EDECOA 3000W-24V

EDECOA 3000W 24V Pure Sine Wave Power Inverter User Manual

Model: 3000W-24V

1. Introduction

This manual provides essential information for the safe and efficient operation of your EDECOA 3000 Watt 24 Volt Pure Sine Wave Power Inverter. This device converts DC 24V battery power into 110V/120V AC household electricity, suitable for various applications. Please read this manual thoroughly before installation and use.

Image 1: EDECOA 3000W 24V Pure Sine Wave Power Inverter and included accessories. The inverter is green with black end caps, featuring AC outlets and an AC terminal block. Accessories include battery cables, a remote controller, and a remote cable.

2. Safety Information

Observe the following safety precautions to prevent injury or damage to the inverter and connected devices:

- Ensure proper ventilation around the inverter. Do not block cooling vents.
- Keep the inverter away from water, moisture, and flammable materials.
- Do not open the inverter casing. Refer servicing to qualified personnel.
- Connect the inverter only to a 24V DC power source.
- Ensure correct polarity when connecting battery cables (positive to positive, negative to negative). Reverse polarity protection is built-in, but incorrect connection can still cause issues.
- Avoid overloading the inverter beyond its continuous power rating of 3000W.
- The inverter features multiple protection mechanisms:
    - Input Low Voltage Protection
    - Input Over Voltage Protection
    - Reverse Polarity Protection

- Overload Protection
- Short Circuit Protection
- Over-temperature Protection

Image 2: Diagram illustrating the intelligent alarm system for the inverter, indicating alerts for low input voltage, high input voltage, overheat, and overload conditions.

3. What's in the Box

Upon unpacking, verify that all items are present:

- EDECOA 3000 Watts 24 Volts Pure Sine Wave Inverter
- Remote Controller (Model: ED-RC)
- Remote Controller Cable (approximately 157 inches / 4 meters)
- 2 pairs of 3AWG Battery Cables (approximately 31.5 inches / 80 cm each)
- Input Port Covers
- User Manual (this document)

Image 3: A visual representation of the accessories included with the EDECOA power inverter: remote controller, remote controller cable, two pairs of battery cables, and input port covers.

4. Setup and Installation

Follow these steps for proper installation:

1. **Choose a Location:** Select a dry, well-ventilated area for the inverter, away from direct sunlight, heat sources, and flammable materials. Ensure sufficient space for air circulation around the cooling fan.
2. **Connect Battery Cables:**
    - Connect the red battery cable to the positive (+) terminal of the 24V battery bank and the positive (+) terminal on the inverter.
    - Connect the black battery cable to the negative (-) terminal of the 24V battery bank and the negative (-) terminal on the inverter.
    - Ensure all connections are tight and secure to prevent arcing and overheating.

3. **Grounding:** Connect the inverter's ground wire port to a proper earth ground.
4. **Connect Remote Controller (Optional):** Insert the remote controller cable into the "REMOTE" port on the inverter and the corresponding port on the remote controller.
5. **AC Terminal Block:** For appliances requiring more than 1800 Watts, use the AC terminal block for a direct wired connection. Consult a qualified electrician for this type of installation.

