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› [WZRELB 3000W Pure Sine Wave Power Inverter 48VDC to 120VAC \(U5-300048\) Instruction Manual](#)

WZRELB U5-300048

WZRELB 3000W Pure Sine Wave Power Inverter (U5-300048) Instruction Manual

Model: U5-300048

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your WZRELB 3000W Pure Sine Wave Power Inverter. This device converts 48V DC power to 120V AC power, suitable for various applications including RVs, trucks, off-grid solar systems, and emergency household power backup. Please read this manual thoroughly before installation and use.

2. SAFETY INFORMATION

Failure to follow these safety instructions may result in serious injury or damage to the inverter and connected equipment.

- **Do not connect the inverter directly to grid power.** This can cause severe damage to the inverter and pose an electrical hazard.
- **Ensure correct polarity.** Reverse connection of positive and negative terminals is strictly forbidden and will damage the unit.
- **Avoid overloading the inverter.** For inductive loads (e.g., motors, refrigerators), select an inverter with a continuous power rating 3-7 times higher than the appliance's wattage. For refrigerators, a 10 times higher power inverter is recommended.
- **Proper power-up and shut-down sequence:** Turn off the load first, then turn off the inverter. When powering on, turn on the inverter first, then turn on your loads. This prevents unstable output during the initial seconds due to the soft start function.
- **Use standard battery cables.** Using non-standard or undersized cables may prevent the inverter from delivering full output.
- **Grounding:** Ensure proper grounding to protect against electrical leakage.
- **Temperature:** The intelligent cooling fan activates when the internal temperature exceeds 50°C (122°F) to prevent overheating.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- WZRELB 3000W 48VDC Pure Sine Wave Power Inverter
- Inverter Connection Cables (Red and Black)
- Spare Fuses



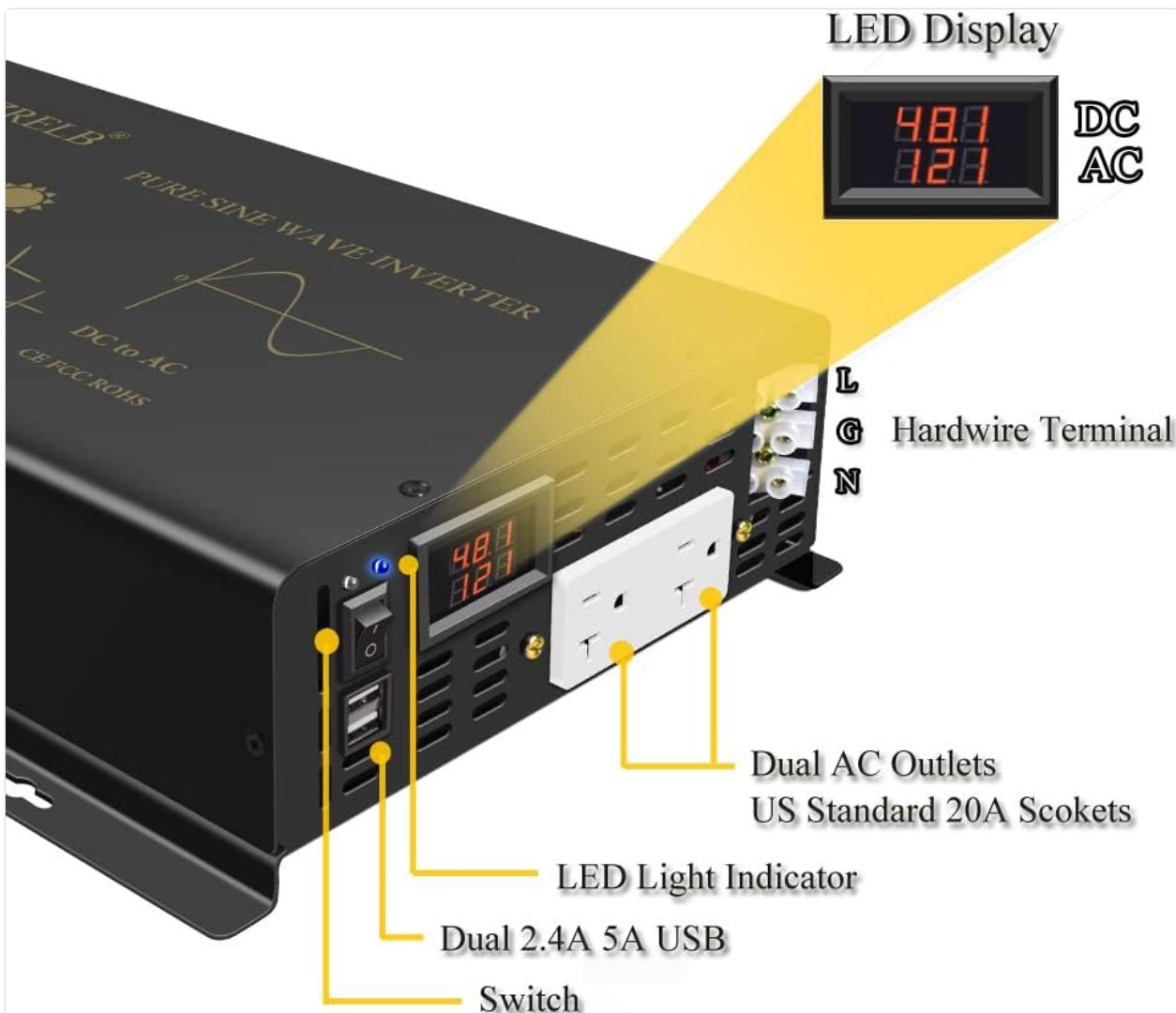
Image: WZRELB 3000W Pure Sine Wave Power Inverter with its connection cables and spare fuses.

