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› Ampeak 3000W Pure Sine Wave Inverter Instruction Manual (Model PWUS03K1)

Ampeak PWUS03K1

Ampeak 3000W Pure Sine Wave Inverter Instruction Manual

MODEL: PWUS03K1

1. Introduction

The Ampeak 3000W Pure Sine Wave Inverter converts 12V DC power from your battery to 120V AC household power. This inverter is designed for reliable and efficient operation, providing clean power suitable for sensitive electronics and various appliances. It features multiple safety protections, versatile connectivity, and a durable design for use in RVs, trucks, boats, off-grid homes, and emergency backup power systems.

This manual provides essential information for the safe and effective use of your Ampeak 3000W Pure Sine Wave Inverter. Please read all instructions carefully before installation and operation.

2. Product Overview

The Ampeak 3000W Pure Sine Wave Inverter is engineered for high efficiency and robust performance. It delivers 3000W continuous power with a 6000W peak surge capability, ensuring compatibility with a wide range of devices. The inverter is equipped with multiple output ports and safety features to protect both the device and connected appliances.



Figure 1: Front view of the Ampeak 3000W Pure Sine Wave Inverter, showcasing its compact design and orange heat sink fins.

STRONG COMPATIBILITY AND PERFORMANCE



DATA BASED ON 12V 300AH BATTERY, INVERTER CONVERSION EFFICIENCY 91%.

Fridge



100W

27H

Microwaves



900W

3H

Air Conditioner



700W

3.9H

Drill



750W

3.6H

Chainsaws



1600W

1.7H

Figure 2: Close-up of the inverter's front panel, featuring three AC outlets, a 12V DC cigarette lighter port, two USB-A ports, and an on/off switch.

ALL-IN-ONE USER EXPERIENCE

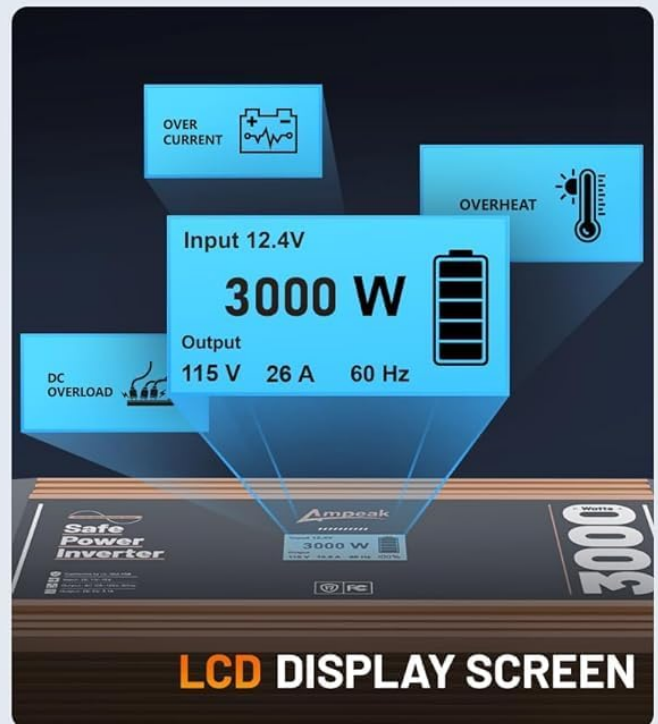
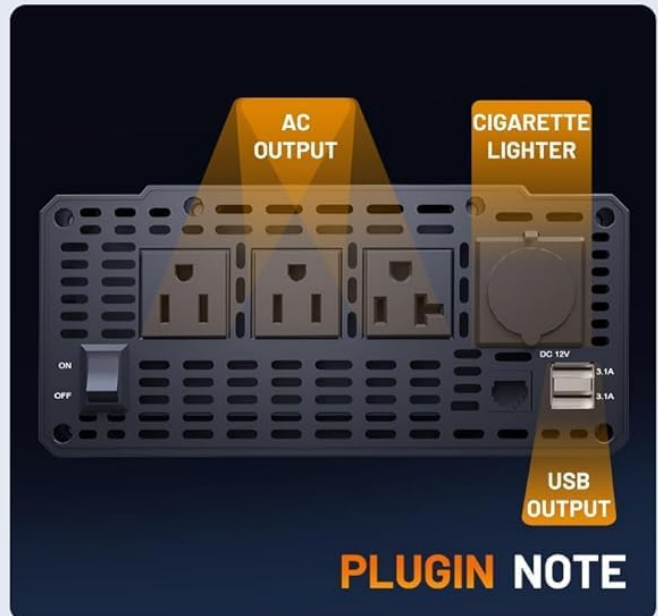
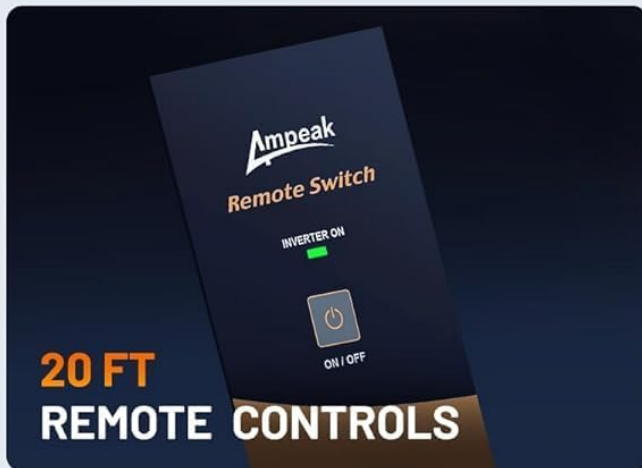
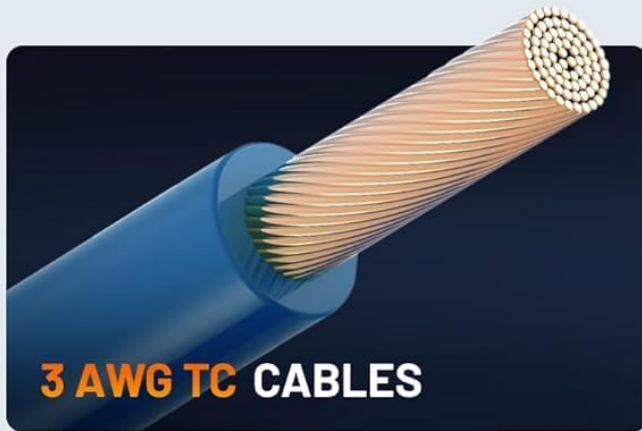


