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› ROARBATT 4000W Pure Sine Wave Power Inverter User Manual

ROARBATT ROARBATT-12V-4000W

ROARBATT 4000W Pure Sine Wave Power Inverter User Manual

1. IMPORTANT SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating the ROARBATT 4000W Pure Sine Wave Power Inverter. Failure to follow these instructions may result in electric shock, fire, serious injury, or property damage.

- **Ventilation:** Ensure adequate ventilation around the inverter. Do not block cooling vents.
- **Environment:** Operate the inverter in a dry, well-ventilated area, away from direct sunlight, heat sources, flammable materials, and moisture.
- **Grounding:** The inverter must be properly grounded. Connect the earth wire to a suitable ground point.
- **DC Input:** Connect the inverter only to a 12V DC power source. Ensure correct polarity (+ to + and - to -). Reverse polarity will damage the inverter.
- **AC Output:** Do not overload the inverter. Ensure the total wattage of connected appliances does not exceed the inverter's continuous power rating (4000W).
- **Maintenance:** Disconnect all power before performing any maintenance or cleaning.
- **Children:** Keep the inverter out of reach of children.

2. PACKAGE CONTENTS

Verify that all items are present in your package:

- ROARBATT 4000W Pure Sine Wave Power Inverter
- Remote Controller (15 ft cable)
- Instruction Manual (this document)
- 2 Pairs of Battery Cables (Red and Black, 5AWG, 31.5 inches / 80 cm)
- 6 x 40A Fuses
- 1 x Wrench

- 1 x Earth Wire



Image 2.1: The ROARBATT 4000W Pure Sine Wave Power Inverter shown with its dimensions (18.3 in / 46.5 cm length, 7.2 in / 18.3 cm width, 3.9 in / 10 cm height). Below the inverter, the included accessories are displayed: a remote control with a 4.5-meter cable, six 40A fuses, a wrench, an earth wire, and two pairs of 5AWG battery cables (red and black), each 31.5 inches (80 cm) long. The battery cable terminals have an outer ring diameter of 10mm and an inner ring diameter of 6mm.

3. PRODUCT FEATURES

The ROARBATT 4000W Pure Sine Wave Power Inverter offers the following key features:

- **High Power Output:** Provides 4000 Watts of continuous pure sine wave power with an 8000 Watt peak power capability.
- **Versatile Connectivity:** Converts 12V DC battery power to 110-120V AC household power. Features 4 AC outlets and 2 USB ports (5V, 3.4A each).
- **Energy Efficient:** Low no-load current draw of less than or equal to 0.6A, which helps extend battery life.
- **Informative LED Display:** Shows real-time input voltage, output voltage, battery capacity, and protection status.
- **Remote Control:** Includes a wired remote control for convenient power on/off functionality from a

distance.

- **Comprehensive Protection:** Built-in safeguards against over voltage, low voltage, overload, short circuit, over temperature, and includes automatic restart and grounding protection.
- **Durable Construction:** Housed in a robust aluminum casing to protect against impacts.
- **Efficient Cooling:** Integrated cooling fans ensure quiet operation and maintain optimal temperature for safe and effective performance.

4. SETUP INSTRUCTIONS

Follow these steps for proper installation of your power inverter:

1. **Choose a Location:** Select a dry, cool, and well-ventilated area for the inverter. Ensure there is sufficient space around the unit for airflow, especially around the cooling fans.
2. **Grounding Connection:** Connect the included earth wire to the grounding terminal on the inverter and to a reliable ground point (e.g., vehicle chassis, earth rod).
3. **DC Battery Connection:**
 - Ensure the inverter is switched OFF.
 - Connect the **RED** battery cable to the **positive (+)** terminal of the 12V battery and to the **positive (+)** terminal on the inverter.
 - Connect the **BLACK** battery cable to the **negative (-)** terminal of the 12V battery and to the **negative (-)** terminal on the inverter.
 - Tighten all connections securely using the provided wrench. Loose connections can cause overheating and damage.
 - *Recommended Battery:* For optimal performance, a 200Ah (Ampere-hour) battery is recommended.
4. **Remote Control Connection:** Plug the remote control cable into the designated port on the inverter.
5. **Initial Check:** Before connecting any AC appliances, double-check all connections for security and correct polarity.