4. PRODUCT FEATURES

- **Pure Sine Wave Output:** Delivers 3000 watts continuous, stable 120V AC power from 48V DC input, with a 6000W peak capacity. Ideal for sensitive electronics.
- **Multiple Output Options:** Features two 120VAC outlets (US type), two 2.4A USB ports, and one heavy-duty 120VAC 25Amp hardwire terminal.
- **Comprehensive Safety Protections:** Includes protection against over voltage, low voltage, overload, short circuit, over heat, reverse polarity (via fuse), and ground leakage.
- **Digital LED Display:** Monitors both DC input voltage and AC output voltage in real-time for clear power usage tracking.

- **Efficient Cooling:** Equipped with an intelligent cooling fan that activates automatically when the internal temperature reaches 50°C (122°F).
- **Compact Design:** Lightweight and small-sized, suitable for various installations.

5. PRODUCT DIAGRAM AND COMPONENTS



Product Details

Each Single Part Matters Each Single Part Values

Image: Front view of the inverter highlighting the LED Display, Hardwire Terminal, Dual AC Outlets, Dual 2.4A USB Ports, Switch, and LED Light Indicator.

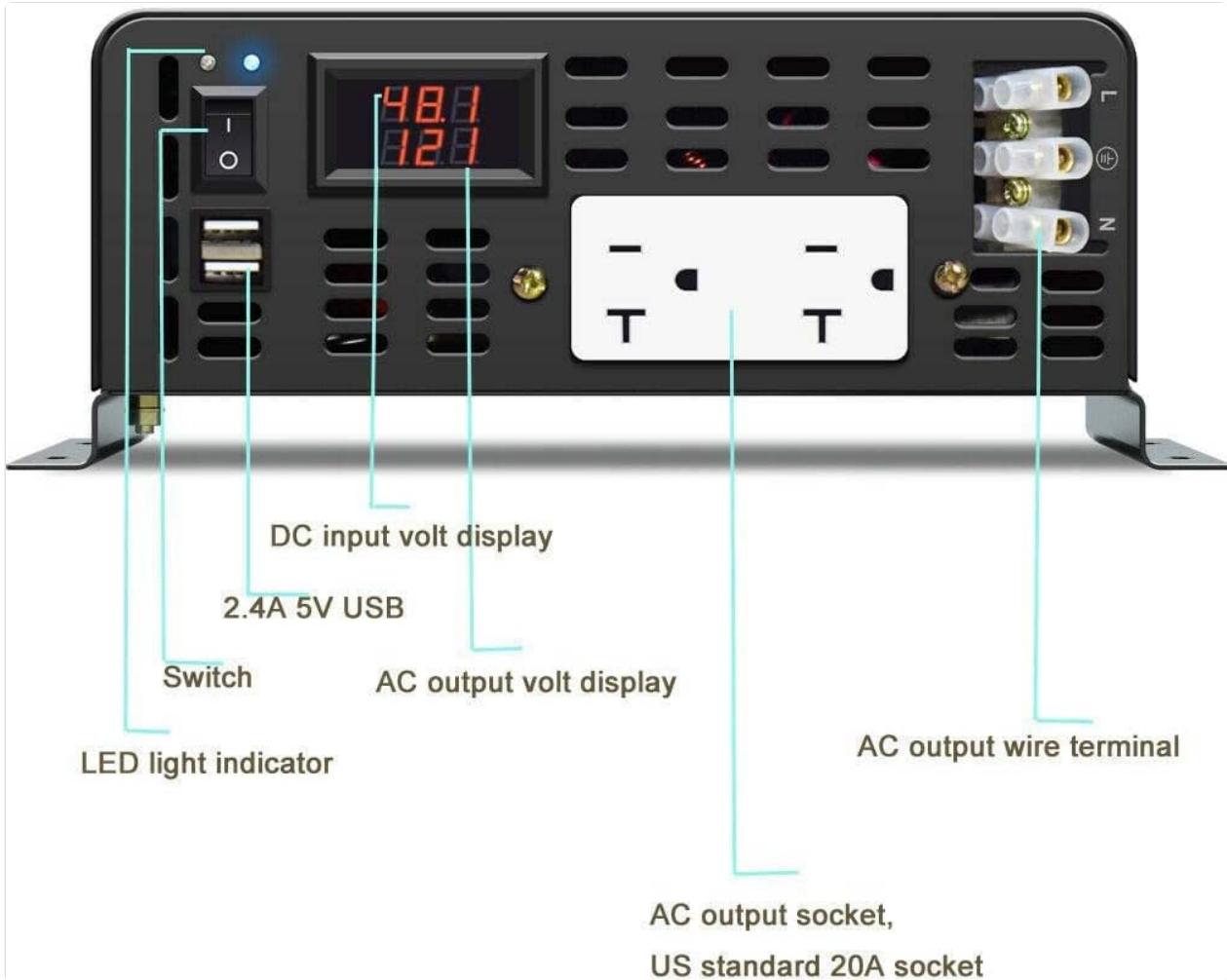


Image: Detailed front panel view showing the DC input volt display, 2.4A 5V USB ports, Power Switch, AC output volt display, AC output sockets (US standard 20A), and AC output wire terminal.

Key Components:

- **LED Display:** Shows DC input voltage and AC output voltage.