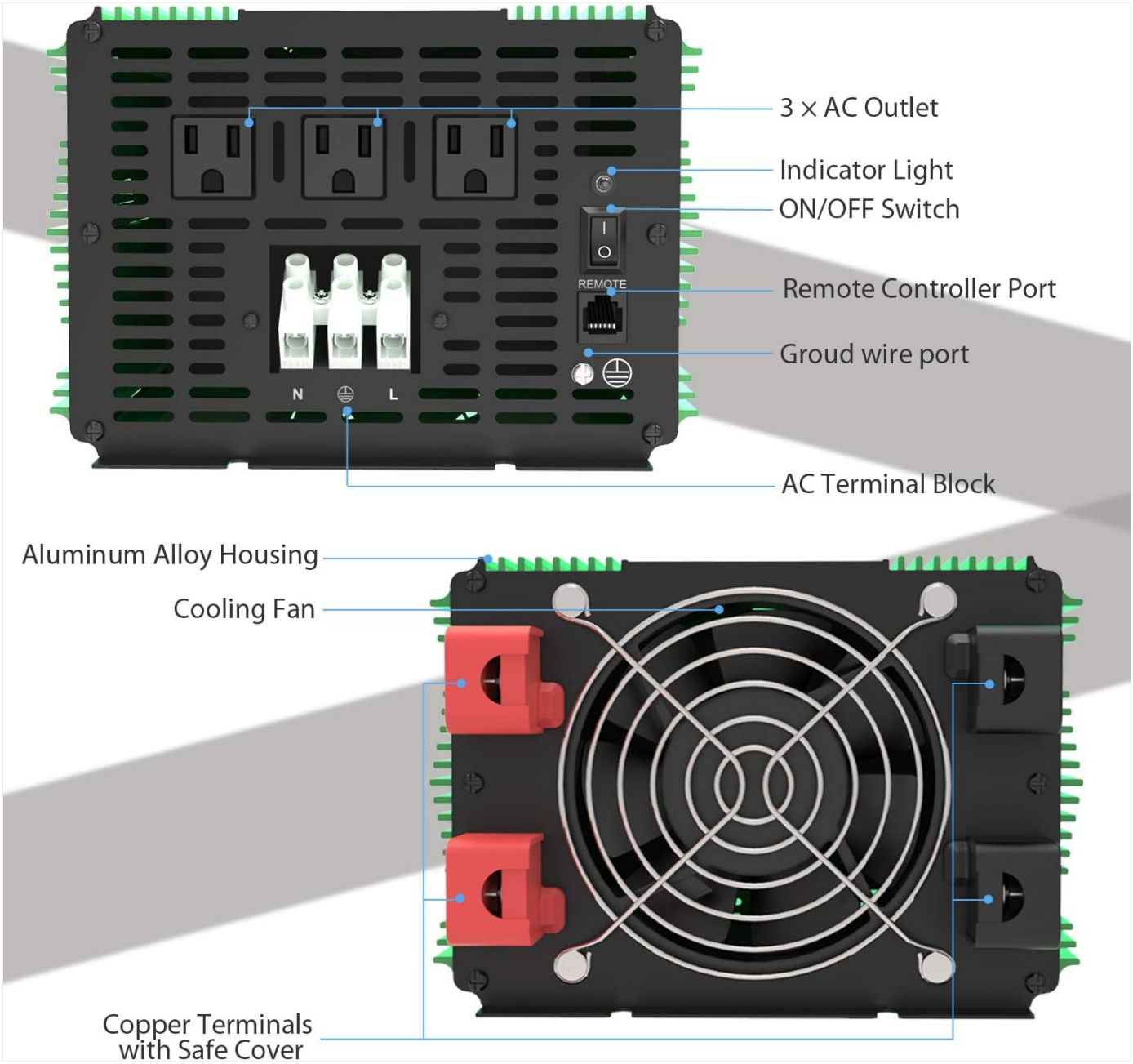

Image 4: Rear panel of the EDECOA inverter showing the 3 AC outlets, indicator light, ON/OFF switch, remote controller port, ground wire port, and AC terminal block. The cooling fan and copper terminals with safe covers are visible on the side.

