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LUYUAN LY-MSW3000W-12V

LUYUAN 3000 Watt Power Inverter User Manual

Model: LY-MSW3000W-12V

Brand: LUYUAN

INTRODUCTION

Thank you for choosing the LUYUAN 3000 Watt Power Inverter. This heavy-duty inverter is designed to convert 12V DC power from your vehicle, solar system, or battery into 110V/120V AC power, suitable for a wide range of appliances and devices. With 3000W continuous power and 6000W peak power, it's an ideal solution for RVs, trucks, off-grid setups, and camping needs. Please read this manual thoroughly before installation and operation to ensure safe and efficient use.



Figure 1: LVYUAN 3000 Watt Power Inverter, showing the main unit, remote control, and battery cables.

WHAT'S IN THE BOX

- LVYUAN 3000 Watt Power Inverter
- Wireless Remote Controller (Note: 12V 23A battery not included)
- 2 Pairs of Battery Cables (Red for positive, Black for negative)
- Instruction Manual



Figure 2: Included components: the inverter unit, wireless remote control, and battery connection cables.

PRODUCT FEATURES AND OVERVIEW

The Lvyuan 3000 Watt Power Inverter is equipped with several features for convenient and safe operation:

- **3000W Continuous Power:** Delivers stable power for demanding applications.
- **6000W Peak Power:** Handles high surge loads from motor-driven appliances.
- **4 AC Outlets:** Multiple standard 110V/120V AC outlets for connecting various devices.
- **USB Ports:** Includes USB 5V ports for charging smaller electronic devices.
- **LCD Display:** Provides real-time monitoring of voltage, battery level, load, and alerts.
- **Wireless Remote Control:** Allows convenient operation from a distance, ideal for hard-to-reach installations.
- **Smart Cooling Fan:** Built-in intelligent cooling fan activates only when internal temperature exceeds 104°F (40°C) or load exceeds 45%, ensuring quiet operation and optimal heat dissipation.
- **Durable Construction:** Features a sturdy aluminum alloy body for enhanced durability.

