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> DATOUBOSS 2500W Pure Sine Wave Inverter User Manual (Model 486072)

DATOUBOSS 486072

DATOUBOSS 2500W Pure Sine Wave Inverter User Manual

MODEL: 486072

1. Introduction

Thank you for choosing the DATOUBOSS 2500W Pure Sine Wave Inverter. This device is designed to convert DC power from your battery bank (48V, 60V, or 72V) into stable 220V AC power, suitable for a wide range of sensitive electronic devices and appliances. This manual provides essential information for safe installation, operation, maintenance, and troubleshooting.

Please read this manual thoroughly before using the inverter to ensure optimal performance and safety.

2. Important Safety Instructions

Failure to follow these safety guidelines may result in electric shock, fire, or serious injury.

- **Read all instructions:** Before operating the inverter, carefully read and understand all instructions and warnings in this manual.
- **Keep away from water:** Do not expose the inverter to rain, moisture, or operate it near water.
- **Proper ventilation:** Ensure the inverter is installed in a well-ventilated area. Do not block ventilation openings.
- **Avoid flammable materials:** Do not install or operate the inverter near flammable materials, gases, or vapors.
- **Correct voltage:** Connect the inverter only to battery systems with the specified DC voltage (48V, 60V, or 72V).
- **Grounding:** Ensure the inverter is properly grounded according to local electrical codes.
- **Qualified personnel:** All electrical work should be performed by qualified personnel.
- **Disconnect power:** Always disconnect power from the battery before performing any maintenance or wiring.
- **Children and pets:** Keep the inverter out of reach of children and pets.

3. Product Overview

The DATOUBOSS 2500W Pure Sine Wave Inverter features a robust design with multiple input voltage options and comprehensive protection systems.

