YNITJH CJ-4000Q

YNITJH Pure Sine Wave Inverter User Manual

Model: CJ-4000Q (4000W 12V to 220V)

1. Introduction

This manual provides essential information for the safe and efficient operation of your YNITJH Pure Sine Wave Inverter. This device is designed to convert direct current (DC) power from a 12V battery source into alternating current (AC) power, specifically 220V, suitable for powering various electronic devices and appliances. It is ideal for use in motorhomes, during camping trips, or as a reliable power source during outages.
Please read this manual thoroughly before installation and operation to ensure proper use and to prevent damage to the inverter or connected devices.

2. Safety Information

Adhering to these safety guidelines is crucial for preventing personal injury and damage to the inverter or other equipment.

- **Electrical Safety:** Always ensure the inverter is disconnected from the battery before performing any maintenance or connection adjustments. Work in a dry environment and avoid contact with water.
- **Ventilation:** The inverter generates heat during operation. Ensure adequate ventilation around the unit. Do not block the cooling fans or vents. The inverter is equipped with dual cooling fans for efficient heat dissipation.
- **Battery Compatibility:** This specific model is designed for a 12V DC input. Ensure your battery system matches this voltage. Connecting to an incorrect voltage can damage the inverter.
- **Load Capacity:** Do not exceed the inverter's rated output power (4000W). Overloading can cause the inverter to shut down or be damaged. Refer to the specifications for continuous and peak power ratings.
- **Polarity:** Always connect the battery cables with correct polarity (positive to positive, negative to negative). Reverse polarity connection will trigger protection but can still cause damage over time.
- **Protection Features:** The inverter includes multiple built-in protections: overload protection, overheating protection, high and low voltage protection, short circuit protection, and reverse polarity protection. While these features enhance safety, they are not substitutes for proper handling.
- **Frequency Compatibility:** This inverter outputs 220V AC. Verify that the output frequency (e.g., 50Hz or 60Hz) of your specific inverter model matches the requirements of the appliances you intend to power and

your regional standard. Incorrect frequency can damage sensitive electronics.

- **Children and Pets:** Keep the inverter out of reach of children and pets.

3. Product Features

The YNITJH Pure Sine Wave Inverter offers a range of features designed for reliable and efficient power conversion:

- **Pure Sine Wave Output:** Provides clean and stable AC power, suitable for sensitive electronics and appliances, ensuring their optimal performance and longevity.
- **High Power Conversion:** Efficiently converts 12V DC to 220V AC, making it versatile for various applications.
- **Durable Construction:** Features an aluminum alloy shell for excellent heat dissipation and durability, designed to withstand various environmental conditions.
- **Efficient Cooling System:** Equipped with dual cooling fans that automatically activate to maintain optimal operating temperature, extending the inverter's lifespan.
- **Comprehensive Protection:** Built-in safety mechanisms include overload protection, overheat protection, low voltage alarm, low voltage lockout, short circuit protection, and reverse polarity protection.
- **LCD Display:** An accurate real-time LCD display provides clear information on input voltage, output voltage, frequency, load power, and internal temperature, allowing for easy monitoring.
- **Multiple Output Ports:** Includes two universal AC power sockets and one USB charging port, allowing you to power multiple devices simultaneously.
- **Versatile Applications:** Suitable for powering a wide range of devices in RVs, during camping, marine applications, home backup, and mobile office setups, including cameras, car refrigerators, kettles, and small household appliances.

Figure 3.1: Detailed view of the inverter's LCD display showing input voltage, output voltage, frequency, load power, and temperature. Also shown are internal components highlighting the thickened heat dissipation aluminum plate, aluminum magnesium alloy heat dissipation shell, high-density pure copper core wiring, and dual cooling fans.

