

## LVYUAN 1500W

# LVYUAN 1500W Car Power Inverter

## USER MANUAL

### 1. Introduction

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Thank you for choosing the LVYUAN 1500W Car Power Inverter. This device is designed to convert 12V DC power from your vehicle's battery into 110V AC household power, allowing you to operate various electronic devices on the go. This manual provides essential information for the safe and efficient operation of your inverter. Please read it thoroughly before use and retain it for future reference.

### 2. Product Overview

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The LVYUAN 1500W Car Power Inverter offers a reliable solution for your mobile power needs. It provides 1500 Watts of continuous modified sine wave power and up to 3000 Watts of peak power, suitable for a wide range of applications.

#### Key Features:

- **Powerful Output:** Converts 12V DC to 110V AC, providing 1500W continuous and 3000W peak power.
- **Multiple Power Outlets:** Equipped with 2 AC sockets and 2 USB charging ports.
- **Convenient LED Display:** Monitors battery voltage, output voltage, power output, and fault codes.
- **6 Protection Modes:** Includes over-voltage, under-voltage, overload, over-temperature, short circuit, and reverse polarity protection.
- **Efficient Heat Dissipation:** Robust aluminum alloy body and temperature-controlled cooling fan.
- **Versatile Applications:** Ideal for outdoor activities, home use, solar systems, emergency backup, trucks, yachts, and RVs.

#### Component Identification:



Figure 2.1: Front (AC) and Rear (DC) Views of the Inverter with Labeled Components. The AC side features two standard US outlets, a voltage display, an ON/OFF switch, an LED indicator, and USB charging ports. The DC side includes positive and negative input terminals and a cooling fan.

# LED DISPLAY

Monitor the Operation Status Anytime



Figure 2.2: Detailed view of the LED Display, which cycles through Battery Voltage, Output Voltage, and Output Power, providing real-time operational status.

## 3. Setup and Installation

Proper installation is crucial for the safe and efficient operation of your inverter.

### Connecting to a 12V Power Source:

1. **Prepare the Inverter:** Ensure the inverter's ON/OFF switch is in the 'OFF' position.
2. **Connect Cables:** Use the provided cables. Connect the red cable to the positive (+) terminal of the inverter and the black cable to the negative (-) terminal.
3. **Connect to Battery:** For direct battery connection, attach the other end of the red cable to the

positive (+) terminal of your 12V battery and the black cable to the negative (-) terminal. Ensure connections are tight and secure.

4. **Cigarette Lighter Plug (for lower power devices):** For loads under 150W, you may use the included cigarette lighter plug cable. Connect it to the inverter's DC input and then plug it into your vehicle's cigarette lighter socket.
5. **Ventilation:** Place the inverter in a well-ventilated area, away from direct sunlight, heat sources, and flammable materials. Ensure there is adequate space around the unit for air circulation.

**Important: Always connect the inverter to the battery before turning it on. Ensure correct polarity (red to positive, black to negative) to prevent damage to the inverter and battery.**

## 4. Operating Instructions

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Follow these steps to operate your LUYUAN 1500W Car Power Inverter:

1. **Power On:** After connecting the inverter to the 12V power source, switch the inverter's ON/OFF button to the 'ON' position. The LED indicator will illuminate, and the LED display will show the battery voltage.
2. **Connect Devices:** Plug your AC-powered devices into the 110V AC outlets and your USB-powered devices into the USB charging ports.
3. **Monitor Display:** The LED display will cycle through Battery Voltage, Output Voltage, and Output Power, allowing you to monitor the inverter's status in real-time.
4. **Power Off:** When you are finished using the inverter, first disconnect all devices from the AC outlets and USB ports. Then, switch the inverter's ON/OFF button to the 'OFF' position. Finally, disconnect the inverter from the 12V power source.

### Understanding Power Ratings:

This inverter provides 1500 Watts of continuous power, meaning it can safely power devices that collectively draw up to 1500W for extended periods. It has a peak power rating of 3000 Watts, which is the maximum power it can supply for a very short duration (e.g., during the startup of certain motors or appliances).

# Universal **1500W** Car Power Inverter



Figure 4.1: Examples of devices compatible with the LVYUAN 1500W Car Power Inverter. Ensure the total wattage of connected devices does not exceed 1500W for continuous operation.

## 5. Safety Precautions

To ensure safe operation and prolong the life of your inverter, observe the following precautions:

- Do not open the inverter casing. There are no user-serviceable parts inside.
- Keep the inverter away from water, moisture, and extreme temperatures.
- Ensure proper ventilation to prevent overheating. The intelligent temperature-controlled fan will activate when needed.
- Do not connect the inverter to AC distribution wiring.
- Avoid connecting devices that exceed the inverter's continuous power rating (1500W).