Figure 3: The LCD display on the inverter, providing real-time monitoring of input voltage, output wattage, battery status, and internal temperature.

3. Setup and Installation

Proper installation is crucial for the safe and efficient operation of your inverter. Ensure the inverter is placed in a well-ventilated area, away from direct sunlight, heat sources, and flammable materials. The inverter should be mounted securely using the integrated mounting brackets.

3.1 Connecting to a 12V DC Battery

1. Ensure the inverter's power switch is in the 'OFF' position.
2. Connect the red (positive) ring terminal cable to the positive terminal of the 12V battery and the positive terminal on the inverter.
3. Connect the black (negative) ring terminal cable to the negative terminal of the 12V battery and the negative terminal on the inverter.
4. Tighten all connections securely using the provided wrench.
5. Verify all connections are firm and correct before proceeding.

Understanding

SIZE



RIGHT SIZE
for right inverter

Figure 4: The inverter comes with heavy-duty 4 AWG pure copper cables and a wrench for secure battery connections.

3.2 Remote Control Port

The inverter includes a remote control port for an optional remote switch (sold separately). This allows for convenient power control when the inverter is installed in a hard-to-reach location.

3.3 Video Demonstration: Inverter Specifications and Connections

Video 1: This video provides a detailed overview of the Ampeak 3000W inverter's physical specifications, including its weight and dimensions, and demonstrates the various output ports and battery terminal connections.

4. Operating Instructions

Once the inverter is securely installed and connected to a 12V DC power source, you can begin operation.

1. Turn the inverter's master power switch to the 'ON' position. The LCD display will illuminate, showing input voltage, output wattage, and other operational parameters.
2. Plug your AC appliances into the 120V AC outlets. For 12V DC accessories, use the cigarette lighter port. For USB-powered devices, use the USB-A ports.
3. Monitor the LCD display for real-time information on voltage, current, and any fault alerts.
4. When finished, turn the inverter's master power switch to the 'OFF' position.

