LiTime L12V1KW-Z-JP

LiTime 12V 1000W Pure Sine Wave Inverter

Model: L12V1KW-Z-JP

1. Introduction

Thank you for choosing the LiTime 12V 1000W Pure Sine Wave Inverter. This device converts 12V DC power from your battery into 100V AC power, suitable for various electronic appliances. Featuring advanced pure sine wave technology, it provides high-quality AC output to protect your sensitive electronics and extend their lifespan. With over 90% conversion efficiency, 1000W rated output, and 2000W surge power, it reliably powers multiple household appliances while minimizing power loss. This manual provides essential information for safe installation, operation, maintenance, and troubleshooting.

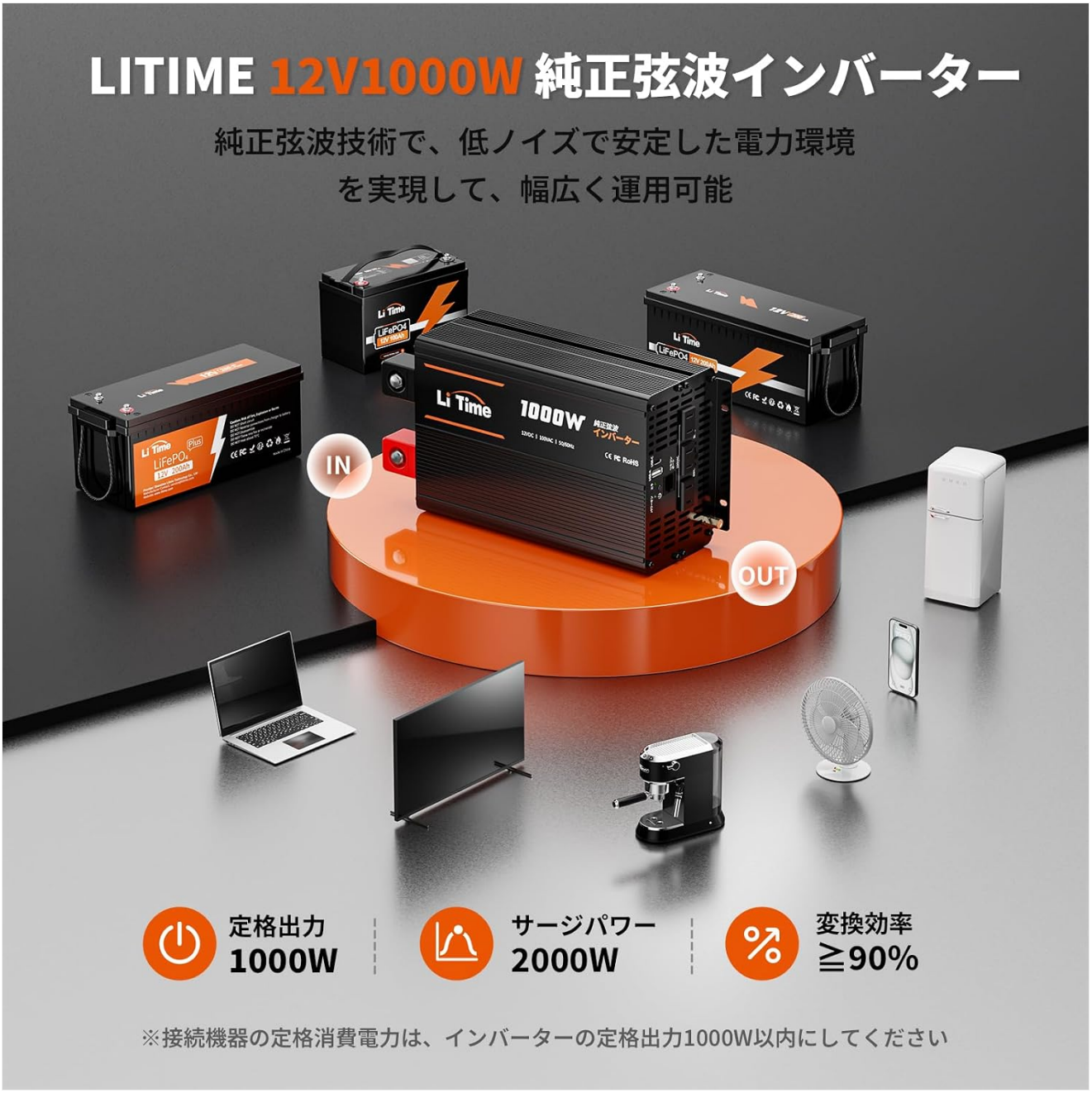

Figure 1: LiTime 12V 1000W Pure Sine Wave Inverter in use, powering multiple devices.

