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› Samlex America SAM-250-12 250-Watt DC to AC Power Inverter User Manual

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Model: SAM-250-12 | Brand: Samlex America

INTRODUCTION

The Samlex America SAM-250-12 is a 250-watt modified sine wave DC to AC power inverter designed to convert 12 VDC power from your vehicle or battery into 115 VAC household power. It is suitable for powering various electronic devices and small appliances on the go, featuring a compact design and essential safety protections.

SAFETY INFORMATION

- Read all instructions thoroughly before operating the inverter.
- Ensure the inverter is placed in a dry, well-ventilated area, away from direct sunlight, heat sources, and flammable materials. Adequate airflow is crucial to prevent overheating.
- Do not expose the inverter to water, rain, or excessive moisture.
- Avoid short-circuiting the output terminals.
- Keep the inverter out of reach of children and pets.
- This device is equipped with safety protections for thermal overload, battery overload, short circuit, and earth fault conditions.
- Only connect to a 12V DC power source. Connecting to other voltages may cause severe damage to the inverter and connected devices.

PACKAGE CONTENTS

- Samlex America SAM-250-12 DC to AC Power Inverter
- 12V Cigarette Lighter Socket Connection Cable
- Battery Clamps (for direct battery connection)
- User Manual

PRODUCT FEATURES

- 250 Watts Continuous Power Output
- Converts 12 VDC to 115 VAC (60 Hz)
- Modified Sine Wave Output
- Durable construction
- Compact and lightweight design
- Soft start and cool surface technology
- Safety certified with protections for thermal, battery overload, short circuit, and earth fault
- USB charging port (5VDC 2.1A)
- Two 115V AC outlets

PRODUCT OVERVIEW



Image: Front view of the Samlex SAM-250-12 Power Inverter, showcasing its compact design. The front panel features two 115V AC outlets, a 5VDC 2.1A USB charging port, an ON/OFF switch, and indicator lights for power and fault status. The top surface displays the brand 'Samlexpower 250' along with key specifications like 'DC-AC Inverter,' '250 Watts,' '12 VDC Input,' '115 VAC Output,' and 'Model SAM-250-12.'

Front Panel

- **115V AC Outlets (x2):** Standard outlets for connecting AC-powered devices.
- **5VDC 2.1A USB Port:** For charging USB-compatible electronic devices.
- **ON/OFF Switch:** Controls the power supply to the inverter.
- **Power Indicator Light:** Illuminates green when the inverter is powered on and operating normally.
- **Fault Indicator Light:** Illuminates red to indicate an error condition or when the inverter enters protection mode.

Rear Panel

- **DC Input Terminals:** Connections for the 12V DC power source (e.g., vehicle battery, cigarette lighter socket).
- **Cooling Fan:** Automatically activates to dissipate heat and maintain optimal operating temperature.

SETUP

1. **Choose a Location:** Select a flat, stable surface for the inverter. Ensure the area is dry, well-ventilated, and free from direct sunlight, heat sources, and flammable materials. Allow at least 6 inches of clear space around the inverter for proper airflow.
2. **Connect to 12V DC Power Source**
 - **For Cigarette Lighter Socket (up to 150W):** Insert the cigarette lighter plug firmly into your vehicle's 12V accessory socket. This method is suitable for lower power applications.
 - **For Direct Battery Connection (full 250W):** Connect the red battery clamp to the positive (+) terminal of your 12V battery and the black battery clamp to the negative (-) terminal. Ensure all connections are secure and tight to prevent voltage drop and overheating.
3. **Verify Connections:** Double-check all power connections to ensure they are correctly polarized and securely fastened. Loose connections can cause poor performance or damage.

OPERATING INSTRUCTIONS

1. **Turn On the Inverter:** After securing all connections, flip the ON/OFF switch on the front panel to the "ON" position. The green Power Indicator Light should illuminate, indicating the inverter is ready for use.
2. **Connect AC Devices:** Plug your AC-powered device(s) into the 115V AC outlets. Ensure the total combined wattage of all connected devices does not exceed 250 watts.
3. **Connect USB Devices:** Plug your USB-powered device(s) into the 5VDC 2.1A USB port for charging.
4. **Monitor Operation:** Observe the Power Indicator Light. If the red Fault Indicator Light illuminates, immediately disconnect all devices and refer to the Troubleshooting section.
5. **Turn Off the Inverter:** When you are finished using the inverter, turn off the inverter using the ON/OFF switch before disconnecting it from the 12V power source.

Important Considerations:

- The inverter is designed for 12V DC input only. Connecting to other voltages may damage the unit.
- Some devices with high startup current (e.g., motors, compressors, refrigerators) may exceed the inverter's surge capacity, even if their continuous wattage is within limits.
- For optimal performance and to prevent excessive battery drain, it is recommended to operate the inverter with the vehicle engine running when connected to a car battery.

MAINTENANCE

- Keep the inverter clean and free from dust and debris. Use a dry cloth for cleaning.
- Ensure the cooling fan vents are unobstructed at all times to allow for proper airflow and heat dissipation.
- Store the inverter in a cool, dry place when not in use, away from extreme temperatures and moisture.
- Regularly check all electrical connections for tightness and signs of corrosion. Clean any corroded terminals.

TROUBLESHOOTING

Problem	Possible Cause	Solution
No power output / Power LED off	Loose connection, discharged battery, faulty fuse, inverter off.	Check all connections, charge or replace battery, replace internal fuse (if applicable and safe, consult professional), turn inverter ON.

Problem	Possible Cause	Solution
Fault LED on / Inverter shuts down	Overload, overheating, low/high battery voltage, short circuit in connected device.	Reduce the connected load, allow the inverter to cool down, check battery voltage, inspect connected devices for short circuits.
Connected device not working correctly	Device incompatible with modified sine wave, device wattage too high, device requires pure sine wave.	Check device requirements for power input. Ensure total wattage is within inverter limits. Some sensitive electronics may require a pure sine wave inverter.

SPECIFICATIONS

Feature	Detail
Model	SAM-250-12
Continuous Power	250 Watts
DC Input Voltage	12 VDC
AC Output Voltage	115 VAC
AC Output Frequency	60 Hz
Output Waveform	Modified Sine Wave
USB Output	5VDC, 2.1A
Dimensions (LxWxH)	6 x 4.5 x 2 inches
Weight	1.2 Pounds
Material	Plastic, Aluminum

WARRANTY AND SUPPORT

The Samlex America SAM-250-12 inverter comes with a manufacturer's warranty. Please refer to the included warranty card or visit the official Samlex America website for detailed warranty terms and conditions. For technical support, service inquiries, or to register your product, please contact Samlex America customer service directly.