- **Hardwire Terminal:** For direct wiring of high-power AC loads (L, N, G).
- **Dual AC Outlets:** Standard US 20A sockets for connecting AC appliances.
- **Dual USB Ports:** 2.4A 5V for charging USB-powered devices.
- **Power Switch:** Controls the inverter's power.
- **LED Light Indicator:** Provides status feedback.
- **Cooling Fans:** Located at the rear for heat dissipation.

6. INSTALLATION

Proper installation is crucial for the inverter's performance and safety. Consult a qualified electrician if you are unsure about any steps.

6.1 Mounting

- Mount the inverter in a dry, well-ventilated area, away from direct sunlight, heat sources, and flammable materials.
- Ensure adequate clearance around the inverter for proper airflow, especially around the cooling fans.
- Securely fasten the inverter to a stable surface using appropriate mounting hardware.

6.2 DC Input Connection (48V)

- Connect the supplied red cable to the positive (+) terminal of your 48V battery bank and the positive (+) terminal on the inverter.
- Connect the supplied black cable to the negative (-) terminal of your 48V battery bank and the negative (-) terminal on the inverter.
- Ensure all connections are tight and secure to prevent loose contacts and voltage drops.
- **Important:** Double-check polarity before making final connections. Reverse polarity will damage the inverter.