2. Safety Information

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

- **Installation:** Ensure the inverter is installed in a well-ventilated area, away from flammable materials, moisture, and direct sunlight.
- **Grounding:** Always connect the inverter to a proper earth ground to prevent electrical hazards.
- **Battery Connection:** Connect the inverter directly to a 12V battery. Ensure correct polarity (red to positive, black to negative). Incorrect connections can damage the inverter and battery.
- **Load Capacity:** Do not exceed the inverter's rated output of 1000W. The surge power is 2000W, but continuous operation above 1000W can cause damage.
- **Ventilation:** Do not block the cooling fans or ventilation openings. Adequate airflow is crucial for preventing overheating.
- **Maintenance:** Only qualified personnel should perform maintenance or repairs. Do not attempt to disassemble the inverter.

- **Emergency:** In case of smoke, unusual odors, or abnormal operation, immediately disconnect the power source.

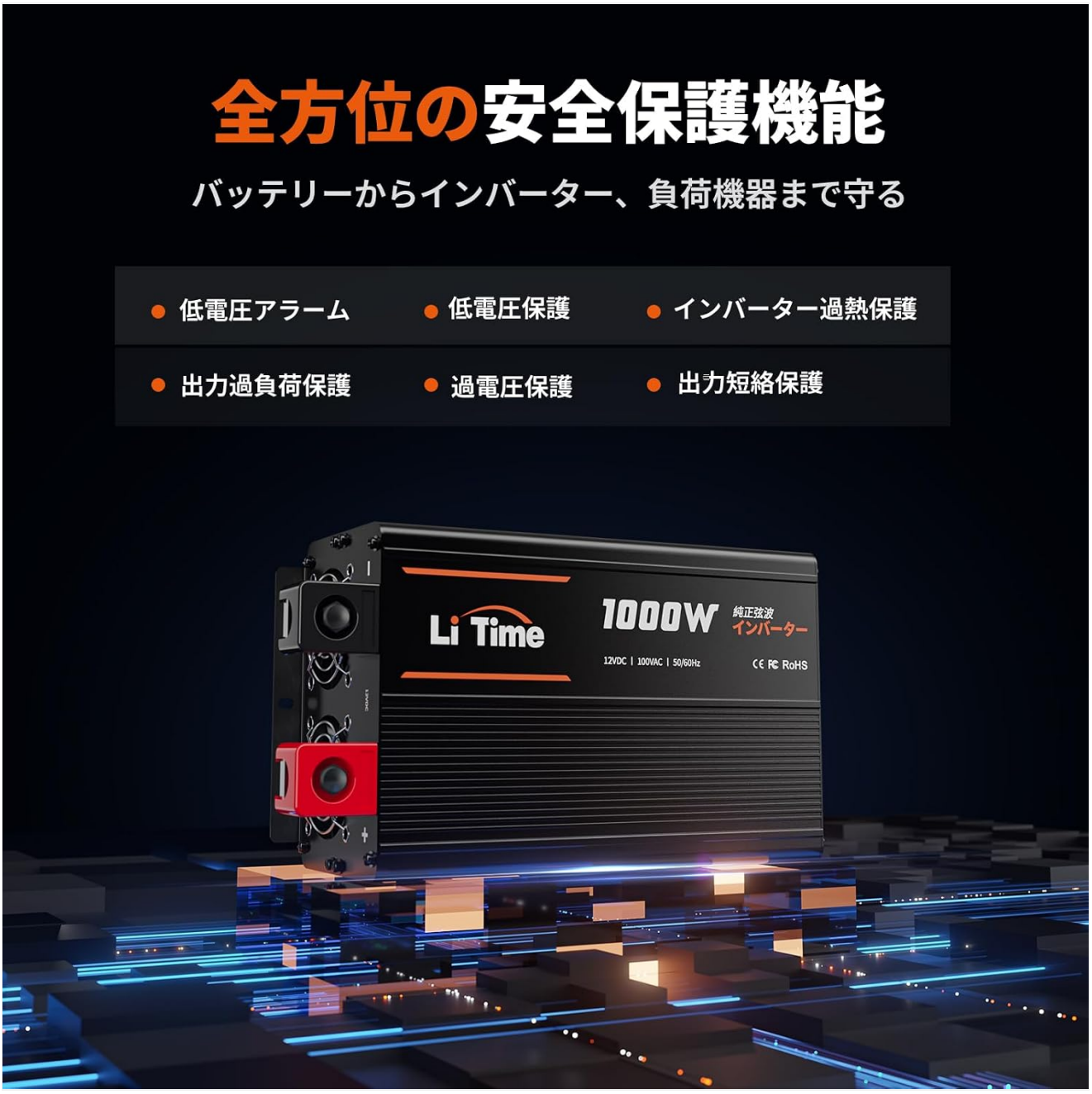

Figure 2: Overview of the inverter's comprehensive safety protection functions.