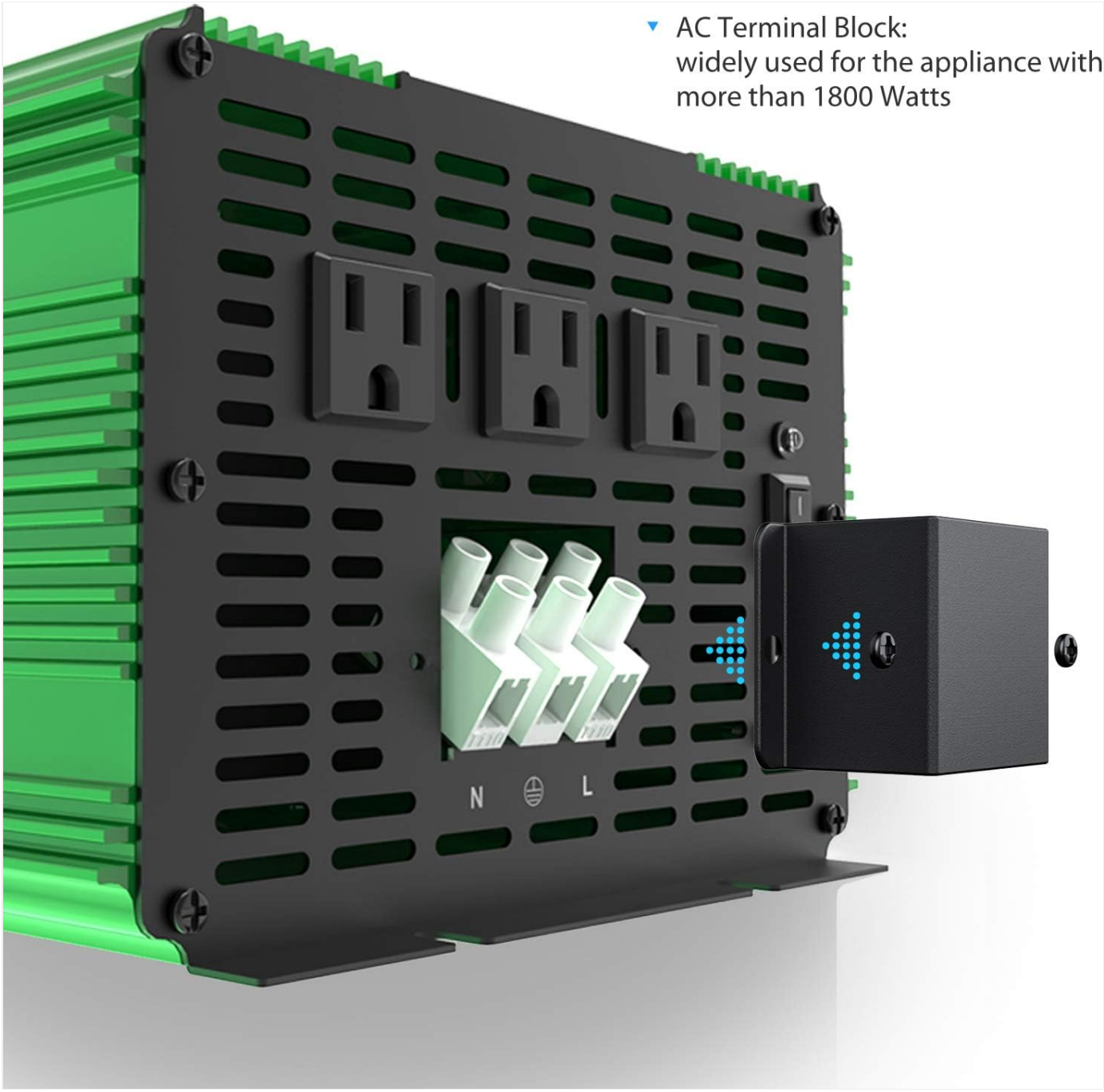

Image 5: Close-up view of the AC Terminal Block on the EDECOA inverter, designed for direct wiring of high-power appliances (over 1800 Watts).

5. Operating Instructions

To operate your EDECOA power inverter:

1. **Power On:** After all connections are secure, switch the ON/OFF button on the inverter to the "ON" position. The indicator light should illuminate. Alternatively, use the remote controller to switch the inverter ON.
2. **Connect Appliances:** Plug your AC appliances into the inverter's AC outlets or ensure they are properly connected to the AC terminal block.
3. **Monitor Load:** Avoid exceeding the inverter's continuous power rating (3000W). The inverter will provide a surge power of up to 6000W for brief periods (less than 10ms) for starting motors.
4. **Remote Controller Functions:** The remote controller allows you to switch the inverter ON/OFF and provides visual indicators for battery capacity and low input voltage warnings.
5. **Power Off:** When finished, switch the ON/OFF button on the inverter or the remote controller to the "OFF" position.

Image 6: The EDECOA remote controller connected to the inverter via a standard network cable. The remote features an ON/OFF switch, battery level indicator, and low input voltage warning light.

Image 7: The EDECOA power inverter providing electricity in an outdoor camping setting, demonstrating its utility for remote power needs.

6. Maintenance

The EDECOA power inverter requires minimal maintenance. To ensure optimal performance and longevity:

- Regularly inspect battery cables and connections for tightness and corrosion.
- Keep the inverter's cooling vents clear of dust and debris. Use compressed air to clean if necessary.
- Store the inverter in a cool, dry place when not in use.

