ALEOPIX RT-PSW-1500W+RC

ALEOPIX 1500W Pure Sine Wave Power Inverter User Manual

Model: RT-PSW-1500W+RC

1. Product Overview

The ALEOPIX 1500W Pure Sine Wave Power Inverter converts 12V DC battery power into 110V/120V AC household electricity. This inverter is designed to provide clean, stable power, suitable for sensitive electronics and appliances. Its pure sine wave output mimics grid power, ensuring compatibility and efficient operation for a wide range of devices.

Key features include a 1500W continuous output with a 3000W surge capability, dual AC outlets, a 5V 3.4A USB port, a digital display for monitoring, and a remote controller for convenient operation.

Image 1.1: The ALEOPIX 1500W Pure Sine Wave Power Inverter, showcasing its main unit, remote control, and included cables.

2. Safety Instructions

Please read all safety instructions carefully before installation and operation. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Ventilation:** Ensure the inverter is installed in a well-ventilated area. Do not block ventilation openings.
- **Moisture:** Do not expose the inverter to rain, water, or excessive moisture.
- **Flammable Materials:** Keep the inverter away from flammable materials, gases, or liquids.
- **Grounding:** Always ensure the inverter is properly grounded according to local electrical codes.
- **Wiring:** Use appropriate gauge wiring for all connections. Incorrect wiring can cause overheating and fire.
- **Overload:** Do not exceed the inverter's rated continuous power output. Overloading can damage the inverter and connected appliances.
- **Children:** Keep the inverter and all electrical connections out of reach of children.
- **Maintenance:** Only qualified personnel should perform maintenance or repairs.

- **Battery Connection:** Connect the inverter to a 12V DC battery system only. Ensure correct polarity (+ to + and - to -).

3. Package Contents

Verify that all items are present in the package:

- 1500 Watt Pure Sine Wave Inverter (1 unit)
- Battery Cables (2 units - one positive, one negative)
- Remote Control (1 unit)
- Ground Wire (1 unit)
- User Manual/Instruction (1 unit)

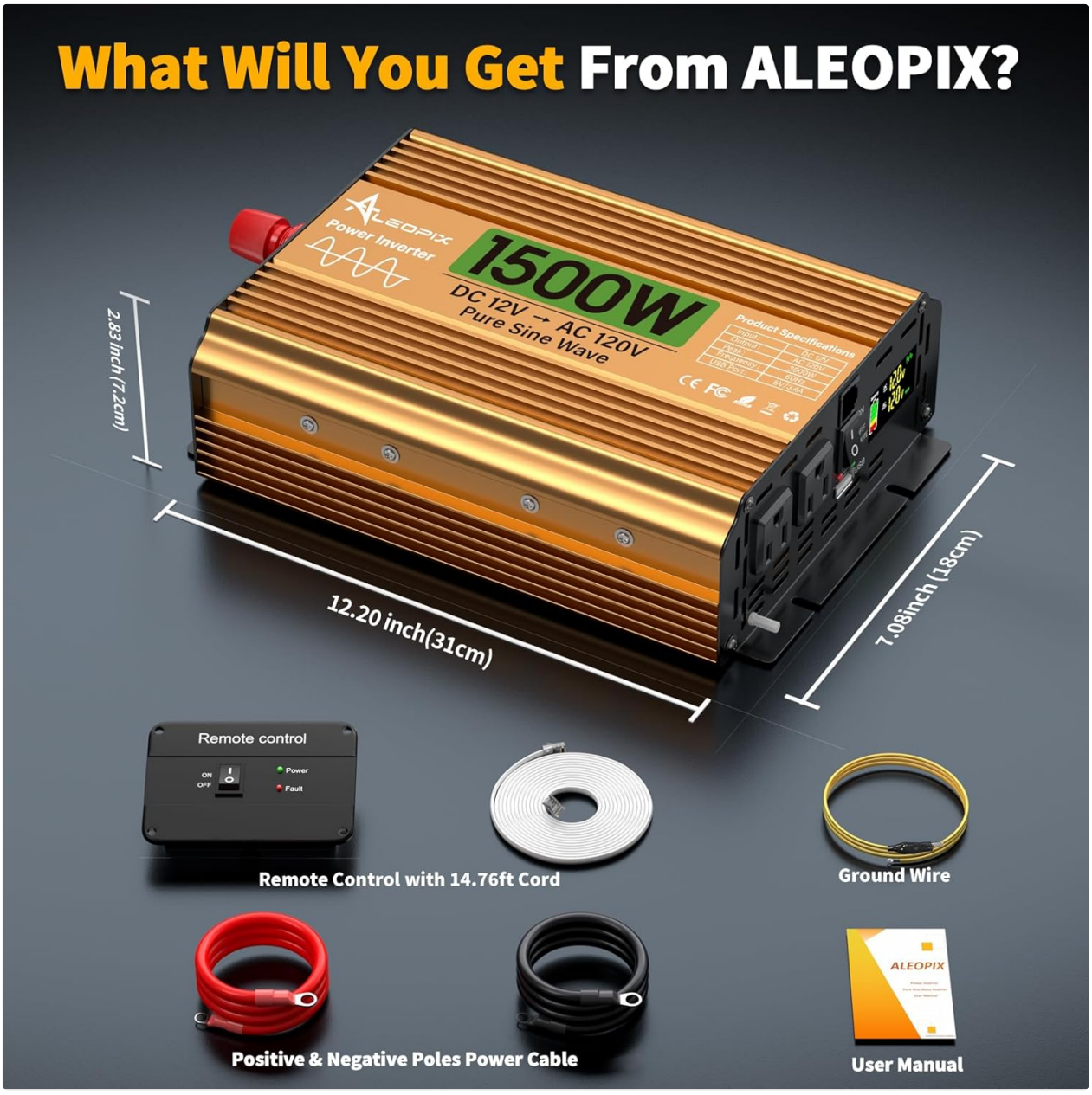

Image 3.1: Visual representation of all components included in the ALEOPIX 1500W Pure Sine Wave Inverter package.