3. Package Contents

Verify that all items are present in the package before installation.

- LiTime 12V 1000W Pure Sine Wave Inverter Unit
- Remote Control Unit
- Battery Connection Cables (Red and Black, 50cm length each)
- Earth Terminal Cable (100cm length)
- Mounting Screws and Plastic Anchors (for inverter and remote control)
- User Manual (This document)

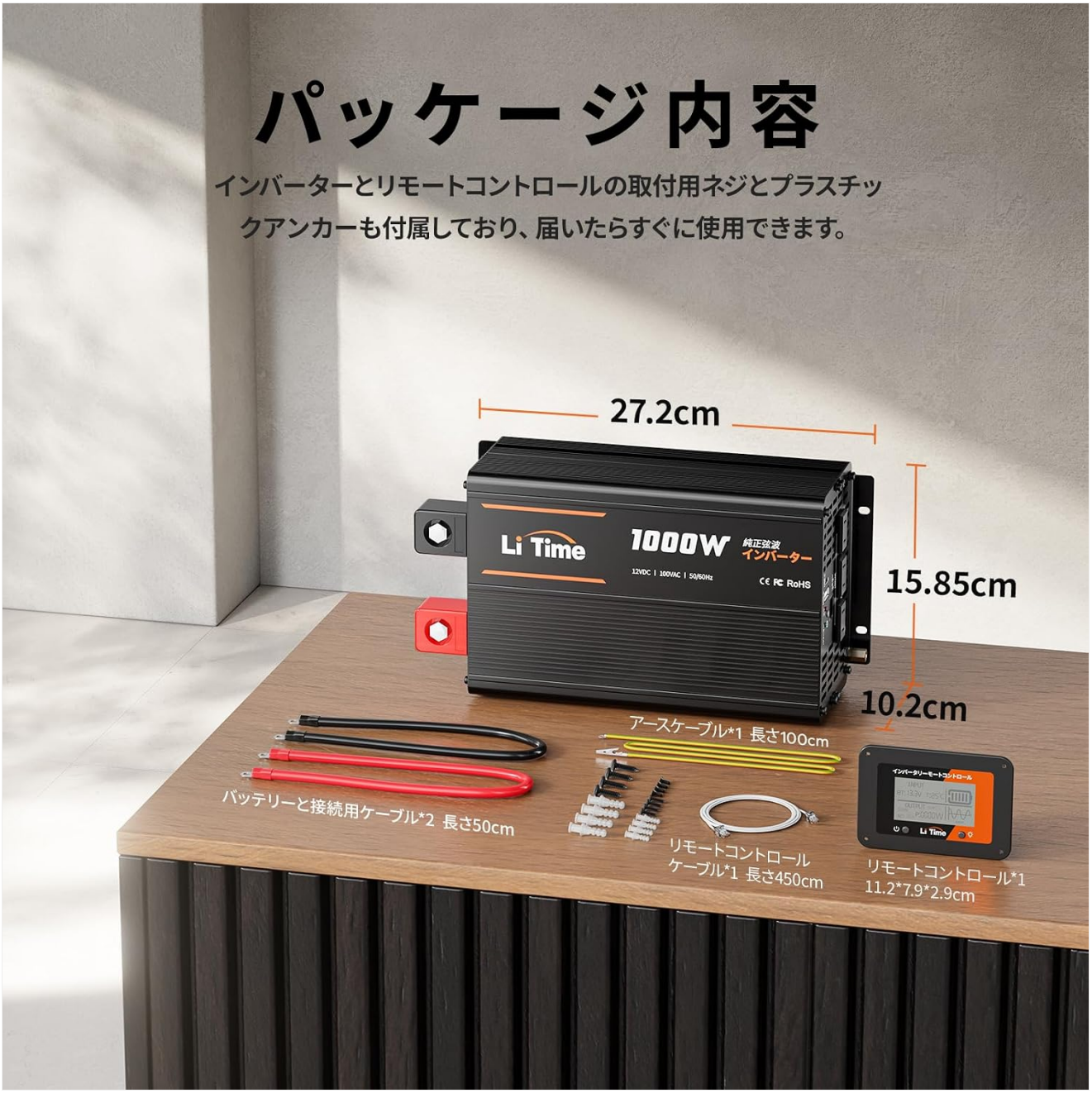

Figure 3: Contents included in the LiTime 12V 1000W Inverter package.

4. Product Overview

Familiarize yourself with the components and ports of the LiTime 12V 1000W Pure Sine Wave Inverter.

