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› BESTEK 300W Modified Sine Wave Power Inverter (MRI3010HU) User Manual

BESTEK MRI3010HU

BESTEK 300W Modified Sine Wave Power Inverter

MODEL: MRI3010HU USER MANUAL

Brand: BESTEK



Image: The BESTEK 300W Power Inverter, showing its compact design, cigarette lighter plug, and various output ports including USB-C

1. Introduction

The BESTEK 300W Modified Sine Wave Power Inverter (Model: MRI3010HU) is designed to convert 12V DC power from your vehicle's battery into 100V AC household power. This device provides a convenient and reliable power source for various electronic devices while traveling, camping, or during power outages. It also features USB-C PD30W and standard USB-A ports for rapid charging of mobile devices.

Please read this manual thoroughly before using the inverter to ensure safe and efficient operation.

2. Safety Instructions

Adhering to these safety guidelines is crucial for preventing damage to the inverter, your devices, and ensuring personal safety.

- **Input Voltage:** This inverter is designed for DC 11-17V input. Do not connect it to power sources outside this range (e.g., 24V systems or AC power) as this will cause severe damage.
- **Power Limit:** The total power consumption of all connected AC devices must not exceed the inverter's rated continuous power of 300W. Exceeding this limit will trigger overload protection.
- **Cigarette Lighter Socket Limit:** Vehicle cigarette lighter sockets typically have a fuse rating of 120W to 180W. If your total power consumption exceeds 150W, it is recommended to use direct battery connection cables (sold separately) to prevent blowing your vehicle's fuse.
- **Ventilation:** Ensure the inverter is placed in a well-ventilated area. Do not block the cooling fan or air vents, as this can lead to overheating and trigger overheat protection.
- **Protection Features:** The inverter is equipped with multiple protection functions including overload, short circuit, overheat, low voltage, over voltage, and reverse connection protection. If a protection mode is activated, the inverter will shut down or indicate an error.
- **Material Safety:** The inverter is constructed with an aluminum alloy casing for efficient heat dissipation and V0 flame-retardant materials for enhanced safety.
- **Environment:** Do not expose the inverter to water, rain, snow, or any liquids. Avoid using it in high-humidity or dusty environments.

PD30W USB C1

急速充電

+

15W Max USB-C2+A1+A2



iPhone 16シリーズを
0%から50%まで充電

30W

30 mins



ACコンセント×2口



ON/OFF



動作正常



保護機能動作

Image: Visual representation of the inverter's six protection functions, including abnormal temperature, output short, output over, input low voltage, input over voltage, and input short protection.

3. Package Contents

Please check the package contents upon receipt:

- BESTEK 300W Modified Sine Wave Power Inverter (MRI3010HU)
- Cigarette Lighter Adapter Cable
- User Manual

4. Product Overview

Familiarize yourself with the components and features of your BESTEK power inverter.

- **AC Outlets (x2):** Standard 100V AC outlets for household appliances.
- **USB-C PD30W Port (x1):** For rapid charging of compatible USB-C devices.
- **USB-A Ports (x2):** For charging standard USB devices (shared 15W max output with C2).
- **LED Display:** Shows real-time input voltage and operational status.
- **Power Switch:** Controls the inverter's power.
- **Cooling Fan:** Automatically activates to dissipate heat during operation.
- **Status Indicators:** Green light for normal operation, Red light for protection mode activation.



Image: Detailed view of the inverter's front panel, highlighting the AC outlets, USB ports, LED display, and power switch.

多重保護機能で安心



Image: The inverter's compact size, with approximate dimensions of 12cm (height) x 8.01cm (width) x 5.44cm (depth), shown next to a smartphone for scale.

5. Setup

Follow these steps to properly set up your power inverter:

1. Ensure the inverter's power switch is in the "OFF" position before connecting to any power source or devices.
2. Insert the cigarette lighter plug firmly into your vehicle's 12V cigarette lighter socket. Ensure a secure connection.
3. For applications requiring more than 150W, it is strongly recommended to connect the inverter directly to the vehicle battery using appropriate battery clamp cables (sold separately). Ensure correct polarity: connect the red cable to the positive (+) terminal and the black cable to the negative (-) terminal.
4. Place the inverter in a stable, well-ventilated location, away from direct sunlight, heat sources, and moisture.