3.1. Inverter Components

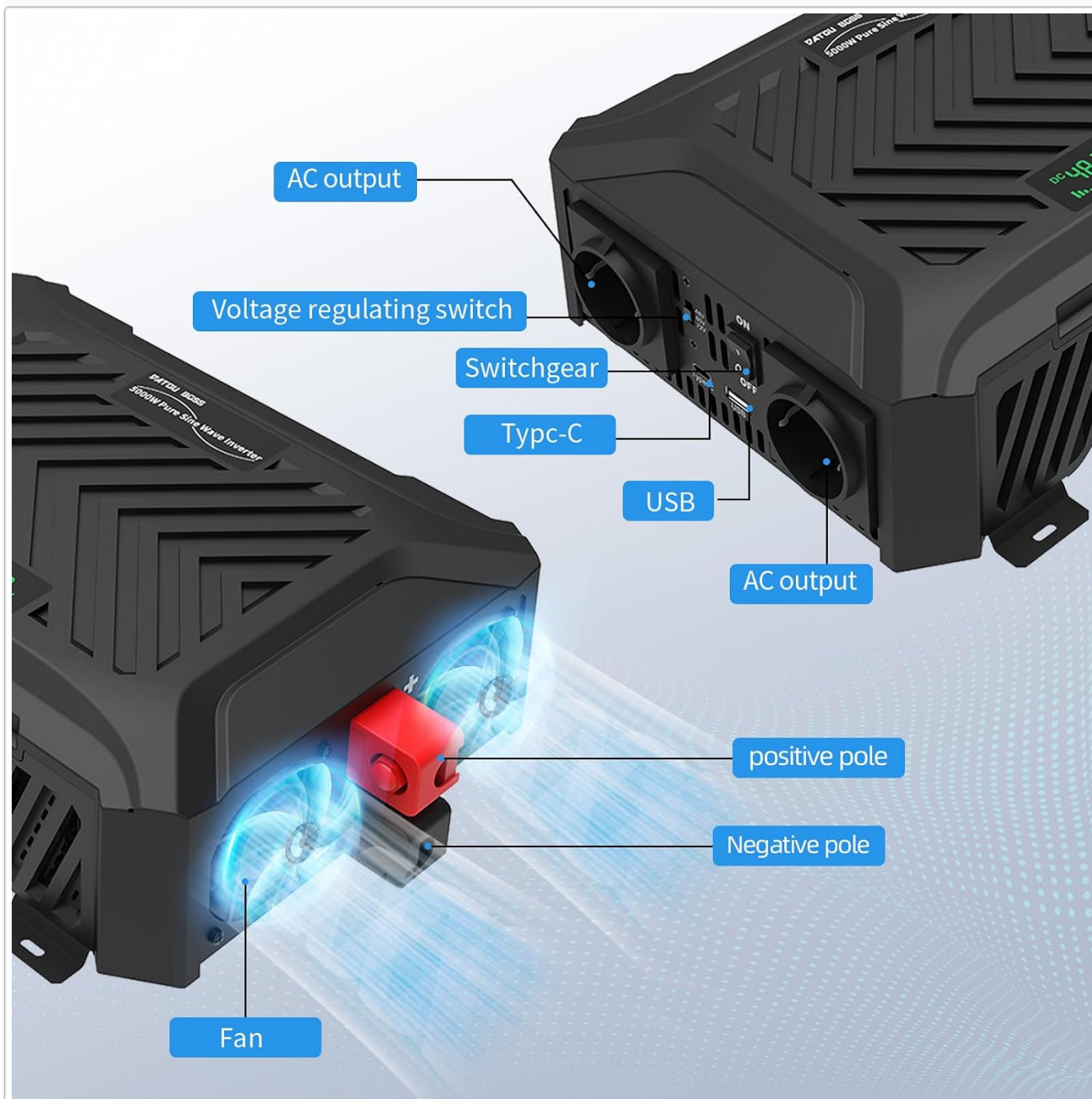


Figure 1: Inverter External Components. This image provides a clear breakdown of the inverter's external features, including AC output sockets, voltage regulating switch, USB and Type-C ports, power switch, and the positive and negative terminals with integrated cooling fans.

- **AC Output Sockets:** Two standard EU sockets for connecting AC appliances.
- **Voltage Regulating Switch:** Allows manual selection of 48V, 60V, or 72V input mode.
- **USB & Type-C Ports:** For charging compatible USB devices.
- **Power Switch:** To turn the inverter ON or OFF.
- **DC Input Terminals:** Red for positive (+), Black for negative (-) battery connection.
- **Cooling Fans:** Automatically activate to dissipate heat and maintain optimal operating temperature.

3.2. LCD Display



Figure 2: LCD Display Information. A close-up of the inverter's LCD screen, detailing the information displayed: input voltage, output voltage, real-time power, battery level indicator, output frequency (50Hz/60Hz), and icons for high voltage, low voltage, overheating, and overload protection.

- **Input Voltage (DC):** Displays the current DC voltage from the battery.
- **Output Voltage (AC):** Shows the AC output voltage provided by the inverter.
- **Real-time Power:** Indicates the current power consumption of connected devices in Watts.
- **Battery Level:** Graphic representation of the battery charge status.
- **Output Frequency:** Displays the AC output frequency (50Hz or 60Hz).
- **Protection Indicators:** Icons for high voltage, low voltage, overheating, and overload protection will illuminate if activated.

4. Setup and Installation

4.1. Unpacking

Carefully remove the inverter from its packaging. Inspect for any damage during transit. Retain packaging for future storage or shipping.

4.2. Placement

- Install the inverter in a dry, cool, and well-ventilated area.
- Avoid direct sunlight, heat sources, and moisture.
- Ensure adequate clearance around the inverter for proper airflow, especially around the cooling fans.
- Mount the inverter securely on a stable surface using the integrated mounting brackets.

4.3. Wiring Connections

Important: Ensure the inverter is OFF before making any connections. Connect the battery cables with correct polarity to avoid damage.



Figure 3: Typical Inverter Connection Diagram. An illustration demonstrating how the 2500W Pure Sine Wave Inverter connects to 48V/60V/72V battery banks to provide stable AC power for sensitive devices like refrigerators, computers, kettles, electric drills, and microwave ovens.

1. Connect DC Input Cables:

- Connect the red cable to the positive (+) terminal of your battery bank and the red (+) terminal on the inverter.
- Connect the black cable to the negative (-) terminal of your battery bank and the black (-) terminal on the

inverter.

- Ensure all connections are tight and secure. Loose connections can cause overheating and damage.

2. **Grounding:** Connect a grounding wire from the inverter's chassis ground terminal to a suitable earth ground point.
3. **Connect AC Appliances:** Once the inverter is powered on, you can plug your AC appliances into the inverter's AC output sockets.

