

## JIGUUN 3000W24V

# JIGUUN 3000W Pure Sine Wave Inverter User Manual

Model: 3000W24V

Brand: JIGUUN

## 1. INTRODUCTION

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This user manual provides comprehensive instructions for the safe and efficient operation of your JIGUUN 3000W Pure Sine Wave Inverter. This device converts 24V DC battery power into 220V AC household power, featuring a 20A charger, network priority circuit, and UPS functionality. It is designed to provide clean, stable power for various applications. Please read this manual thoroughly before installation and use to ensure proper function and to prevent damage to the unit or connected equipment.

## 2. SAFETY INSTRUCTIONS

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Always observe the following safety precautions to reduce the risk of electric shock, fire, or injury:

- **Ventilation:** Ensure adequate ventilation around the inverter. Do not block ventilation openings. Overheating can cause the inverter to shut down or be damaged.
- **Environment:** Install the inverter in a dry, cool, and well-ventilated area, away from direct sunlight, heat sources, and flammable materials. Avoid environments with excessive dust, moisture, or corrosive fumes.
- **Grounding:** The inverter must be properly grounded. Connect the grounding wire to a suitable earth ground point.
- **Battery Connection:** Connect the inverter directly to a 24V DC battery bank. Ensure correct polarity (+ to + and - to -) to prevent damage. Use appropriate gauge cables for the power rating.
- **Load Capacity:** Do not exceed the inverter's continuous output power rating (3000W) or peak power rating (6000W). Overloading can damage the inverter and connected appliances.
- **Qualified Personnel:** Installation and maintenance should be performed by qualified personnel familiar with electrical systems and safety procedures.
- **Disconnection:** Disconnect all power sources (DC and AC) before performing any maintenance or troubleshooting.
- **Children and Pets:** Keep the inverter out of reach of children and pets.

## 3. PRODUCT OVERVIEW

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### 3.1 Package Contents

Upon unpacking, verify that all items listed below are present and undamaged:

- 1 x JIGUUN 3000W Pure Sine Wave Inverter (24V DC to 220V AC)
- 1 x Wireless Remote Control
- 1 Set of Battery Cables (1 Red, 1 Black)
- 1 x Grounding Wire with Alligator Clip
- 1 x AC Connection Cable
- 2 x Protective Sheaths
- 4 x Spare Fuses (Note: Fuses are installed internally, no need for initial installation)
- 1 x User Manual (this document)



Figure 3.1: JIGUUN 3000W Pure Sine Wave Inverter with all included accessories, including the main inverter unit, remote control, battery cables, grounding wire, AC cable, and spare fuses.

### 3.2 Key Features

- **Pure Sine Wave Output:** Provides clean and stable AC power, suitable for sensitive electronics.

- **High Power Output:** Continuous 3000W, Peak 6000W.
- **Integrated Charger:** Advanced PFC charging function with a 20A maximum charging current and six-stage charging process for optimal battery health.
- **Network Priority UPS Function:** Seamless automatic transfer (less than 20ms) between mains power and battery power, ensuring uninterrupted power supply.
- **Wireless Remote Control:** Conveniently operate the inverter from a distance.
- **Intelligent LCD Display:** Real-time monitoring of input/output voltages, frequencies, charging status, running time, and error messages.
- **Multiple Protections:** Includes overheat shutdown, automatic overload protection, overvoltage and undervoltage protection, and an acoustic undervoltage signal.
- **Dual EU Sockets & USB Ports:** Two AC outlets and two 2.4A USB charging ports for versatile connectivity.

### 3.3 Component Identification



Figure 3.2: Front and back panel overview of the JIGUUN 3000W Inverter. Key components include the LCD display, ON/OFF switch, AC outlets, USB ports on the front, and DC input terminals, AC input, and cooling fans on the rear.

