

BESTEK MRZ10011AU

BESTEK 1000W Pure Sine Wave Power Inverter User Manual

Model: MRZ10011AU

1. INTRODUCTION

Thank you for choosing the BESTEK 1000W Pure Sine Wave Power Inverter. This device is designed to convert 12V DC power from your vehicle's battery or other 12V DC power sources into 110V AC household power, allowing you to operate various electronic devices and appliances on the go. Featuring a pure sine wave output, it provides clean and stable power, making it suitable for sensitive electronics. This manual provides essential information for safe operation, setup, maintenance, and troubleshooting.

2. SAFETY INFORMATION

Please read and understand all safety instructions before operating the inverter. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Ventilation:** Ensure adequate ventilation around the inverter. Do not block ventilation openings. Overheating can cause the inverter to shut down or be damaged.
- **Dry Environment:** Do not expose the inverter to water, rain, or spray. Operate it in a dry environment.
- **Proper Connection:** Connect the inverter only to a 12V DC power source. Ensure correct polarity (+ to + and - to -). Incorrect connection can damage the inverter and the power source.
- **Load Limits:** Do not exceed the inverter's continuous power rating of 1000W. Overloading can cause the inverter to shut down or be damaged. Pay attention to the starting (surge) power of appliances, especially those with motors.
- **Fuse Protection:** The inverter has built-in fuses for protection. Do not attempt to bypass or replace fuses with incorrect ratings.
- **Children and Pets:** Keep the inverter out of reach of children and pets.
- **Maintenance:** Do not attempt to disassemble or modify the inverter. Refer all servicing to qualified personnel.

3. PACKAGE CONTENTS

Upon opening the package, please verify that all items are present and in good condition:

- BESTEK 1000W Pure Sine Wave Power Inverter
- DC Battery Cables (Red and Black)
- Spare 50A ATO Fuses (4 included)
- User Manual (this document)

4. PRODUCT OVERVIEW

The BESTEK 1000W Pure Sine Wave Power Inverter is designed for efficiency and user convenience. Key features include:

- **1000W Continuous Power:** Provides stable 1000 watts of continuous AC power.
- **Pure Sine Wave Output:** Delivers clean power, ideal for sensitive electronics like medical devices (CPAP), laptops, and audio equipment, reducing electrical noise and power consumption.
- **Multiple Outlets:** Equipped with two 110V AC outlets and two 4.2A smart USB charging ports for versatile power options.
- **Digital LCD Display:** A clear LCD screen shows real-time input voltage, output voltage, output power, and indicates protection status, allowing you to monitor the inverter's performance.
- **Smart Cooling Fan:** An intelligent cooling fan automatically adjusts its speed based on the power load and internal temperature, ensuring efficient heat dissipation and reducing operational noise.
- **Comprehensive Protection:** Built-in safety features include protection against overheating, under/over voltage, overload, and short circuiting, safeguarding both the inverter and your connected devices.



Figure 4.1: Front view of the BESTEK 1000W Pure Sine Wave Power Inverter, showing the two AC outlets, two USB ports, and the digital LCD display. Included are the red and black battery cables.

Great Power, Fast Charging

Dual USB 4.2A Output



2*AC Outlets



2*USB

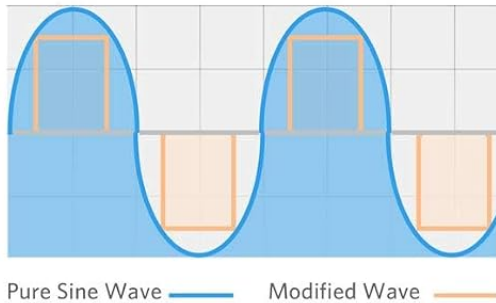


Figure 4.2: The inverter connected to a laptop and a smartphone via its AC and USB ports, demonstrating its charging capabilities.

Pure Sine Wave Inverter

Better drive capability and Less damage to appliances

Wave type comparison



100%

Fully applicable

100%

Equipment service life



40%

Reduce power consumption

Figure 4.3: A visual comparison illustrating the smooth waveform of pure sine wave output compared to a modified sine wave, highlighting the benefits for sensitive electronics.

High Speed Cooling Fan

Dissipate working heat fast, avoid overheating



Built-In
Cooling Fan



Figure 4.4: An exploded view showing the internal high-speed cooling fan, which helps dissipate heat and prevent overheating.

5. SETUP

Follow these steps to properly set up your BESTEK power inverter:

1. **Choose a Location:** Place the inverter on a flat, stable surface in a well-ventilated area. Ensure there is sufficient

space around the inverter for air circulation. Avoid placing it near heat sources, flammable materials, or in direct sunlight.

2. **Prepare the Power Source:** Ensure your 12V DC battery or power source is fully charged and capable of providing the necessary current. For optimal performance and safety, use a deep cycle battery if powering high-wattage appliances for extended periods.

3. **Connect Battery Cables:**

- Connect the **red** positive (+) cable to the positive (+) terminal of the inverter.
- Connect the **black** negative (-) cable to the negative (-) terminal of the inverter.
- Ensure connections are tight and secure to prevent loose connections, which can cause overheating.