- Always connect the inverter to a 12V DC power source only.
- Keep out of reach of children.

### Built-in Protection Modes:

The inverter is equipped with 6 protection modes to safeguard itself and your devices:

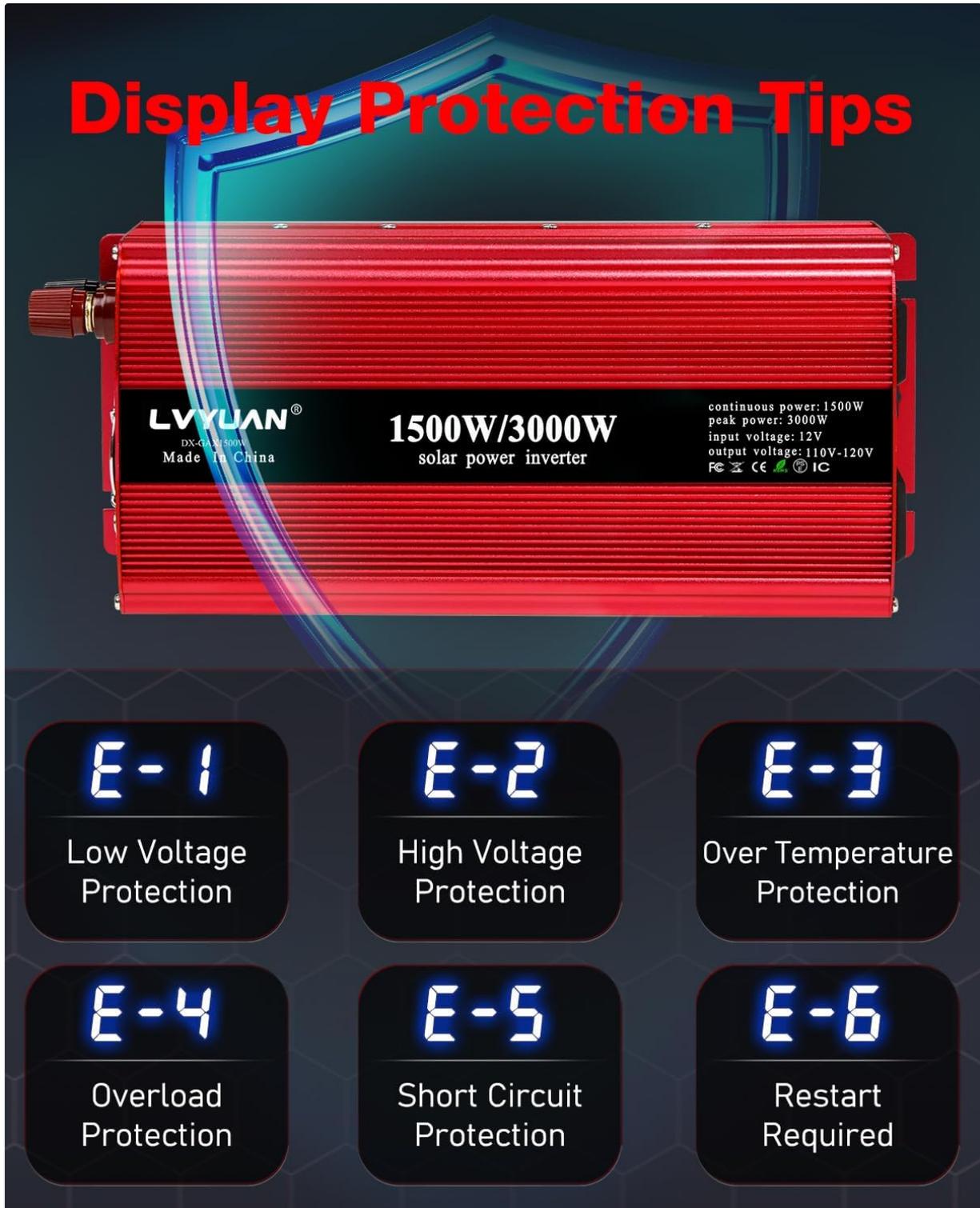


Figure 5.1: Visual representation of the inverter's error codes and their corresponding protection types.

- **E-1: Low Voltage Protection:** Activates when input voltage drops too low.
- **E-2: High Voltage Protection:** Activates when input voltage rises too high.
- **E-3: Overtemperature Protection:** Activates when the internal temperature exceeds safe limits.
- **E-4: Overload Protection:** Activates when connected load exceeds the inverter's capacity.
- **E-5: Short Circuit Protection:** Activates in case of a short circuit in the output.

- **E-6: Repeated Faults Shutdown, Restart Required:** Indicates multiple protection activations, requiring a manual restart.