# 6-Stage Smart Charging Process

PFC function and battery reconditioning

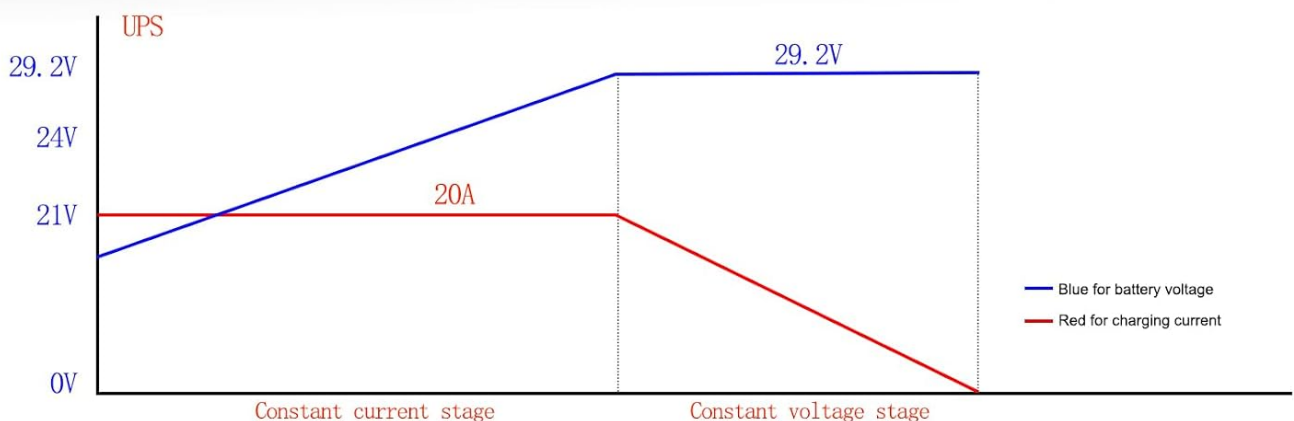


Figure 3.3: Detailed view of the inverter's connection points. This includes the LCD display, power indicator, ON/OFF switch, ground connection, USB ports, AC outlets (x2), AC overload recovery button, DC negative terminal, DC positive terminal, cooling fans (x2), and AC input.

## 4. SETUP AND INSTALLATION

Before installation, ensure the inverter is placed on a stable, flat surface in a well-ventilated area, away from direct sunlight, heat, and moisture. Ensure sufficient clearance around the unit for airflow.

### 4.1 Battery Connection

1. Ensure the inverter's power switch is in the "OFF" position.
2. Connect the **red** battery cable to the **positive (+)** terminal of the 24V battery bank and the **positive (+)** DC input terminal on the inverter.
3. Connect the **black** battery cable to the **negative (-)** terminal of the 24V battery bank and the **negative (-)** DC input terminal on the inverter.
4. Ensure all connections are tight and secure to prevent loose connections and sparking.