7. Troubleshooting

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

Problem	Possible Cause	Solution
Inverter does not turn on.	◦ Loose battery connections. ◦ Low battery voltage (below 24V). ◦ Blown fuse in battery circuit (if applicable). ◦ Inverter's internal protection activated.	◦ Check and tighten all battery cable connections. ◦ Recharge or replace the battery. ◦ Check and replace any external fuses. ◦ Cycle power (turn off, wait 30 seconds, turn on).

Problem	Possible Cause	Solution
No AC output.	◦ Overload condition. ◦ Over-temperature. ◦ Short circuit in connected appliance. ◦ Low battery voltage.	◦ Reduce the load by disconnecting some appliances. ◦ Allow the inverter to cool down. Ensure proper ventilation. ◦ Check appliances for faults. ◦ Recharge the battery.
Remote controller not working correctly (e.g., turns on but not off).	◦ Faulty remote cable. ◦ Remote controller malfunction. ◦ Cable length exceeding recommended limit (e.g., 16 feet).	◦ Try a different, shorter network cable (RJ45). ◦ Contact EDECOA support if the issue persists after trying a new cable.
Inverter makes a beeping sound.	◦ Low input voltage warning. ◦ Overload warning. ◦ Over-temperature warning.	◦ Check battery voltage and recharge. ◦ Reduce connected load. ◦ Ensure adequate ventilation and allow cooling.

8. Specifications

Key technical specifications for the EDECOA 3000W 24V Pure Sine Wave Power Inverter:

Feature	Specification
Model	3000W-24V
Continuous Power	3000 Watts
Surge Power	6000 Watts (<10ms)
Input DC Voltage	24 Volts
Output AC Voltage	110V/120V AC
Output Waveform	Pure Sine Wave (THD < 5%)
AC Outlets	3
Additional Output	1 AC Terminal Block
Protection Features	Input Low/Over Voltage, Reverse Polarity, Overload, Short Circuit, Over-temperature
Cooling	Intelligent Fan Control (IFC), 1 Efficient Cooling Fan, 2 Built-in Heat Dissipation Plates
Dimensions	16.85 x 8.07 x 0.01 inches (Product)
Item Weight	21.8 pounds
Certifications	CE, EMC, LVD

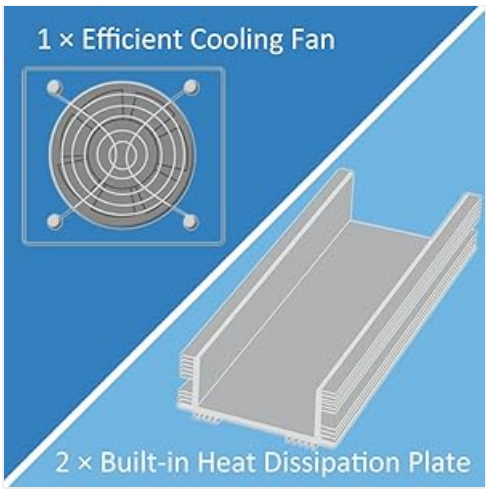

Image 8: Diagram illustrating the inverter's cooling system, featuring one efficient cooling fan and two built-in heat dissipation plates for thermal management.

