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› WZRELB 2500W Pure Sine Wave Power Inverter (Model RBN250012VC) Instruction Manual

WZRELB RBN250012VC

WZRELB 2500W Pure Sine Wave Power Inverter

MODEL: RBN250012VC - INSTRUCTION MANUAL

1. Introduction

This manual provides essential information for the safe and efficient operation of your WZRELB 2500W Pure Sine Wave Power Inverter. This device converts 12V DC battery power into 120V AC household power, suitable for sensitive electronics. It delivers 2500W of continuous power and can handle peak loads up to 5000W.



Image 1.1: WZRELB 2500W Pure Sine Wave Power Inverter, showing the overall unit with outlets and digital displays.

2. Safety Precautions

Read and understand all safety instructions before operating the inverter. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Cable Selection:** Always use the provided standard battery cables. For sustained maximum power output, it is recommended to use appropriate gauge cables (e.g., 2 gauge for 1800W sustained power) to prevent overheating and ensure full performance.
- **No Grid Connection:** Do not connect the inverter directly to grid power.
- **Polarity:** Reverse connection of positive and negative battery terminals is strictly forbidden and will damage the inverter.
- **Overload Protection:** Do not overload the inverter. For inductive loads (e.g., motors, refrigerators), choose an inverter with a continuous power rating 3-7 times higher than your appliance's wattage. For refrigerators, a 10 times higher power inverter is suggested.

- **Power-Up Sequence:** Turn on the inverter first, then connect and turn on your loads. This allows the soft start function to stabilize the output.
- **Power-Down Sequence:** Turn off the load first, then turn off the inverter.
- **Ventilation:** Ensure adequate airflow around the inverter. The cooling fan operates when the internal temperature exceeds 50°C (122°F).
- **Incompatible Devices:** The inverter is not recommended for connection with battery chargers or devices that contain their own chargers, such as laptops, as this can cause compatibility issues.
- **Grounding:** Ensure proper grounding to prevent leakage of electricity.

3. Setup and Installation

Follow these steps to properly set up your WZRELB power inverter.

1. **Unpacking:** Carefully remove the inverter from its packaging. Inspect for any shipping damage. Ensure all components, including the inverter cables, are present.
2. **Mounting and Placement:** Choose a dry, well-ventilated area for installation. The inverter should be placed on a stable, non-flammable surface. Ensure there is sufficient space around the unit for air circulation, especially near the cooling fans.
3. **Battery Connection:**
 - Connect the positive (+) terminal of the inverter to the positive (+) terminal of your 12V battery.
 - Connect the negative (-) terminal of the inverter to the negative (-) terminal of your 12V battery.
 - Ensure connections are tight and secure to prevent arcing and power loss.
4. **Grounding:** Connect the inverter's chassis ground terminal to a proper earth ground or vehicle chassis ground.