# PURE SINE WAVE INVERTER

Continuous output power 3000W/peak power 6000W

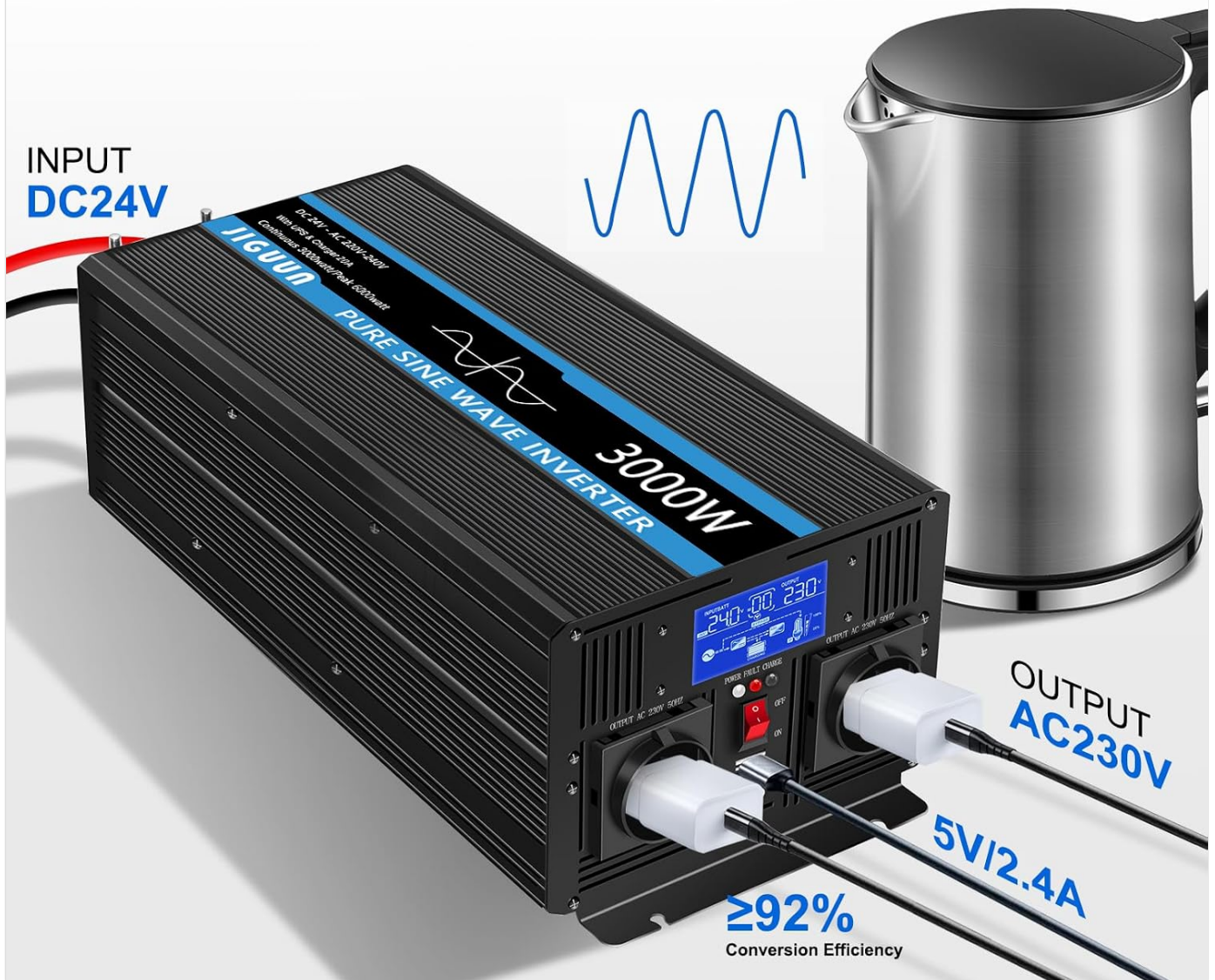


Figure 4.1: Illustration of DC input from a 24V battery and AC output to connected appliances. This diagram highlights the flow of power from the battery through the inverter to the load.