4. Product Features and Components

The ALEOPIX 1500W Inverter is equipped with several features for user convenience and safety:

- **Pure Sine Wave Output:** Provides clean and stable AC power, safe for sensitive electronics.
- **Digital LED Display:** Shows real-time battery voltage, AC output voltage, and battery level.
- **Dual AC Sockets:** Two standard 110V/120V AC outlets for connecting multiple devices.
- **USB Port:** One 5V 3.4A USB port for charging mobile devices.
- **Remote Control Port:** Allows connection of the included remote control for convenient power management.
- **ON/OFF Button:** Main power switch on the inverter unit.
- **Dual Cooling Fans:** Smart temperature-controlled fans activate automatically to prevent overheating.
- **Positive and Negative Terminals:** Secure connection points for 12V DC battery cables.

Image 4.1: Front and rear views of the inverter highlighting the LED display, AC outlets, USB port, remote port, and cooling fans.

5. Setup Instructions

Follow these steps for proper installation and connection of your inverter:

1. **Choose a Location:** Select a dry, well-ventilated area away from direct sunlight, heat sources, and flammable materials. Ensure sufficient space around the inverter for airflow.

2. **Connect Ground Wire:** Connect one end of the included ground wire to the inverter's grounding terminal and the other end to a reliable earth ground (e.g., vehicle chassis, ground rod).
3. **Connect Battery Cables:**
    - Connect the **red** positive (+) battery cable to the inverter's positive (+) terminal.
    - Connect the **black** negative (-) battery cable to the inverter's negative (-) terminal.
    - Connect the other end of the **red** positive (+) cable to the positive (+) terminal of your 12V DC battery.
    - Connect the other end of the **black** negative (-) cable to the negative (-) terminal of your 12V DC battery.

    Important: Ensure all connections are tight and secure to prevent loose connections, which can cause sparks or overheating. Verify correct polarity before proceeding.
4. **Connect Remote Control (Optional):** Plug the remote control cable into the designated remote control port on the inverter.

Image 5.1: Example setup showing the inverter connected to a 12V battery, illustrating a typical installation scenario.

Image 5.2: A schematic diagram demonstrating the integration of the ALEOPIX inverter within a solar power system for an RV.

6. Operating Instructions

Once the inverter is properly installed and connected, follow these steps to operate it:

1. **Power On:** Press the ON/OFF button on the inverter unit or the remote control. The LED display will illuminate, showing battery voltage and AC output. The green 'Power' light on the remote will also turn on.
2. **Connect Appliances:** Plug your 110V/120V AC appliances into the inverter's AC sockets. For USB charging, connect your device to the USB port.
3. **Monitor Performance:** Observe the digital display for real-time information on battery status and output. This helps in managing power consumption and battery life.
4. **Power Off:** When finished, turn off the inverter by pressing the ON/OFF button on the unit or remote. Disconnect appliances before prolonged storage.

The remote control allows you to conveniently switch the inverter on or off from a distance, such as from inside an RV or another room. The remote also features indicator lights for power and fault status.

Image 6.1: The remote control in use, demonstrating its convenience for operating the inverter from a distance.

Image 6.2: The inverter powering a kettle, illustrating its capability to run various household appliances from a 12V power source.

7. Maintenance

Regular maintenance ensures optimal performance and longevity of your inverter:

- **Cleaning:** Periodically clean the exterior of the inverter with a dry, soft cloth. Do not use liquid cleaners or solvents.
- **Ventilation:** Ensure the cooling fans and ventilation openings are free from dust and debris. Blocked vents can lead to overheating.
- **Connections:** Regularly check all electrical connections (battery cables, ground wire) to ensure they are tight and free from corrosion.
- **Storage:** If storing the inverter for an extended period, disconnect it from the battery and store it in a cool, dry place.

8. Troubleshooting

Refer to the table below for common issues and their solutions:

Problem	Possible Cause	Solution
No power output	Inverter OFF; Loose battery connections; Low battery voltage; Blown fuse	Turn ON inverter; Check and tighten connections; Recharge/replace battery; Check and replace fuses (if accessible and safe)
Low AC output voltage	Low battery voltage; Overload	Recharge battery; Reduce connected load
Inverter shuts down (Fault light ON)	Overload; Overheating; Short circuit; High/Low input voltage	Reduce load; Ensure proper ventilation (fans operate automatically); Check for short circuits in wiring/appliances; Verify battery voltage is within range
Cooling fans constantly running	High internal temperature; High power efficiency	This is normal operation. Fans activate when internal temperature exceeds 45°C (113°F) or power efficiency is above 40%. They stop when temperature drops below 42°C (107.6°F) or efficiency is below 30%. Ensure adequate ventilation.

9. Specifications

Feature	Specification
Model Number	RT-PSW-1500W+RC
Continuous Power	1500 Watts
Peak Surge Power	3000 Watts
Input Voltage	12V DC
Output Voltage	110V/120V AC
Output Waveform	Pure Sine Wave
USB Output	5V 3.4A
Conversion Efficiency	>90%
Product Dimensions	9.05 x 7.08 x 2.83 inches
Item Weight	4.85 pounds
Power Source	Solar and Battery Powered

10. Warranty and Support

ALEOPIX provides 12 months of after-sales service and technical support for this product. For any questions, technical assistance, or warranty claims, please contact ALEOPIX customer service through your purchase

platform or the official ALEOPIX website.