## 6. Maintenance

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

- **Cleaning:** Periodically clean the exterior of the inverter with a dry, soft cloth. Ensure ventilation openings are free from dust and debris. Do not use liquid cleaners.
- **Connections:** Regularly check all cable connections to ensure they are tight and secure. Loose connections can cause overheating and poor performance.
- **Storage:** When not in use for extended periods, store the inverter in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Fuse Replacement:** The inverter includes extra fuses. If the inverter stops working and no fault code is displayed, check the fuses. Refer to the troubleshooting section for guidance on fuse replacement.

## 7. Troubleshooting

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

Problem / Fault Code	Possible Cause	Solution
No power / Inverter not turning on	Loose battery connections; Dead battery; Blown fuse; Inverter switch OFF.	Check and tighten all connections; Recharge/replace battery; Replace fuses; Ensure switch is ON.
<b>E-1: Low Voltage Protection</b>	Input voltage below 10.5V (for 12V system).	Recharge or replace the battery.
<b>E-2: High Voltage Protection</b>	Input voltage above 15.5V (for 12V system).	Check vehicle's charging system; Ensure correct battery voltage.
<b>E-3: Overtemperature Protection</b>	Inverter is too hot due to poor ventilation or excessive load.	Reduce load; Ensure proper ventilation; Allow inverter to cool down.
<b>E-4: Overload Protection</b>	Connected device(s) draw too much power.	Disconnect some devices; Ensure total wattage is within 1500W continuous.
<b>E-5: Short Circuit Protection</b>	Short circuit detected at the output.	Disconnect all devices; Check for faulty wiring or damaged appliances.
<b>E-6: Repeated Faults Shutdown</b>	Multiple protection events occurred.	Turn off the inverter, disconnect from power source, wait a few minutes, then reconnect and restart. Address underlying issues.

Problem / Fault Code	Possible Cause	Solution
Low output power / Device not working correctly	Battery voltage too low; Cable gauge too small; Device requires pure sine wave.	Recharge battery; Use thicker cables for high loads; Note this is a modified sine wave inverter, some sensitive electronics may not operate optimally.

## 8. Specifications

Feature	Detail
Model Number	1500W
Continuous Power	1500 Watts
Peak Power	3000 Watts
Input Voltage	12V DC
Output Voltage	110V AC
Output Waveform	Modified Sine Wave
Conversion Efficiency	> 85%
USB Output	2 USB charging ports
Product Dimensions	10.24 x 4.13 x 2.17 inches (26 x 10.5 x 5.5 cm)
Item Weight	3 pounds (1.36 kg)
Heat Dissipation	Aluminum alloy body, Temperature-controlled fan



Figure 8.1: Physical dimensions of the Lvyuan 1500W Car Power Inverter.

## 9. Package Contents

The following items are included in your Lvyuan 1500W Car Power Inverter package:

- Lvyuan 1500W Car Power Inverter
- Battery Clamp Cables (Red and Black)
- Cigarette Lighter Plug Cable
- Instruction Manual (this document)
- Extra Fuses



Figure 9.1: The Lvyuan 1500W Inverter and its accompanying accessories.

## 10. Warranty and Support

For warranty information and customer support, please refer to the documentation provided with your purchase or contact Lvyuan directly through their official channels. You can also visit the [Lvyuan Store on Amazon](#) for more details.

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### Related Documents - 1500W



#### [Lvyuan Pure Sine Wave DC/AC Inverter Instruction Manual](#)

Comprehensive instruction manual for Lvyuan Pure Sine Wave DC/AC Inverters, detailing safety precautions, product features, installation, usage, protection functions, fuse replacement, troubleshooting, and warranty information.

 <p>取扱説明書</p>	<p><a href="#">LVYUAN SPI-10K-UP</a></p> <p>LVYUAN SPI-10K-UP</p>
 <p>取扱説明書</p>	<p><a href="#">LVYUAN DC10 Smart Battery Charger: Features, Specifications, and Usage Guide</a></p> <p>Comprehensive guide to the LVYUAN DC10 Smart Battery Charger, covering its product description, applications, technical specifications, operating instructions, performance characteristics, and important safety precautions for charging 12V and 24V lead-acid batteries.</p>
 <p>取扱説明書</p>	<p><a href="#">LVYUAN HSI3500</a></p> <p>LVYUAN® 3kW-24V : HSI3500</p>
 <p>取扱説明書</p>	<p><a href="#">LVYUAN Car Refrigerator Freezer User Manual</a></p> <p>Comprehensive user manual for the LVYUAN Car Refrigerator Freezer, covering features, safety precautions, operation, maintenance, and troubleshooting.</p>
 <p>取扱説明書</p>	<p><a href="#">LVYUAN Folding Solar Panel CSUL Series User Manual</a></p> <p>User manual for the LVYUAN CSUL series folding solar panels, providing safety instructions, usage guidelines, FAQs, product specifications, and warranty information.</p>