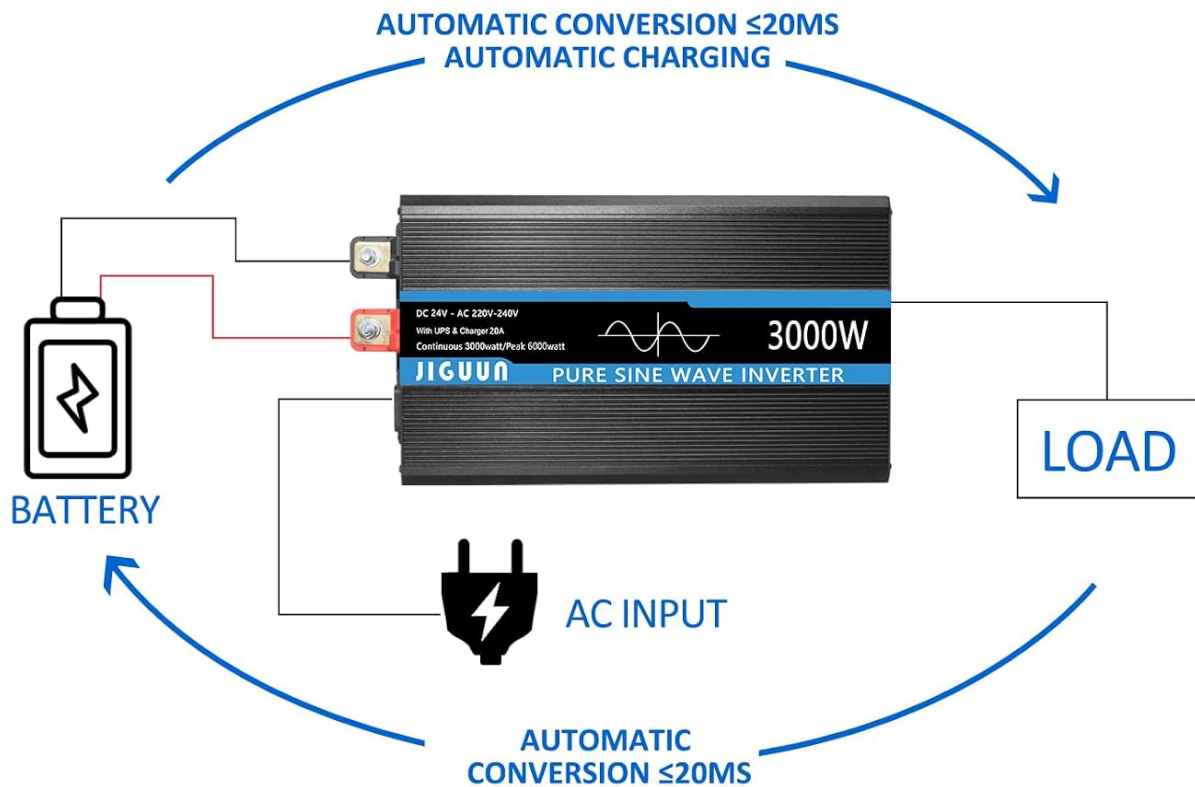
## 4.2 Grounding Connection

Connect the provided grounding wire from the inverter's ground terminal to a reliable earth ground point. This is essential for safety and to prevent electrical hazards.

## 4.3 AC Input (Mains Power) Connection for Charging and UPS Function

If you intend to use the inverter's charging and UPS (Uninterruptible Power Supply) functions, connect the AC input cable from a standard 220V AC mains power outlet to the AC input port on the inverter.

# Uninterrupted power supply



With mains power priority is given to mains power, without mains power there is a seamless switchover to battery power.

Figure 4.2: Diagram showing the automatic power conversion process. When mains power is available, it prioritizes mains power and charges the battery. If mains power fails, it seamlessly switches to battery power within 20 milliseconds.

## 5. OPERATING INSTRUCTIONS

### 5.1 Powering On/Off

- To Power On:** After all connections are secure, switch the ON/OFF button on the inverter's front panel to the "ON" position. The LCD display will illuminate, and the inverter will begin operation.
- To Power Off:** Switch the ON/OFF button to the "OFF" position. The LCD display will turn off, and the inverter will cease operation.

### 5.2 Understanding the LCD Display

The intelligent LCD display provides real-time information about the inverter's status:

- **Input Voltage (DC):** Displays the current voltage of your 24V battery bank.
- **Output Voltage (AC):** Shows the current AC output voltage (220-240V).

- **Input Frequency:** Displays the frequency of the incoming AC power (if connected).
- **Output Frequency:** Displays the output AC frequency (50 Hz).
- **Charging Status:** Indicates if the battery is charging and the charging current.
- **Running Time:** Shows the accumulated operating time.
- **Error Messages:** Displays specific error codes or messages if a fault occurs.

# Intelligent Lcd Display

- Input Voltage
- Output Voltage
- Input Frequency
- Output frequency
- Running time
- Error message
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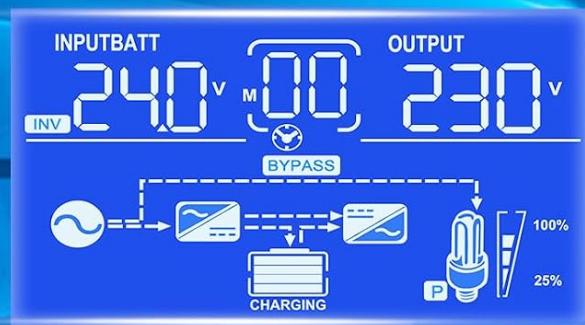


Figure 5.1: The intelligent LCD display provides critical operational data such as input voltage, output voltage, input frequency, output frequency, running time, and error messages.