4.1 Usage Scenarios

The Ampeak 3000W inverter is suitable for a variety of applications:

- **RV/Truck/Boat Use:** Power your essential appliances and electronics on the go.
- **Off-Grid Solar Systems:** Integrate with your solar setup for continuous power.
- **Emergency Backup:** Provide reliable power during outages for critical devices like refrigerators, medical equipment (CPAP), and lighting.
- **Work Tools:** Charge power tool batteries and run small power tools at job sites.

MOST POPULAR

SAFETY POWER INVERTERS



18 Months
Support



AIG product
liability insurance



FCC



UL458



3000W
40A x12 FUSE | ≥91% Efficiency

Figure 5: The inverter in an outdoor setting, powering various devices such as a microwave, coffee maker, and laptop, demonstrating its versatility for camping and outdoor activities.

4.2 Video Demonstration: Inverter Testing and Performance

Video 2: This video demonstrates the Ampeak 3000W Pure Sine Wave Inverter's performance under various loads, including a shop vacuum and a heat gun, and verifies its pure sine wave output using an oscilloscope.

5. Safety Features

The Ampeak 3000W Pure Sine Wave Inverter incorporates 17-layer safeguards to ensure safe and reliable operation:

- Overload Protection
- Overvoltage Protection
- Undervoltage Protection
- Short Circuit Protection
- Thermal Protection
- Built-in advanced heat sink and 2 silent fans for dual internal and external heat dissipation.
- 12 x 40A fuses for enhanced safety.
- Soft-start technology to prevent surge damage.

AMPEAK KEEPS YOU **SAFE** ALL THE WAY



Figure 6: An illustration highlighting the inverter's internal safety components, including 40A fuses, high-quality MOS tubes, smart cooling fans, and OP-AMP IC chips, ensuring over 91% pure sine wave efficiency.

6. Specifications

Feature	Specification
Brand	Ampeak
Model Name	PWUS03K1
Wattage	3000 watts (Continuous) / 6000 watts (Peak)
Input Voltage	12 Volts DC (11V-15V)
Output Voltage	120 Volts AC (105V-125V)
Electrical Output Waveform	Pure Sine Wave
Frequency	60 Hz
Number of Outlets	3 AC Outlets (15A*2+20A*1), 2 USB-A (5V/3.1A), 1 DC Cigarette Lighter
Conversion Efficiency	90%
Item Dimensions L x W x H	19.29"L x 10.31"W x 5.75"H
Weight	11 lbs
Operating Temperature	14°F – 104°F (-10°C – 40°C)
Certifications	FCC, UL458

7. Troubleshooting

If your inverter is not functioning correctly, refer to the following common issues and solutions:

- **No Power Output:** Check battery connections for tightness and corrosion. Ensure the battery voltage is within the 11V-15V range. Verify the inverter's power switch is ON.
- **Low Output Voltage:** Ensure the input DC voltage is stable. Reduce the load on the inverter. Check for loose or corroded battery connections.
- **Overload Alarm:** Reduce the total wattage of connected appliances. The inverter will automatically shut down if overloaded. Disconnect some devices and restart.
- **Overheating Alarm:** Ensure the inverter is in a well-ventilated area. Clear any obstructions from the cooling fans. Reduce the load.
- **Short Circuit:** Disconnect all AC loads and check for any short circuits in the wiring or appliances.

If problems persist after attempting these solutions, contact Ampeak customer support.

8. Maintenance

To ensure the longevity and optimal performance of your Ampeak 3000W Pure Sine Wave Inverter, follow these maintenance guidelines:

- **Regular Cleaning:** Keep the inverter's exterior clean and free from dust and debris. Ensure the cooling fan vents

are unobstructed.

- **Connection Checks:** Periodically inspect all DC and AC connections for tightness and signs of corrosion. Clean terminals if necessary.
- **Storage:** If storing the inverter for an extended period, ensure it is turned OFF and disconnected from the battery. Store in a cool, dry place.
- **Battery Health:** Maintain your 12V DC battery in good condition, as its performance directly impacts the inverter's efficiency.

9. Warranty and Support

The Ampeak 3000W Pure Sine Wave Inverter comes with an 18-month warranty, covering defects in materials and workmanship. Ampeak also offers 24/7 customer support to assist with any questions or issues you may encounter.

For warranty claims or technical assistance, please contact Ampeak customer service through their official channels. A 30-day hassle-free return policy is also available.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

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