5. OPERATING INSTRUCTIONS

Follow these steps to operate your ROARBATT power inverter:

1. **Power On:** Press the 'On/Off' button on the inverter or the remote control. The LED display will illuminate, showing input voltage, output voltage, and battery capacity.
2. **Connect AC Appliances:** Plug your 110-120V AC appliances into the AC outlets on the inverter. Ensure the total power consumption of all connected devices does not exceed 4000W. For devices with high startup (peak) power requirements, ensure they do not exceed 8000W.
3. **Connect USB Devices:** Plug your USB-powered devices into the dual USB ports for charging.
4. **Monitor Performance:** Regularly check the LED display for input voltage and battery capacity to ensure the battery does not discharge excessively.
5. **Power Off:** When finished, first disconnect all AC and USB appliances, then press the 'On/Off' button on the inverter or remote control to power down the unit.

Note: The inverter's cooling fans will activate automatically when the internal temperature rises or when a significant load is applied.

6. MAINTENANCE

Proper maintenance ensures the longevity and reliable operation of your inverter:

- **Cleaning:** Periodically clean the exterior of the inverter with a dry, soft cloth. Do not use liquid cleaners or solvents.
- **Ventilation:** Ensure the cooling vents are free from dust and debris. Use compressed air to clear any blockages if necessary.
- **Connections:** Regularly check all DC and grounding connections to ensure they remain tight and free from corrosion.
- **Fuse Replacement:** If the inverter stops providing power and the troubleshooting steps do not resolve the issue, a fuse may have blown. Disconnect all power, open the fuse compartment (refer to the inverter's physical layout), and replace blown 40A fuses with new ones of the same rating. Always use the correct fuse type and rating.
- **Storage:** If storing the inverter for an extended period, ensure it is clean, dry, and stored in a cool environment. Disconnect it from the battery.

7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
No power output / Inverter not turning on	Loose battery connections Low battery voltage Blown fuse Inverter switch is OFF	Check and tighten battery cables Recharge or replace battery Replace 40A fuses (see Maintenance) Ensure inverter switch is ON
Overload protection activated (LED indicator)	Connected appliance(s) exceed 4000W continuous or 8000W peak power	Reduce the total load by disconnecting some appliances. Restart the inverter.
Low voltage protection activated (LED indicator)	Battery voltage is too low	Recharge the 12V battery. Disconnect the inverter to prevent deep discharge.
Over-temperature protection activated (LED indicator)	Poor ventilation Excessive ambient temperature Prolonged high load operation	Ensure vents are clear. Move inverter to a cooler, well-ventilated area. Reduce load. Allow inverter to cool down before restarting.
AC output voltage is incorrect	Faulty appliance Internal inverter issue	Test with a different appliance. If problem persists, contact customer support.

If the problem persists after attempting these solutions, please contact ROARBATT customer support.

8. SPECIFICATIONS

Technical specifications for the ROARBATT 4000W Pure Sine Wave Power Inverter:

- **Model:** ROARBATT-12V-4000W

- **Continuous Power:** 4000 Watts
- **Peak Power:** 8000 Watts
- **DC Input Voltage:** 12V DC
- **AC Output Voltage:** 110-120V AC
- **Output Waveform:** Pure Sine Wave
- **USB Output:** 2 x 5V DC, 3.4A (shared)
- **No-Load Current Draw:** $\leq 0.6A$
- **Dimensions (L x W x H):** 18.3" x 7.2" x 3.9" (46.5 cm x 18.3 cm x 10 cm)
- **Weight:** Approximately 16.46 pounds (7.47 kg)
- **Protection Features:** Over Voltage, Low Voltage, Overload, Short Circuit, Over Heat, Automatic Restart, Grounding Protection

9. WARRANTY AND SUPPORT

ROARBATT provides a **24-month warranty** for this product from the date of purchase. This warranty covers manufacturing defects and workmanship under normal use.

For technical assistance, warranty claims, or any questions regarding your ROARBATT 4000W Pure Sine Wave Power Inverter, please contact ROARBATT customer service. Please have your purchase details and model number (ROARBATT-12V-4000W) ready when contacting support.

Contact information can typically be found on the ROARBATT official website or through your purchase platform.