4. **Connect to Battery:**

- Connect the other end of the **red** positive (+) cable to the positive (+) terminal of your 12V battery.
- Connect the other end of the **black** negative (-) cable to the negative (-) terminal of your 12V battery.
- **Important:** Always connect the inverter to the battery terminals first, then connect the cables to the inverter. When disconnecting, reverse the order: disconnect from the battery first, then from the inverter.
- **Cable Gauge:** The included 8 AWG cables are suitable for many applications. However, for sustained loads approaching 1000W, consider upgrading to thicker 4 AWG cables to minimize heat generation and voltage drop, especially for longer cable runs.

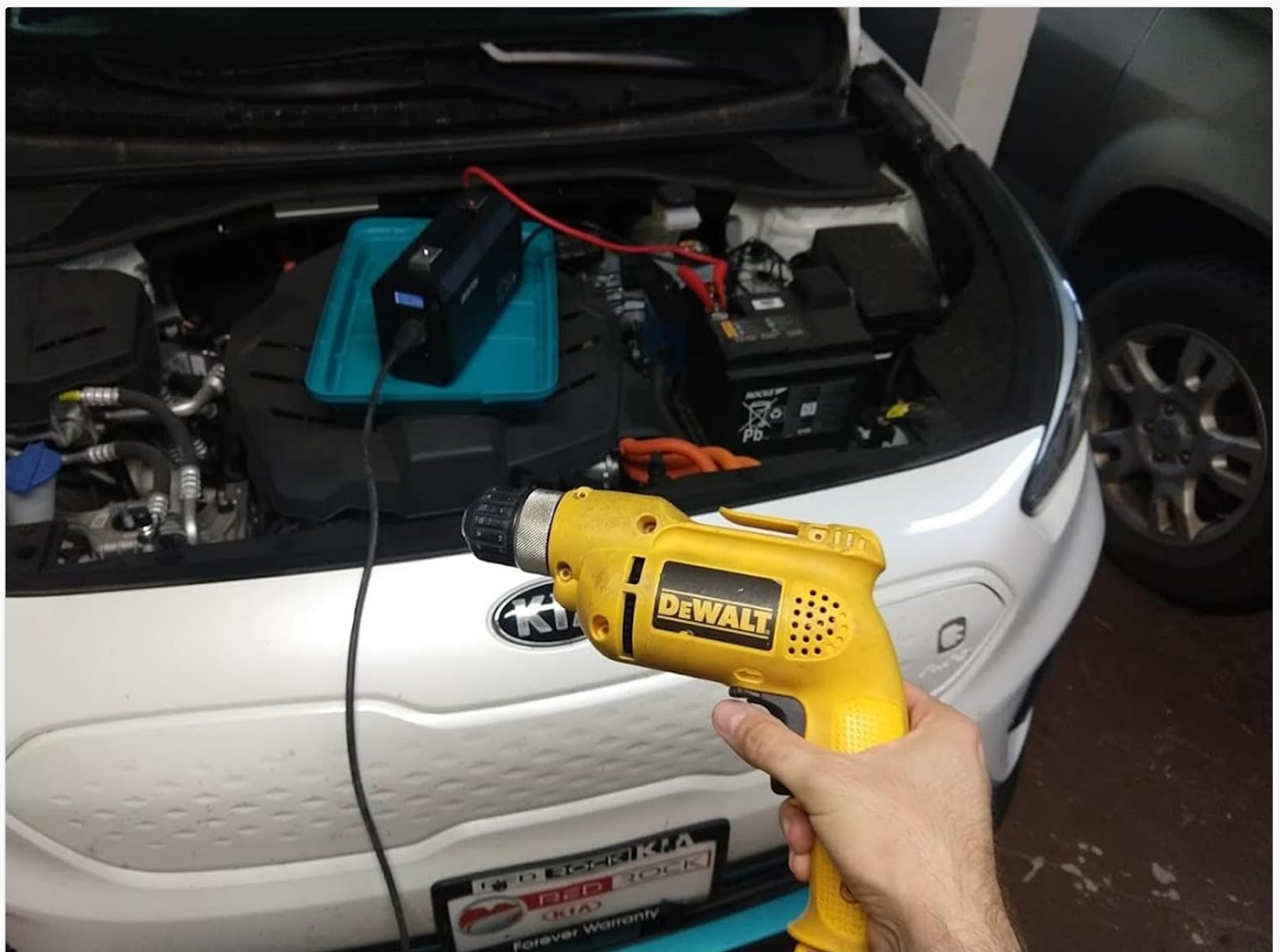


Figure 5.1: The inverter connected to a car battery, demonstrating a typical setup for powering tools or appliances.