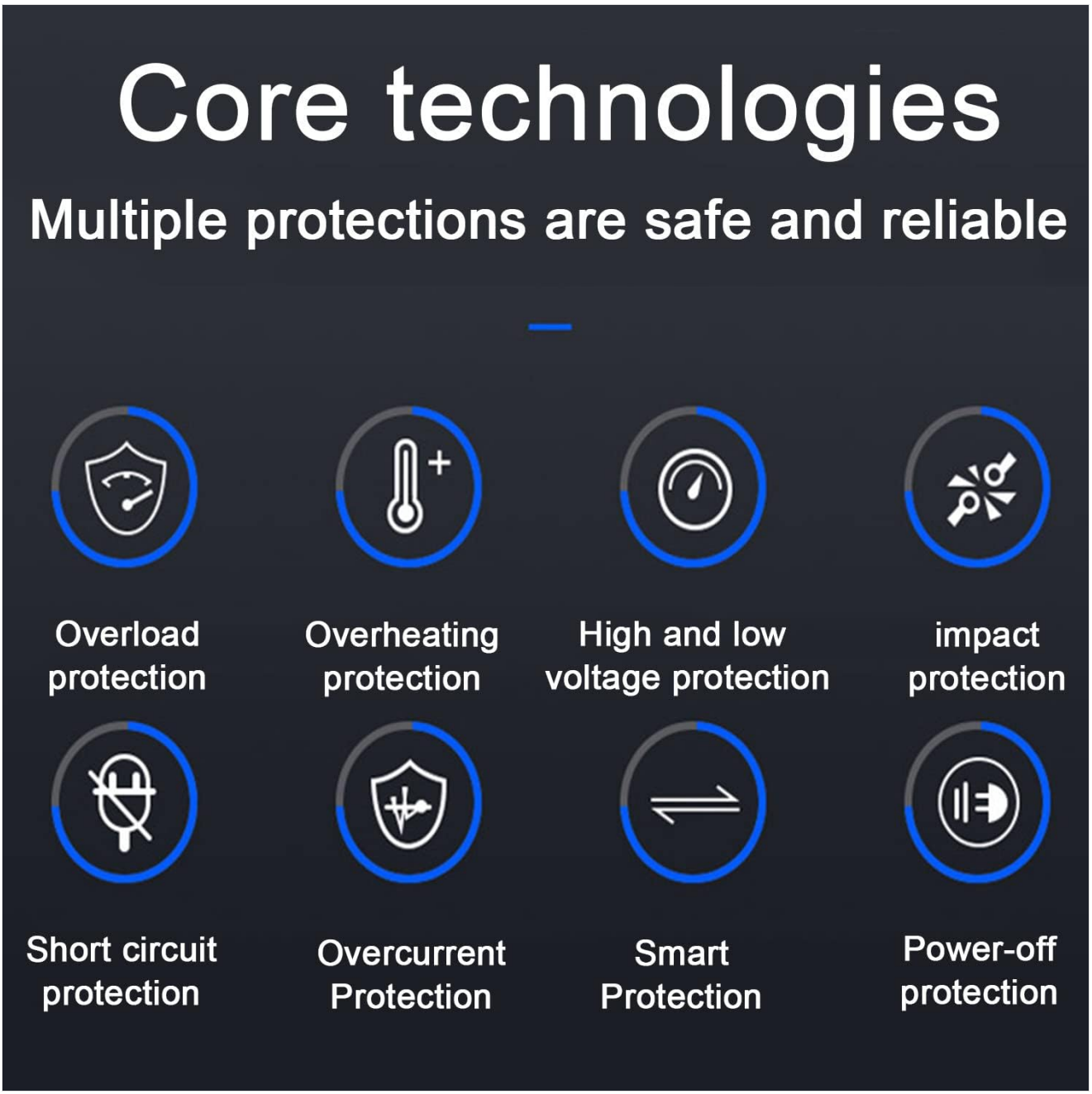

Figure 3.2: Icons representing the core protection technologies integrated into the inverter, including overload protection, overheating protection, high and low voltage protection, impact protection, short circuit protection, overcurrent protection, smart protection, and power-off protection.

4. Setup and Installation

Proper installation is critical for the inverter's performance and safety.

4.1 Choosing a Location

- Select a cool, dry, and well-ventilated area.
- Avoid direct sunlight, heat sources, and moisture.
- Ensure there is sufficient space around the inverter for air circulation, especially around the cooling fans.
- Mount the inverter securely to prevent movement or accidental dislodgement.

4.2 Connecting to a Battery System

This inverter requires a 12V DC battery system. For optimal performance and safety, use appropriate gauge cables for your inverter's wattage and cable length. Shorter, thicker cables are recommended to minimize voltage drop.

1. Ensure the inverter's power switch is in the "OFF" position.
2. Connect the positive (+) terminal of the inverter to the positive (+) terminal of the 12V battery.
3. Connect the negative (-) terminal of the inverter to the negative (-) terminal of the 12V battery.
4. Ensure all connections are tight and secure to prevent arcing and overheating.