## 5.3 Wireless Remote Control

The included wireless remote control allows you to turn the inverter ON or OFF from a distance, providing convenience, especially when the inverter is installed in a less accessible location.



## Remote Control

No wire connection done

Figure 5.2: The wireless remote control allows for convenient remote operation of the inverter, eliminating the need for direct wire connections.

### 5.4 Charging Function (PFC & 6-Stage)

When the inverter is connected to mains AC power, its built-in 20A charger will automatically begin charging the connected 24V battery bank. The advanced Power Factor Correction (PFC) and six-stage charging process optimize charging efficiency and prolong battery life.

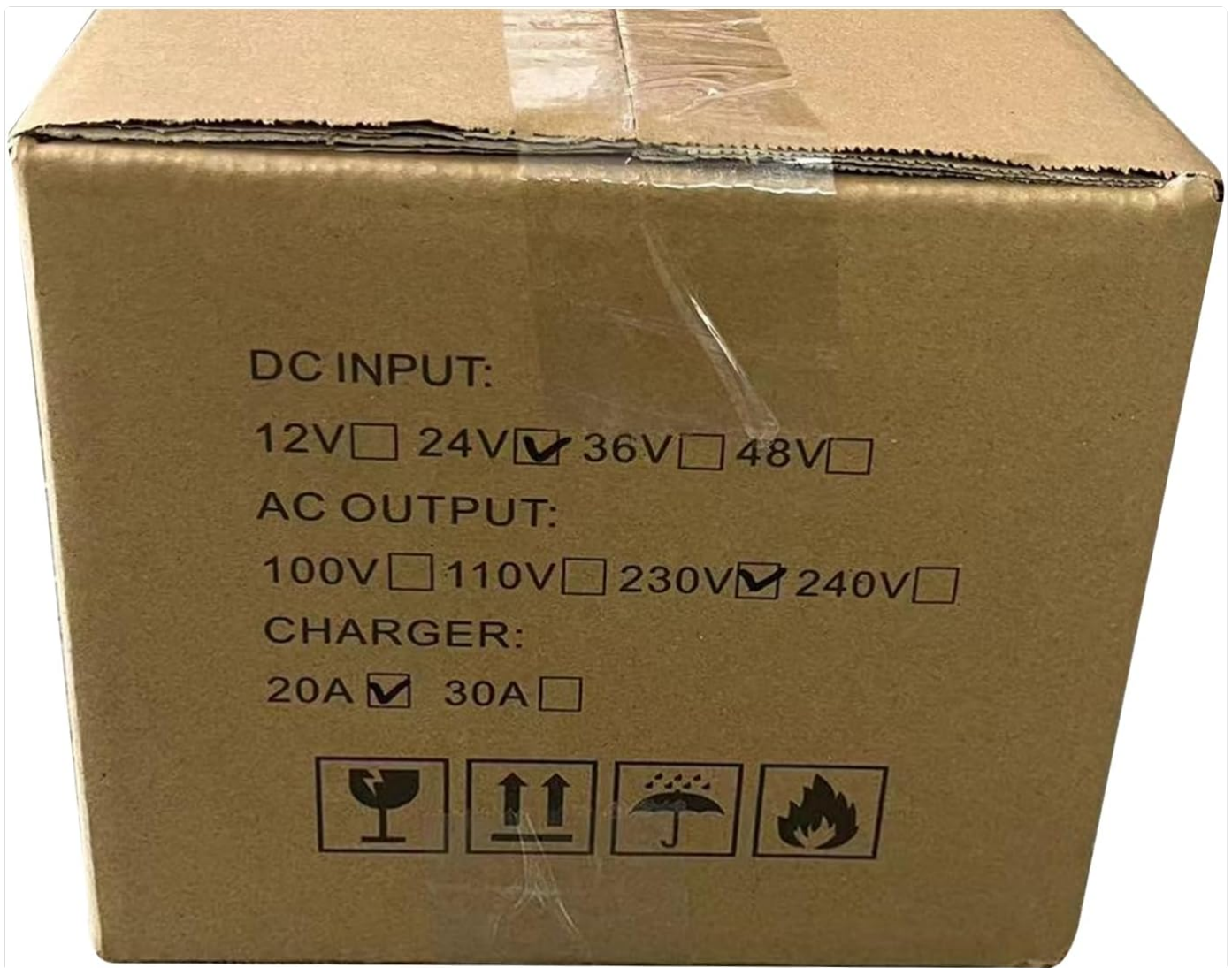


Figure 5.3: This graph illustrates the 6-stage smart charging process, showing how the charging voltage and current adapt to the battery's state to ensure efficient and safe charging, including battery reconditioning.

## 6. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your inverter:

- **Cleaning:** Periodically clean the exterior of the inverter with a soft, dry cloth. Do not use liquid cleaners or solvents. Ensure ventilation openings are free from dust and debris.
- **Connections:** Regularly check all electrical connections (battery cables, AC input/output, grounding) to ensure they are tight and free from corrosion. Loose connections can cause overheating and poor performance.
- **Battery Health:** Monitor your battery bank's health. Ensure batteries are properly maintained according to their manufacturer's guidelines.
- **Environment:** Confirm the installation environment remains suitable (dry, cool, well-ventilated).

## 7. TROUBLESHOOTING

The inverter is equipped with multiple protection features and an LCD display to indicate operational errors. Refer to the display for specific error messages.

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
<b>Inverter not turning on / No output</b>	<p>Low battery voltage</p> <p>Loose battery connections</p> <p>Inverter switch is OFF</p> <p>Blown internal fuse</p>	<p>Charge battery or check battery health.</p> <p>Check and tighten all battery cable connections.</p> <p>Ensure the ON/OFF switch is in the "ON" position.</p> <p>Contact support for fuse replacement if necessary (fuses are internal).</p>