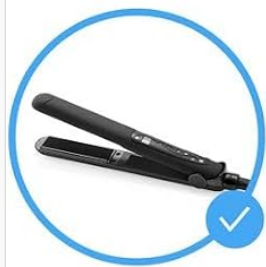
6. OPERATING INSTRUCTIONS

Once the inverter is properly set up, follow these steps to operate it:

1. **Power On:** Press and hold the power button on the inverter for a few seconds until the LCD display illuminates. The display will show the input voltage from your battery.
2. **Connect AC Appliances:** Plug your 110V AC appliances into the AC outlets on the front of the inverter. Ensure the total continuous power draw of all connected appliances does not exceed 1000W. For appliances with motors (e.g., refrigerators, power tools), be aware of their higher starting (surge) power requirements.
3. **Connect USB Devices:** Plug your USB-powered devices (smartphones, tablets, etc.) into the 4.2A USB charging ports. These ports provide smart charging, automatically detecting and delivering the optimal current for your device.
4. **Monitor the LCD Display:**
 - **Input Voltage (IN V):** Shows the current voltage of your 12V DC battery. Monitor this to ensure your battery does not discharge too low.
 - **Output Voltage (OUT V):** Displays the 110V AC output voltage.
 - **Output Power (OUT W):** Shows the real-time power consumption of your connected appliances in watts.
 - **Protection Indicators:** The display will also show indicators for various protection modes (e.g., overload, low voltage, overheating) if they are triggered.
5. **Cooling Fan Operation:** The internal cooling fan will automatically activate and adjust its speed based on the inverter's temperature and load. This is normal operation and helps maintain optimal performance.
6. **Power Off:** When you are finished using the inverter, first disconnect all appliances and USB devices. Then, press and hold the power button until the LCD display turns off. Finally, disconnect the battery cables from the battery terminals.

Powerful Drive Capability

Fully applicable for appliance under 1000 watts



Hair straightener



Hair curler



Hair dryer

Run all kinds of
appliance under
1000 watts



Electric drill



Refrigerator



Microwave Oven



Figure 6.1: Illustration of the inverter's capability to power various appliances under 1000 watts, such as hair straighteners, hair curlers, hair dryers, electric drills, refrigerators, and microwave ovens.

Wonderful Outdoor Life

Perfect for camping and driving trip on the way



Figure 6.2: The inverter being used in an outdoor camping scenario, demonstrating its utility for powering devices in remote locations.

7. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your inverter:

- **Cleaning:** Periodically clean the exterior of the inverter with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure ventilation openings are free from dust and debris.

- **Cable Connections:** Regularly check that all battery cable connections are clean, tight, and free from corrosion. Loose connections can lead to voltage drops and overheating.
- **Storage:** When not in use for extended periods, store the inverter in a cool, dry place, away from direct sunlight and moisture. Disconnect it from the battery to prevent slow discharge, as the USB ports draw a small amount of power even when the unit is off.
- **Fuse Replacement:** The inverter is protected by internal 50A ATO fuses. If a fuse blows, the inverter will cease to function. Replace only with fuses of the same type and rating (50A ATO). Refer to the product diagram for fuse location.

8. TROUBLESHOOTING

If you encounter issues with your inverter, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No power output / Inverter not turning on	• Loose battery connections • Low battery voltage • Blown fuse • Inverter power button not pressed long enough	• Check and tighten battery cable connections. • Charge the 12V battery. • Check and replace internal 50A ATO fuses if blown (use spare fuses provided). • Press and hold the power button for a few seconds until the LCD display activates.
Inverter shuts down frequently	• Overload protection triggered • Overheating • Under/Over voltage protection	• Reduce the total wattage of connected appliances. • Ensure adequate ventilation; allow inverter to cool down. • Check battery voltage; ensure it's within the 12V operating range.
Fan is noisy or constantly running	• High load or high internal temperature • Normal operation	• This is normal. The fan speed adjusts automatically to dissipate heat. Ensure ventilation is not blocked.
LCD display shows error code/indicator	• Specific protection mode activated	• Refer to the specific indicator on the display (e.g., "OV" for over-voltage, "OL" for overload) and address the underlying cause as described above.

If the problem persists after attempting these solutions, please contact BESTEK customer support for further assistance.

9. SPECIFICATIONS

Feature	Detail
Model	MRZ10011AU
Continuous Power	1000W
Input Voltage	DC 12V
Output Voltage	AC 110V

Feature	Detail
USB Output	4.2A Dual USB Charging Ports
Waveform	Pure Sine Wave
Product Dimensions (L x W x H)	10.5 x 5.9 x 3.7 inches
Item Weight	4.25 pounds
Protection Features	Overheating, Under/Over Voltage, Overload, Short Circuiting
Fuses	4 x 50A ATO Fuses (internal)

10. WARRANTY AND SUPPORT

BESTEK provides an **18-month warranty** for this product, covering defects in materials and workmanship under normal use. This warranty period begins from the date of purchase.

For warranty claims, technical support, or any questions regarding the operation or maintenance of your BESTEK 1000W Pure Sine Wave Power Inverter, please contact BESTEK customer service. Have your purchase details and product model number (MRZ10011AU) ready when contacting support.

You can typically find contact information on the BESTEK official website or through the retailer where you purchased the product.

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

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