6.3 AC Output Connection (120V)

- **Standard Outlets:** Plug your 120V AC appliances directly into the dual AC outlets.
- **Hardwire Terminal:** For permanent or high-power installations, connect your AC wiring to the hardwire terminal (L for Live, N for Neutral, G for Ground). Ensure correct wiring and consult local electrical codes.

7. OPERATION

7.1 Starting the Inverter

1. Ensure all DC input connections are secure and correct.
2. Ensure no AC loads are connected or turned on.
3. Flip the power switch on the inverter to the 'ON' position. The LED display should illuminate, showing DC input voltage and AC output voltage.
4. Once the inverter is stable (after a few seconds), you can connect and turn on your AC loads one by one.

7.2 Shutting Down the Inverter

1. Turn off all connected AC loads.
2. Unplug AC appliances from the outlets or disconnect from the hardwire terminal.
3. Flip the power switch on the inverter to the 'OFF' position.

8. MAINTENANCE

- Regularly inspect all electrical connections for tightness and corrosion.
- Keep the inverter's ventilation openings clear of dust and debris to ensure proper cooling.
- Clean the exterior of the inverter with a dry, soft cloth. Do not use liquids or abrasive cleaners.
- Check the fuses periodically. Spare fuses are provided for replacement if needed.

9. TROUBLESHOOTING

Problem	Possible Cause	Solution
No AC Output	Inverter is off; Low DC input voltage; Overload; Short circuit; Blown fuse.	Turn on inverter; Check battery voltage; Reduce load; Check for short circuits; Replace fuse.

Problem	Possible Cause	Solution
Red light flashing	Input voltage is slightly high.	Monitor input voltage; Ensure battery charging system is regulated.
Low Voltage Alarm (43V-45V)	Battery voltage is low.	Recharge or replace batteries.
Inverter shuts down (Low Voltage Shut Down: 41V-43V)	Battery voltage is critically low.	Immediately recharge or replace batteries.
Overload Shut Down	Connected load exceeds inverter's capacity.	Reduce load; Manually restart the inverter.
Over Voltage Shut Down (61.2V)	DC input voltage is too high.	Check battery charging system and voltage regulator.
Cooling fan not running	Normal operation if temperature is below 50°C. Fan failure if temperature is high.	No action needed if cool. If hot and fan is off, contact support.

10. SPECIFICATIONS

Parameter	Value
Model	U5-300048
Continuous Power	3000 Watts
Peak Power	6000 Watts
DC Input Voltage	48V DC
DC Input Range	42V - 60V
AC Output Voltage	120V AC
AC Output Frequency	60Hz
Waveform	Pure Sine Wave
Efficiency	85% - 90%
AC Outlets	Dual US Type (20A)
USB Ports	2 x 2.4A (5V)
Hardwire Terminal Capacity	25 Amp Max
Low Voltage Alarm	43V - 45V
Low Voltage Shut Down	41V - 43V

Parameter	Value
Over Voltage Shut Down	61.2V
Cooling	Intelligent Cooling Fan (activates > 50°C)
Product Dimensions	16.2 x 9.7 x 3.7 inches
Item Weight	3.2 ounces
Manufacturer	Yueqing Reliable Electric co.,ltd

11. WARRANTY AND SUPPORT

WZRELB provides a **12-month warranty** for this product. For technical assistance, troubleshooting, or warranty claims, please contact customer service.

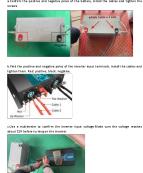
Customer Service Contact:

Email: info@powerreliable.com

Please have your model number (U5-300048) and purchase information ready when contacting support.

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Related Documents - U5-300048

	<p>WZRELB 3000W 12VDC Inverter Installation and Usage Guide</p> <p>A concise guide for installing and using the WZRELB 3000W 12VDC Pure Sine Wave Inverter, including important notes on battery connection, cable specifications, and appliance load compatibility.</p>
	<p>WZRELB 2500W Pure Sine Wave 12VDC Power Inverter Installation and Usage Guide</p> <p>Step-by-step installation and usage instructions for the WZRELB 2500W Pure Sine Wave Power Inverter (12VDC input). Includes preparation, connection, safety notes, and load management tips.</p>