4.3 Connecting to a Car (for lower wattage models or specific applications)

While the 4000W model typically requires direct battery connection due to high current draw, some lower wattage variants of this product line may support connection via a car cigarette lighter socket. If your specific model supports this, ensure the vehicle's electrical system can handle the load. For the 4000W model, direct connection to the vehicle's main battery is mandatory.

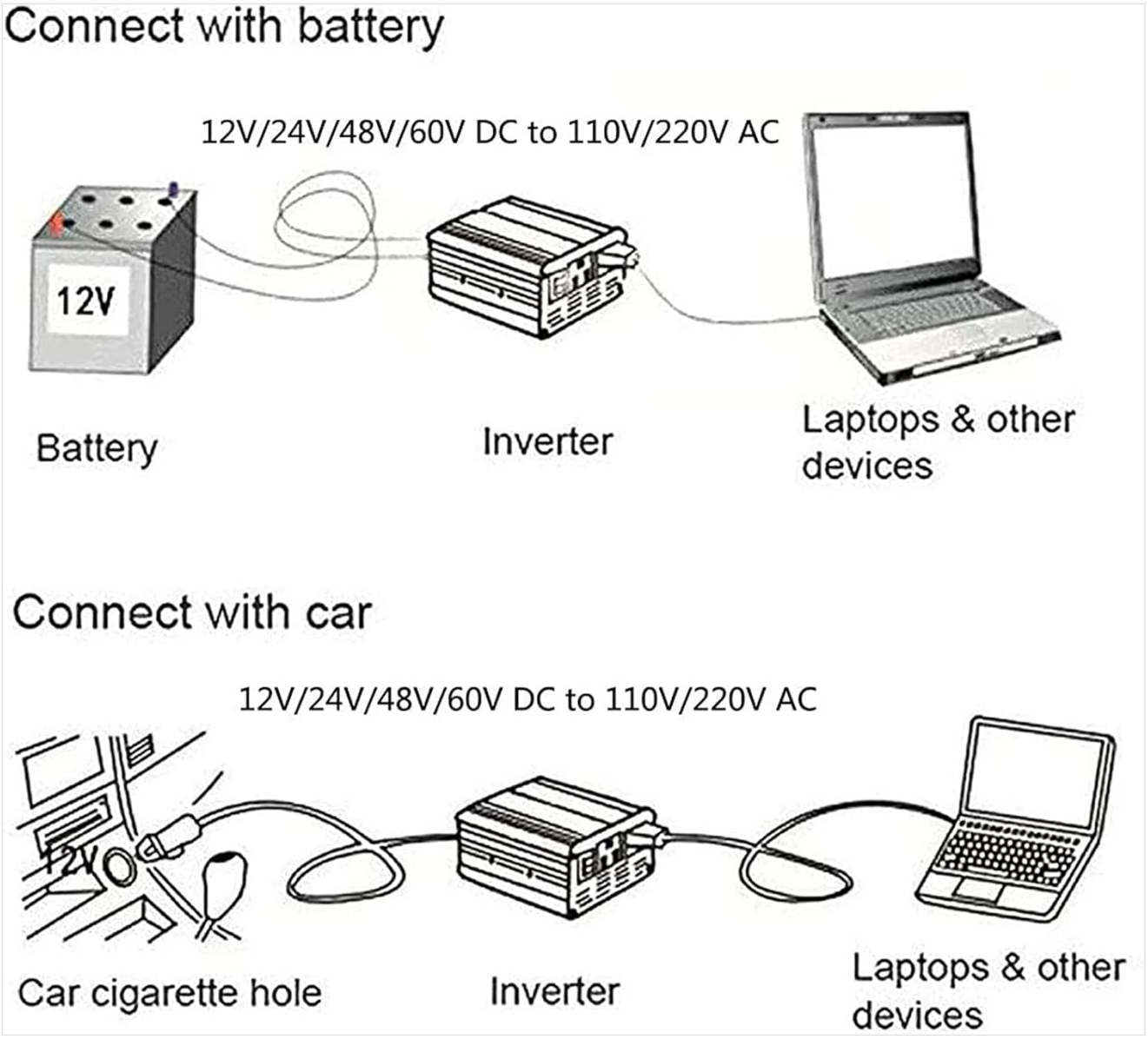

Figure 4.1: Diagrams illustrating how to connect the inverter to a 12V battery system and how lower wattage inverters might connect via a car cigarette hole to power laptops and other devices.

