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Giandel PS 600KAR

GIANDEL PS-600KAR 600W Pure Sine Wave Power Inverter

Instruction Manual

Brand: Giandel | Model: PS 600KAR

1. INTRODUCTION

The GIANDEL PS-600KAR 600W Pure Sine Wave Power Inverter is designed to convert 12V DC battery power to 120V AC household power. This inverter produces a pure sine wave output, which is identical to the waveform of standard utility power. This makes it ideal for powering sensitive electronics and appliances, ensuring their longevity and optimal performance. It is suitable for various applications including small solar systems, outdoor use, and emergency power needs.

2. KEY FEATURES

- **Pure Sine Wave Output:** Provides clean and smooth power, safe for sensitive electronics like fans, laptops, and small pumps. Minimizes interference with radios and communication equipment.
- **600W Continuous Power:** Delivers 600 watts of continuous power with dual 110V/120V AC outlets, suitable for most appliances under 600W. (Note: Not suitable for high-startup power appliances like freezers/refrigerators).
- **Remote Control:** Includes a 15ft wired remote for convenient ON/OFF control, ideal for RVs, trucks, cars, and off-grid systems.
- **ETL Listed & UL458 Standard:** Ensures safety and reliability with multiple protection features.
- **Comprehensive Safety Protections:** Features input over-voltage, input under-voltage, overheat, overload, reverse polarity, and short circuit protection.
- **Smart Cooling System:** Built-in intelligent cooling fan activates only when needed, reducing noise and prolonging device life.

- **Durable Construction:** Strong aluminum alloy housing provides advanced protection against drops and bumps.



Image: The GIANDEL 600W Pure Sine Wave Inverter is ETL listed, ensuring safety and quality, and comes with an 18-month warranty.

3. WHAT'S IN THE BOX

Your GIANDEL 600W Pure Sine Wave Power Inverter package includes:

- 1x 600W Pure Sine Wave Power Inverter
- 2x Battery Cables (9AWG, 2 ft length)
- 1x Remote Control with 15 ft Cable
- 8x Shockproof Pads
- 1x User Manual

12V DC connections

Warning:

- ⚠ This is a 12V inverter, for 12V battery only. Make sure the battery is 12V and fully charged while using.
- ⚠ Multi protection functions like Low input voltage, over-load, over-heat will cause beeping and shutdown.



power inverter

Lead Acid battery / GEL battery

Image: This image displays all included accessories: the 600W inverter, a remote control with a 15-foot cable, two 2-foot battery cables, and 8 shockproof pads.

4. PRODUCT OVERVIEW

Familiarize yourself with the various components and ports of your GIANDEL inverter:

600Watt Pure Sine Wave inverter

Excellent Performance & Widely Compatible



 **Not workable for appliances exceed 600 watts**

Image: This image shows the front and back panels of the inverter. The front features dual AC outlets, a USB output, remote control port, LED power indicator, and power ON/OFF switch. The back panel includes DC input terminals, a removable fuse, and an intelligent cooling fan.

Front Panel:

- **Dual AC Outlets:** Two 110V/120V AC outlets for connecting appliances.
- **USB Output:** 5V/2.1A (max) for charging USB-powered devices.
- **Remote Control Port:** Connects the wired remote control for convenient operation.
- **LED Power Indicator:** Displays power status and fault warnings.
- **Power ON/OFF Switch:** Main switch to turn the inverter on or off.

Rear Panel:

- **DC Input Terminals:** Connect the positive (red) and negative (black) battery cables.
- **Removable Fuse:** Provides protection against reverse polarity connection.
- **Intelligent Cooling Fan:** Automatically activates to dissipate heat when the inverter gets hot.
- **Earth Wire Terminal:** For grounding the inverter.

5. SETUP INSTRUCTIONS

5.1. Connecting to a 12V Battery

1. Ensure the inverter's power switch is in the OFF position.
2. Connect the red battery cable to the positive (+) terminal of the inverter and the positive (+) terminal of your 12V battery.
3. Connect the black battery cable to the negative (-) terminal of the inverter and the negative (-) terminal of your 12V battery.
4. Ensure all connections are tight and secure to prevent overheating.
5. If using the remote control, plug its cable into the remote control port on the inverter's front panel.



Image: This diagram illustrates the correct connection of the inverter to a 12V lead-acid or GEL battery, showing the positive (red) and negative (black) cable connections.

5.2. Video Guide: Inverter Setup

Your browser does not support the video tag.