5. Operating Instructions

5.1. Powering On/Off

- **To Power On:** Ensure all connections are secure. Press the power switch to the 'ON' position. The LCD display will illuminate, showing current operating parameters.
- **To Power Off:** Disconnect all AC appliances from the inverter. Press the power switch to the 'OFF' position.

5.2. Voltage Selection

This inverter supports 48V, 60V, and 72V DC input. You must select the correct voltage mode to match your battery bank.



Figure 4: Manual Voltage Regulating Switch. A hand is shown adjusting the voltage regulating switch on the inverter, allowing users to manually select the input voltage mode (48V, 60V, or 72V) to match their battery system.



Figure 5: Automatic Voltage Detection and Adjustment. This diagram illustrates the inverter's intelligent system that automatically

detects and adapts to 48V, 60V, or 72V battery voltages, maintaining a stable 220V/230V AC output with 2500W rated power and 5000W peak power.

- Use the voltage regulating switch on the inverter to select the appropriate input voltage (48V, 60V, or 72V) that matches your battery system.
- The inverter features an intelligent detection system that can automatically recognize and adapt to the battery voltage once selected.

5.3. Connecting AC Devices

- Ensure the total power consumption of all connected devices does not exceed the inverter's continuous power rating (2500W).
- Plug your AC devices directly into the EU sockets on the inverter.
- For sensitive electronics, the pure sine wave output ensures stable and clean power, similar to grid electricity.

5.4. USB and Type-C Charging

The integrated USB and Type-C ports can be used to charge compatible portable electronic devices.

6. Maintenance

- **Cleaning:** Periodically clean the exterior of the inverter with a dry, soft cloth. Do not use liquid cleaners or solvents.
- **Ventilation:** Ensure the ventilation openings are free from dust and debris to prevent overheating.
- **Connections:** Regularly check all electrical connections (DC input, AC output, grounding) to ensure they are tight and free from corrosion.
- **Storage:** If storing the inverter for an extended period, ensure it is clean, dry, and stored in a cool, well-ventilated area.

7. Troubleshooting

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

New Upgrade Ic Chip

Quick Response & Security Upgrade



Figure 6: Inverter Protection Features. This graphic highlights the inverter's advanced protection system, including safeguards against overvoltage, low voltage, short circuits, overload, and overheating, ensuring safe and reliable operation.

Problem	Possible Cause	Solution
Inverter does not turn on.	No DC input power; Loose battery connections; Low battery voltage.	Check battery connections and polarity. Ensure battery voltage is within operating range. Charge battery if low.
No AC output.	Overload protection activated; Overheat protection activated; Short circuit.	Reduce load on the inverter. Allow inverter to cool down. Check for short circuits in connected devices.
Low output power.	Low battery voltage; Excessive cable length or gauge.	Charge battery. Use shorter, thicker cables for DC input.

Problem	Possible Cause	Solution
Abnormal noise from inverter.	Cooling fan operating; Overload condition.	Cooling fan noise is normal during operation, especially under load. If noise is excessive or unusual, reduce load.
LCD display shows error.	Specific protection activated (e.g., high/low voltage, overheat, overload).	Refer to the LCD display indicators (Figure 2) to identify the specific protection. Address the underlying cause (e.g., reduce load, check battery voltage, ensure ventilation).

8. Specifications

Feature	Detail
Brand	DATOUBOSS
Model Number	486072
Continuous Power	2500 Watts
Peak Power	5000 Watts
Input Voltage	48V / 60V / 72V DC (Selectable)
Output Voltage	220V AC
Output Waveform	Pure Sine Wave
Efficiency	>92%
Dimensions (L x W x H)	36 cm x 24 cm x 10 cm (14.2 in x 9.5 in x 3.9 in)
Weight	3.6 Kilograms (7.9 lbs)
Color	Black
Recommended Uses	Office, Home, Vehicle (RV, Marine, Solar Systems)
Protection Features	Overload, Short-circuit, Overheat, Under-voltage, Over-voltage
Output Ports	2 x EU AC Sockets, 1 x USB, 1 x USB Type-C

9. Warranty and Support

Specific warranty details are not provided in the product information. For warranty claims, technical support, or service inquiries, please contact DATOUBOSS customer service through your purchase platform or the official DATOUBOSS website. Please have your model number (486072) and purchase date available when contacting support.