<b>Overload Protection (Error on LCD)</b>	<p>Connected load exceeds 3000W continuous or 6000W peak.</p>	<p>Reduce the total power consumption of connected appliances.</p> <p>Disconnect some loads and restart the inverter.</p>
<b>Overheat Shutdown (Error on LCD)</b>	<p>Insufficient ventilation</p> <p>High ambient temperature</p> <p>Blocked cooling fans</p>	<p>Ensure adequate airflow around the inverter.</p> <p>Move the inverter to a cooler environment.</p> <p>Check and clear any obstructions from the cooling fans.</p> <p>Allow the unit to cool down before restarting.</p>
<b>Overvoltage/Undervoltage Protection (Error on LCD)</b>	<p>Input DC voltage is too high or too low.</p>	<p>Check battery voltage. Ensure it is within the 22V-26V DC range.</p> <p>Recharge battery if undervoltage.</p>
<b>Acoustic Undervoltage Signal</b>	<p>Battery voltage is getting low, indicating a need for charging.</p>	<p>Charge the battery immediately to prevent complete discharge and inverter shutdown.</p>

## 8. SPECIFICATIONS

Parameter	Value
Output Wave	Pure Sine Wave
Continuous Output Power	3000W
Surge (Peak) Output Power	6000W
Nominal Input Voltage (DC)	24V (22~26V DC)
Rated Output Voltage (AC)	220-240V AC
Output Frequency	50 Hz
Charging Current (Max)	20A
UPS Transfer Time	<20ms
Cooling Fan Activation Temperature	45°C
Efficiency	>92%
Display Type	LCD
Product Dimensions (L x W x H)	40 x 19 x 14 cm

Parameter	Value
Product Weight	7 kg
Color	Black/White
Total Power Outlets	2 (EU Sockets)
USB Output	2.4A

## 9. WARRANTY AND SUPPORT

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JIGUUN is committed to providing high-quality products. While specific warranty terms are not detailed in this manual, we encourage you to retain your purchase receipt for any warranty claims.

For any questions, technical assistance, or support regarding your JIGUUN 3000W Pure Sine Wave Inverter, please contact the JIGUUN support team. Contact information is typically provided on the product packaging or through your point of purchase.

*As per product information: If you have any other questions, please contact us by email and the JIGUUN team will solve it for you.*