Video: This official GIANDEL video demonstrates the setup and features of the 600W Pure Sine Wave Inverter, including its ETL approval and various applications.

Your browser does not support the video tag.

Video: This ECO-WORTHY video provides a general overview of a 600W inverter charger, demonstrating its connection to a battery and its functionality, which can be helpful for understanding inverter setup.

6. OPERATING INSTRUCTIONS

1. After connecting the inverter to the battery, press the Power ON/OFF switch on the inverter (or use the remote control) to turn it on. The LED power indicator should light up.
2. Plug your AC devices into the dual 110V/120V AC outlets. For USB-powered devices, use the 5V/2.1A USB output.
3. Ensure the total wattage of your connected devices does not exceed 600W.
4. To turn off the inverter, press the Power ON/OFF switch (or use the remote control).

7. SAFETY PRECAUTIONS

- **Proper Ventilation:** Do not put the inverter into direct sunlight. Keep it in a cool, dry, and well-ventilated environment to prevent overheating. The intelligent cooling fan will activate as needed.
- **Correct Voltage:** Connect the inverter to a 12V battery only. Ensure the battery is fully charged when using.
- **Load Limits:** Do not use the inverter with products that draw a higher wattage than it can provide (600W continuous, 1200W peak), as this may cause damage to both the inverter and the product.
- **Vehicle Use:** Do not leave the power inverter in the ON position while your car is off to prevent draining the car battery.
- **Wiring:** Always disconnect the positive battery terminal before doing any wiring to the inverter. Ensure correct polarity (red to positive, black to negative). Fuses will blow if battery cables are reverse connected.
- **Overload Reset:** If an overload condition occurs (601W-750W), the inverter will automatically shut down with a long beeping sound and a red indicator. You will need to power Off/On to reset it.

8. APPLICATIONS

The GIANDEL 600W Pure Sine Wave Power Inverter is versatile and can be used in various scenarios:

- **Off-Grid Systems:** Ideal for small off-grid solar systems.
- **Vehicles:** Perfect for campers, RVs, trucks, and cars to power electronics on the go.

- **Outdoor Activities:** Provides power for camping, marine use, and other outdoor adventures.
- **Emergency Backup:** A reliable power source during power outages.



Image: This image illustrates the inverter's versatility, showing it powering a phone, a gaming device, a fan, a shaver, a laptop, and a camera. It also indicates appliances not suitable for this inverter, such as large kitchen appliances.

9. SPECIFICATIONS

Feature	Detail
Model Name	PS-600JAR
Wattage	600 watts (Rated), 1200W (Peak)

Power Source	DC 12V (9.8-16VDC)
Nominal Output Voltage	110-120VAC
Output Wave Form	Pure Sine Wave
USB Output	1x DC 5V/2.1A (max)
Max Efficiency	90%
THD	≤3%
No Load Current	0.7A
Internal Fuses	30A (2x 40 amp easily replaceable fuses)
Product Dimensions	6.9 x 5.3 x 3.4 inches
Item Weight	4.89 pounds
Safety Certifications	ETL Listed, UL458 Standard

10. TROUBLESHOOTING

The inverter is equipped with intelligent protection features. If an issue occurs, the inverter may shut down and/or emit an alarm. Refer to the LED power indicator for fault signals.

- **Low Input Voltage:** If the input voltage drops below 9.5VDC, the inverter will shut down. An alarm will sound at 9.8VDC. Check battery charge level.
- **Overload Protection:** If the connected load exceeds 600W (continuous) or 1200W (peak), the inverter will shut down. A long beeping sound and red indicator will signal an overload. Disconnect some loads and power Off/On to reset.
- **Overheat Protection:** If the internal temperature exceeds 65±5°C, the inverter will shut down. Allow it to cool down in a well-ventilated area.
- **Reverse Polarity:** Incorrect connection of battery cables (positive to negative, negative to positive) will blow the internal fuses. Replace fuses if necessary after correcting the connection.
- **Short Circuit:** The inverter will shut down if a short circuit is detected at the AC output. Remove the short circuit and power Off/On to reset.

11. WARRANTY & SUPPORT

The GIANDEL PS-600KAR 600W Pure Sine Wave Power Inverter comes with an **18-Months Warranty**. For any questions, technical support, or warranty claims, please refer to the contact information provided in your user manual or visit the official GIANDEL website. GIANDEL products are covered by product liability insurance from AIG company, ensuring peace of mind.