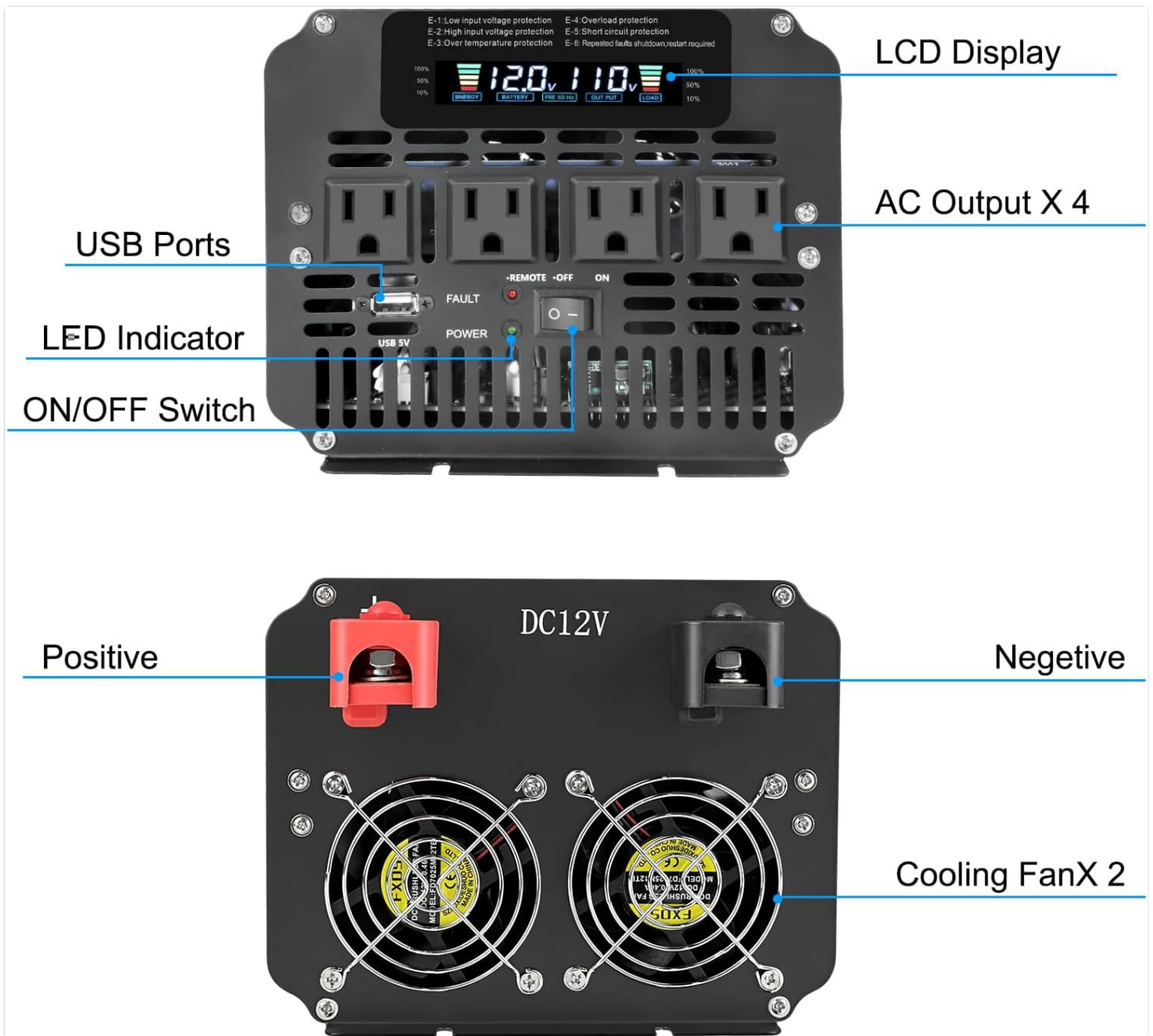


Figure 3: Front and rear panel overview of the inverter, highlighting key components like AC outlets, USB ports, and cooling fans.

LCD DISPLAY

- 1 Battery Capacity
- 2 Battery Voltage
- 3 Output Frequency
- 4 Output Voltage
- 5 Load Capacity



Figure 4: The LCD display provides essential information for monitoring the inverter's performance.

SETUP

Proper setup is crucial for the safe and efficient operation of your power inverter. Follow these steps carefully:

1. **Choose a Location:** Select a dry, well-ventilated area for the inverter. Ensure it is away from direct sunlight, heat sources, and flammable materials.
2. **Prepare Battery Cables:** The inverter comes with two pairs of cables. For this 3000W model, ensure you use the appropriate gauge cables for your battery connection to handle the current safely.
3. **Connect to Battery:**
 - First, ensure the inverter is turned OFF.
 - Connect the RED (positive) cable to the positive (+) terminal of the inverter.
 - Connect the BLACK (negative) cable to the negative (-) terminal of the inverter.
 - Then, connect the other end of the RED (positive) cable to the positive (+) terminal of your 12V battery.

- Finally, connect the other end of the BLACK (negative) cable to the negative (-) terminal of your 12V battery.
- Ensure all connections are tight and secure to prevent arcing or overheating.

4. **Install Remote Control Battery:** The wireless remote control requires a 12V 23A battery (not included). Insert the battery into the remote control unit.



Figure 5: Illustration of connecting the inverter to a 12V battery source. Ensure correct polarity (red to positive, black to negative).

OPERATING INSTRUCTIONS

Once the inverter is properly set up, follow these steps to operate it:

1. **Turn On the Inverter:** Use the ON/OFF switch on the inverter's front panel or the wireless remote control to turn the unit on. The LCD display will illuminate, showing current voltage and other parameters.
2. **Connect Appliances:** Plug your AC appliances into the standard 110V/120V AC outlets on the inverter. For USB charging, use the dedicated USB 5V ports.
3. **Monitor Performance:** Regularly check the LCD display for battery voltage, output voltage, and load status. This helps ensure optimal performance and prevents overloading.
4. **Wireless Remote Control:** The remote allows you to turn the inverter on or off from a distance of up to 160 feet without obstruction, providing convenience for installations in hard-to-reach areas.
5. **Turn Off When Not in Use:** Always turn off the inverter when not in use to conserve battery power.

WIRELESS REMOTE CONTROL

Anywhere, Anytime



- The remote control distance is about 160 feet without obstruction

Figure 6: The wireless remote control offers convenient operation from a distance.