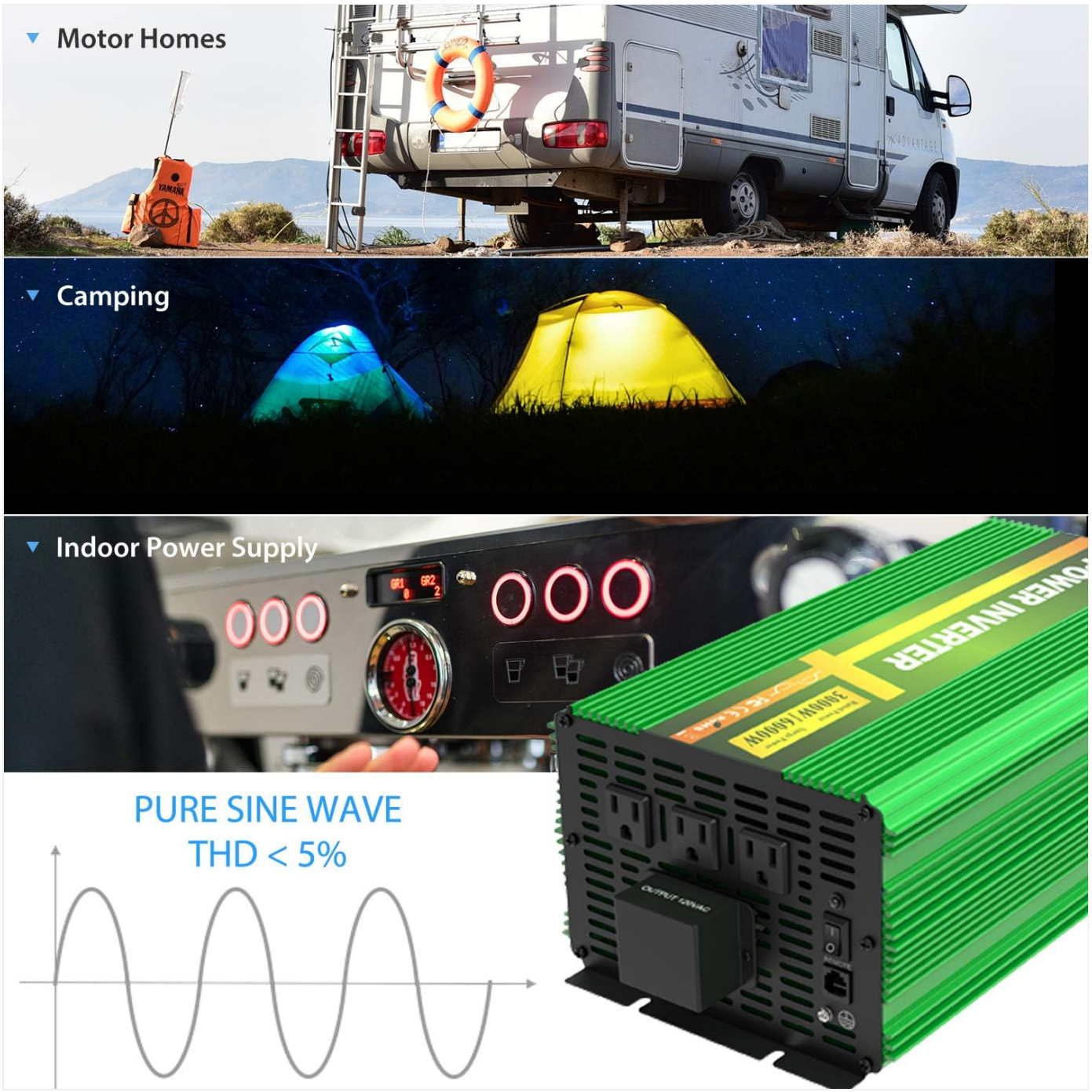

Image 9: Illustration of the pure sine wave output (THD < 5%) provided by the inverter, alongside examples of its use in motor homes, camping, and as an indoor power supply.

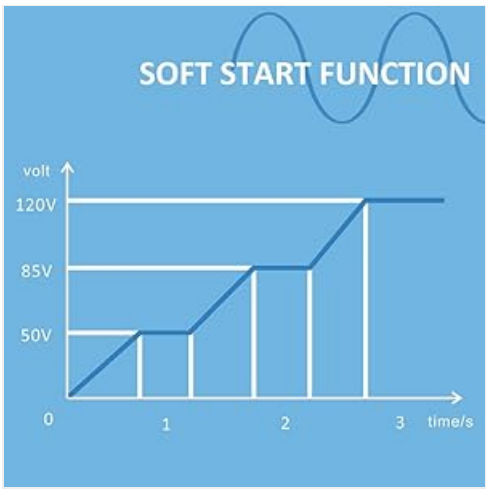

Image 10: Graph illustrating the soft start function of the inverter, showing a gradual voltage increase to 120V over time.

9. Warranty and Support

For warranty information or technical support, please refer to the EDECOA official website or contact their customer service directly. Protection plans may be available for extended coverage.
Visit the EDECOA Store on Amazon for more products and information.