様々な機器に使用可能

For ノートパソコン



Macbook Pro



ノートパソコン

For phones&pads



phone



pad

For ゲーム機



switch



PS5

For WiFi 無線LAN ルーター



WiFi 無線 ルーター



USB WiFi アダプター

For カーアクセサリー



エアーコンプレッサー



ファン



Bluetooth スピーカー



ワイヤレスヘッドホン



Image: The inverter positioned in a car's center console, actively charging a laptop via an AC outlet and a smartphone via a USB-C port.

6. Operating Instructions

Once set up, follow these steps to operate your inverter:

1. After connecting the inverter to the power source (cigarette lighter or battery), switch the inverter to the "ON" position using the power switch.
2. The LED display will illuminate, showing the current input voltage from your vehicle's battery. The green status indicator should light up, indicating normal operation.
3. Connect your AC-powered devices (e.g., laptop, small appliances) to the AC outlets. Ensure the total power consumption of all connected AC devices does not exceed 300W.
4. Connect your USB-powered devices (e.g., smartphones, tablets, game consoles) to the USB-C PD30W port or the USB-A ports for charging. The USB-C port provides up to 30W for rapid charging, while the USB-A ports share a maximum of 15W output.

5. Monitor the status indicators: A green light indicates normal operation. A red light indicates a protection mode has been activated (e.g., overload, overheat, low voltage).
6. When you are finished using the inverter, disconnect all devices and switch the inverter to the "OFF" position.

コンパクト&持ち運びやすいデザイン 出張、旅行、キャンプに最適



Image: Examples of devices compatible with the inverter, including laptops (MacBook Pro, notebooks), phones, tablets, game consoles (Switch, PS5), WiFi routers, USB WiFi adapters, air compressors, fans, Bluetooth speakers, and wireless headphones.

7. Maintenance

Proper maintenance ensures the longevity and optimal performance of your inverter.

- **Cleaning:** Regularly wipe the exterior of the inverter with a dry, soft cloth to remove dust and dirt. Do not use liquid cleaners, solvents, or abrasive materials.
- **Ventilation:** Keep the cooling fan and all air vents clear of obstructions (dust, lint, debris) to ensure efficient heat dissipation. A clogged fan can lead to overheating.
- **Storage:** When not in use for extended periods, store the inverter in a cool, dry place, away from direct sunlight,

- extreme temperatures, and moisture.
- **Cable Inspection:** Periodically inspect the power cables for any signs of damage, fraying, or loose connections. Replace damaged cables immediately.



Image: Illustration of the inverter's smart cooling fan, which operates at ultra-low noise levels and increases speed with rising temperature to efficiently dissipate heat.

8. Troubleshooting

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

Problem	Possible Cause	Solution
No Power / Inverter Not Turning On	Inverter switch is OFF Loose connection Vehicle's 12V socket has no power Vehicle's fuse blown	Ensure inverter switch is ON Check all cable connections are secure Verify vehicle's 12V socket is functional Check and replace vehicle's cigarette lighter fuse if necessary
No AC Output (Red Indicator)	Overload protection activated Overheat protection activated Low/Over input voltage	Reduce total connected load below 300W Allow inverter to cool down, ensure ventilation Check vehicle battery voltage (must be 11-17V DC)
Vehicle's Cigarette Lighter Fuse Blows	Connected load exceeds cigarette lighter's capacity (typically 120-180W)	Reduce load or use direct battery connection cables for higher power devices
Cooling Fan is Loud or Constantly Running	High internal temperature Fan vents obstructed	This is normal during heavy loads or high ambient temperatures Ensure fan vents are clear of dust and debris

9. Specifications

Technical details of the BESTEK 300W Modified Sine Wave Power Inverter:

- **Brand:** BESTEK
- **Model:** MRI3010HU
- **Input Voltage:** DC 11-17V
- **Output Voltage:** AC 100V
- **Rated Continuous Power:** 300W
- **Output Waveform:** Modified Sine Wave
- **USB-C Output:** PD30W (Max)
- **USB-A Output:** 15W (Max, shared across C2/A1/A2)
- **Protection Features:** Overload, Short Circuit, Overheat, Low Voltage, Over Voltage, Reverse Connection
- **Construction Material:** Aluminum Alloy Casing, V0 Flame-Retardant Materials
- **Warranty:** 1 Year
- **Origin:** China

10. Warranty and Support

Your BESTEK 300W Modified Sine Wave Power Inverter is backed by a manufacturer’s warranty.

- **Warranty Period:** This product is covered by a 1-year warranty from the date of purchase.
- **Customer Support:** For technical assistance, warranty claims, or product inquiries, please contact BESTEK customer service. Refer to your purchase documentation or the BESTEK official website for specific contact details.

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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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