5. Operating Instructions

5.1 Powering On/Off

1. After ensuring all connections are secure, switch the inverter's power button to the "ON" position.
2. The LCD display will illuminate, showing real-time operational data.

3. To power off, switch the inverter's power button to the "OFF" position.

5.2 Connecting Appliances

- Plug your 220V AC appliances into the universal AC outlets on the inverter.
- For USB-powered devices, connect them to the USB charging port.
- Ensure the total wattage of all connected appliances does not exceed the inverter's continuous power rating (4000W).
- Some appliances, especially those with motors (e.g., refrigerators, pumps), have a high starting (surge) power requirement. Ensure the inverter's peak power rating can handle these surges.

Figure 5.1: A visual guide showing various types of appliances that can be powered by an inverter, including refrigerators, televisions, power tools, fans, blenders, kettles, ice cream machines, and more. Note: Different power appliances require different power inverters based on their wattage and surge requirements.

5.3 Understanding the LCD Display

The LCD provides real-time feedback on the inverter's status:

- **Input Voltage (V):** Displays the current DC voltage from your battery.
- **Output Voltage (V):** Shows the AC output voltage (e.g., 220V).
- **Frequency (Hz):** Indicates the AC output frequency (e.g., 50Hz).
- **Load Power (W):** Displays the current power consumption of connected devices.
- **Temperature (°C):** Shows the internal temperature of the inverter.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your inverter.

- **Cleaning:** Keep the inverter clean and free of dust and debris. Use a dry cloth to wipe the exterior. Do not use liquid cleaners.
- **Ventilation:** Periodically check that the cooling fans and vents are clear and unobstructed. Dust buildup can impair cooling efficiency.
- **Connections:** Regularly inspect battery and output connections for tightness. Loose connections can cause overheating and power loss.
- **Storage:** If storing the inverter for an extended period, ensure it is disconnected from the battery and stored in a cool, dry place.

7. Troubleshooting

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

Problem	Possible Cause	Solution
No power output / Inverter not turning on	Inverter switch is OFF Loose battery connections Battery voltage too low Reverse polarity connection Internal fuse blown	Turn the inverter switch to ON. Check and tighten all battery cable connections. Recharge or replace the battery. Correct the battery cable polarity. Contact customer support for fuse replacement.
Overload alarm / Inverter shuts down	Connected load exceeds inverter's capacity Appliance surge power too high	Reduce the total wattage of connected appliances. Disconnect high surge appliances or use a higher wattage inverter.
Overheat alarm / Inverter shuts down	Insufficient ventilation Ambient temperature too high Excessive load for prolonged periods	Ensure cooling fans and vents are clear. Move the inverter to a cooler, well-ventilated area. Reduce the load or allow the inverter to cool down.
Low voltage alarm	Battery voltage is too low	Recharge or replace the battery.

Problem	Possible Cause	Solution
Inverter gets hot, appliances malfunction (e.g., in Europe)	Output frequency mismatch (e.g., 60Hz inverter used in 50Hz region)	Verify the inverter's output frequency (e.g., 50Hz or 60Hz) matches your regional standard and the requirements of your appliances. If mismatched, this inverter model may not be suitable for your region.

8. Specifications

Attribute	Detail
Model Name	CJ
Item Model Number	CJ-4000Q
Brand	YNITJH
Wattage (Rated)	4000W (This specific variant)
Wattage (Max/Peak)	8000W (as per product title, general range)
Input Voltage	12V DC (This specific variant)
Output Voltage	220V AC (This specific variant)
Power Source	Battery Powered
Package Dimensions	11.81 x 9.06 x 4.33 inches
Item Weight	4.4 pounds
Recommended Uses	Car, Travel, Camping, Recreational Vehicle, Road trips, Business trip, Laptop, Small electronics, Household appliances, Smart phone, Tablet, Digital camera, pump, Journey, Workshop

9. Warranty and Support

For specific warranty details and duration, please refer to the product packaging or contact the seller directly. Warranty terms may vary based on your region and point of purchase.
If you encounter any issues not covered in the troubleshooting section or require further assistance, please contact the seller or manufacturer (YNITJH) through the platform where you purchased the product. Provide your order number and a detailed description of the issue for prompt support.