connected.
- While the LR2000 provides EMI/RFI filtering, severe external interference sources might still affect sensitive equipment. Try relocating the equipment or the source of interference if possible.

If the problem persists after attempting these steps, contact Tripp Lite technical support for further assistance.

9. Specifications

Feature	Specification
Output Watts	2000 W
Output Nominal Voltage	230V, 50 / 60Hz
Outlet Quantity / Type	6 (2 NEMA 5-15R, 2 NEMA 6-15R, 2 IEC-320)
Input Amps (Max)	10A
Input Cord Length	6.5 ft. (2 m)
Voltage Correction Range	Corrects brownouts to 175V and overvoltages to 281V
EMI / RFI AC Noise Suppression	75 dB
Unit Dimensions (HWD)	7.25 x 6 x 7 inches (18.4 x 15.2 x 17.8 cm)
Item Weight	13.3 pounds (6.03 kg)
Material of Construction	Polycarbonate

10. Warranty and Support

10.1 Product Warranty

The Tripp Lite LR2000 Line Conditioner is backed by a **2-year limited warranty**. This warranty covers defects in materials and workmanship under normal use. Please refer to the warranty information included in your package for full terms and conditions.

10.2 Technical Support

For technical assistance, product information, or warranty claims, please contact Tripp Lite customer support. Contact details can typically be found on the official Tripp Lite website or in the documentation provided with your product.
Note: Proposition 65 Warning: This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.