SAFETY PROTECTIONS

The Lvyuan 3000 Watt Power Inverter is designed with multiple safety features to protect both the unit and your connected devices:

- **Low Input Voltage Protection:** Prevents damage to the battery from excessive discharge.
- **High Input Voltage Protection:** Protects the inverter from over-voltage input.
- **Over Temperature Protection:** The smart cooling fan and internal sensors prevent overheating.
- **Overload Protection:** Shuts down the inverter if the connected load exceeds its capacity.
- **Short Circuit Protection:** Automatically cuts off power in case of a short circuit.
- **Reverse Polarity Protection:** Prevents damage if battery connections are reversed.
- **Sound Alert Protection:** Provides audible alerts for various fault conditions.
- **Repeated Faults Shutdown:** If faults persist, the inverter will shut down and require a manual restart for safety.

8 Safety Protection



Figure 7: Overview of the comprehensive safety features built into the inverter.

APPLICATIONS

This versatile power inverter is suitable for a variety of applications, providing reliable AC power wherever you need it:

- **Vehicles:** Power tools, laptops, and other electronics in your truck or car.
- **RVs & Campers:** Run small appliances like ice makers, blenders, or lights while off-grid.
- **Off-Grid Systems:** Ideal for solar inverter systems in cabins or remote locations.
- **Camping:** Provide power for essential devices during outdoor adventures.
- **Emergency Backup:** A reliable power source during outages.

Versatile Application

It is applicable to most appliances & sensitive devices below 5000Watts.



Figure 8: The inverter can power various tools and appliances, making it highly versatile.



Figure 9: Enjoy reliable power for your devices during camping and RV trips.

MAINTENANCE

To ensure the longevity and optimal performance of your LUYUAN Power Inverter, regular maintenance is recommended:

- **Keep Clean:** Regularly wipe down the exterior of the inverter with a dry, soft cloth. Ensure ventilation openings are free from dust and debris.
- **Check Connections:** Periodically inspect all cable connections to the inverter and battery. Ensure they are tight and free from corrosion. Loose connections can lead to overheating and reduced performance.
- **Ventilation:** Always ensure adequate airflow around the inverter. Do not block the cooling fans or place the unit in an enclosed space.
- **Storage:** If storing the inverter for an extended period, disconnect it from the battery and store it in a cool, dry place.



Figure 10: The dual cooling fans are essential for maintaining optimal operating temperature.

TROUBLESHOOTING

If you encounter issues with your inverter, refer to the following common troubleshooting tips:

Problem	Possible Cause	Solution
Inverter not turning on	Loose battery connections, low battery voltage, blown fuse.	Check and tighten all connections. Recharge or replace battery. Inspect and replace fuses if necessary.
No AC output	Overload, short circuit, high temperature, low input voltage.	Reduce load. Check for shorted appliances/cables. Allow inverter to cool down. Check battery voltage.
Inverter beeping	Low battery voltage, overload, overheating.	Check LCD display for specific error code. Address the indicated issue (recharge battery, reduce load, allow cooling).
Remote control not working	Dead or incorrectly installed battery in remote.	Replace the 12V 23A battery in the remote control, ensuring correct polarity.

SPECIFICATIONS

- **Model:** LY-MSW3000W-12V

- **Continuous Power:** 3000 Watts
- **Peak Power:** 6000 Watts
- **Input Voltage:** 12V DC
- **Output Voltage:** 110V / 120V AC
- **Output Waveform:** Modified Sine Wave
- **AC Outlets:** 4
- **USB Output:** 5V
- **Product Dimensions:** 14.88 x 7.09 x 5.51 inches
- **Item Weight:** 7.72 pounds
- **Recommended Uses:** Vehicle, Office, RV, Outdoor, Camping, Home, Solar Inverter System
- **Power Source:** Solar and Battery Powered
- **Manufacturer:** Guangzhou LVYUAN Technology Co., Ltd.
- **Country of Origin:** China

Upgrade Modified Sine Wave TECHNOLOGY

3000W

CONTINUOUS POWER

6000W

SURGE POWER

- Clean, Smooth Power
- Sturdy Aluminum Alloy Body
- Temperature Controlled Fan



High Frequency Transformers



Powerful Built-in Heat Sink & Cooling Fan



High Performance Capacitors



Sturdy & Thick Aluminum Housing



High Inductive Loads

Figure 11: The inverter utilizes advanced technology for efficient power conversion.

WARRANTY AND SUPPORT

For warranty information, technical support, or any inquiries regarding your LUYUAN Power Inverter, please refer to the contact details provided on the product packaging or visit the official LUYUAN website. Keep your purchase receipt for warranty claims.