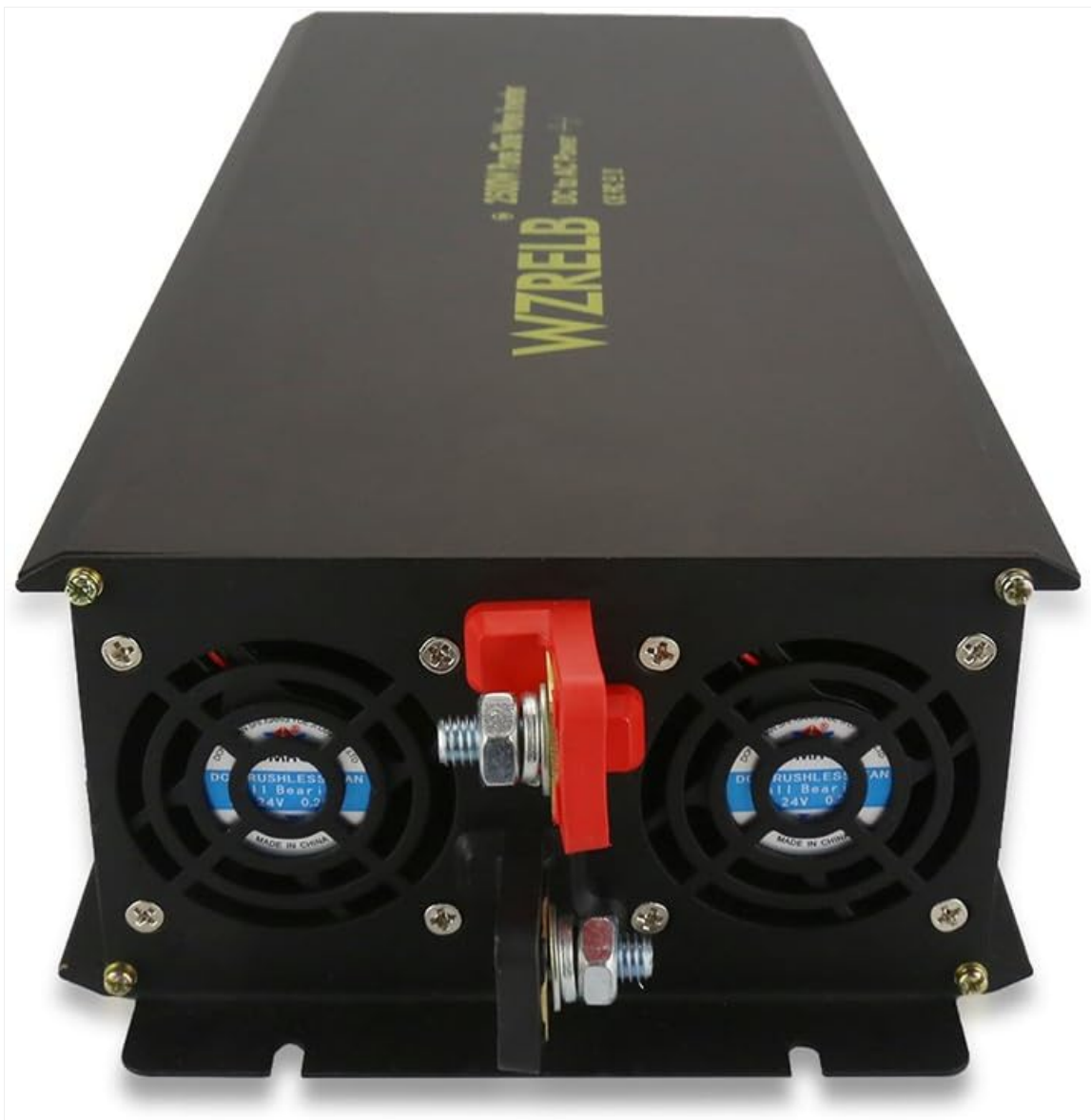


Image 3.1: Rear view of the inverter, highlighting the cooling fans and battery connection terminals.

4. Operating Instructions

Follow these steps for safe and effective operation of your inverter.

1. **Power On:** After all connections are secure, switch the inverter's power button to the 'ON' position. The LED displays will illuminate, showing DC input voltage and AC output voltage.
2. **Connect Appliances:** Plug your 120V AC appliances into the inverter's AC outlets. Ensure the total wattage of your appliances does not exceed the inverter's continuous power rating (2500W).
3. **Monitor Displays:** Observe the LED displays for DC input voltage and AC output voltage. The output voltage can be adjusted between 110V-130V if needed.
4. **Cooling Fan:** The built-in intelligent cooling fan will activate automatically when the internal temperature exceeds 50°C (122°F) or under heavy load. This is normal operation.
5. **Power Off:** To turn off the system, first switch off all connected AC appliances, then switch the inverter's power button to the 'OFF' position.



Image 4.1: Front panel of the inverter, showing the dual USA type outlets, power switch, and LED displays for DC and AC voltages.

5. Maintenance

Regular maintenance ensures optimal performance and longevity of your inverter.

- **Cleaning:** Keep the inverter clean and free from dust and debris. Use a dry cloth to wipe the exterior. Do not use liquids or solvents.
- **Ventilation:** Periodically check that the cooling vents are not obstructed. Ensure the cooling fan is operating correctly when the unit is under load or warm.
- **Connections:** Regularly inspect all electrical connections (battery terminals, AC outlets) for tightness and corrosion. Loose connections can cause overheating and inefficient operation.
- **Storage:** If storing the inverter for an extended period, disconnect it from the battery and store it in a cool, dry place.

6. Troubleshooting

This section addresses common issues you might encounter with your inverter.

Problem	Possible Cause	Solution
Inverter does not turn on	Loose battery connections, low battery voltage, blown fuse	Check battery connections, charge battery, check and replace fuses (spare fuses are included for replacement).
Low Voltage Alarm (9.5V-10.5V) or Shut Down (9V-10V)	Battery voltage is too low	Recharge or replace the battery. Reduce load.

Problem	Possible Cause	Solution
Overload Shut Down	Connected load exceeds inverter's capacity	Disconnect some appliances. Manually recover by cycling the inverter power. Ensure total load is within 2500W continuous rating.
Over Voltage Shut Down (15.5V)	Input DC voltage is too high	Check battery charging system. Ensure input voltage does not exceed 15V.
Over Thermal Shut Off	Inverter is overheating	Reduce load, ensure proper ventilation, allow inverter to cool down.
Red light flashing	Input voltage is slightly high	This is a reminder. If output is normal, it can be disregarded. Monitor input voltage.
Output unstable at first seconds	Normal soft start function	Turn on the inverter first, then turn on your loads. This allows the output to stabilize.

7. Specifications

Key technical specifications for the WZRELB 2500W Pure Sine Wave Power Inverter.

Feature	Specification
Brand	WZRELB
Model Name	RBN250012VC
DC Input Voltage	12V (Range: 10V-15V)
AC Output Voltage	120V
Continuous Output Power	2500 Watts
Peak Output Power	5000 Watts
Output Waveform	Pure Sine Wave
Frequency	60Hz
No Load Current Draw	1.5A
Efficiency	85%-90%
AC Outlets	2 (USA Type)
Low Voltage Alarm	9.5V-10.5V
Low Voltage Shut Down	9V-10V
Over Voltage Shut Down	15.5V
Cooling Method	Intelligent Cooling Fan (activates > 50°C)

Feature	Specification
Item Weight	9 Pounds

8. Warranty Information

This WZRELB Power Inverter comes with a **12-month warranty** from the date of purchase. This warranty covers manufacturing defects and workmanship under normal use. Please retain your proof of purchase for warranty claims. The warranty does not cover damage caused by misuse, improper installation, unauthorized modifications, or natural disasters.

9. Support

For technical assistance, troubleshooting not covered in this manual, or warranty inquiries, please contact WZRELB customer support. Refer to the product packaging or the official WZRELB website for the most current contact information.