4.1. AC Side Components

1. ON/OFF Switch: Powers the inverter on or off.
2. Frequency Switch (50Hz/60Hz): Allows selection of output frequency.
3. Earth Terminal: For grounding the inverter.
4. LED Indicator: Displays operational status.
5. USB-A Output Port (5V/3A): For charging USB-A compatible devices.
6. USB-C Output Port (5V/3A, 9V/2A, 12V/1.5A): For charging USB-C compatible devices.
7. Remote Control Port: Connects to the remote control unit.
8. AC Outlets (3 x 100V AC): For connecting AC-powered appliances.

4.2. DC Side Components

9. Cooling Fans (2): Dissipate heat during operation.
10. Positive Terminal: Connects to the positive terminal of the 12V battery.
11. Negative Terminal: Connects to the negative terminal of the 12V battery.

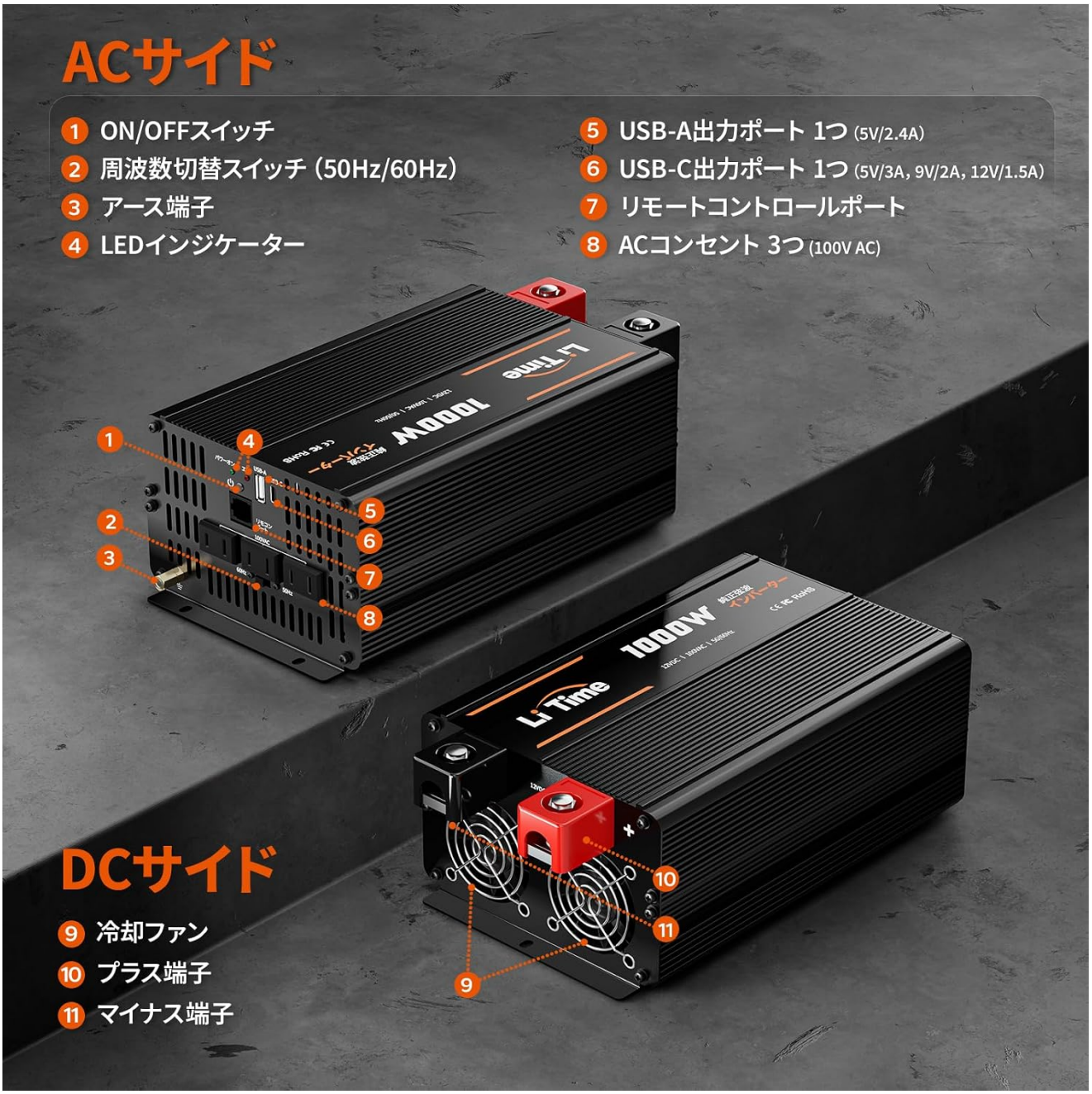

Figure 4: Front (AC side) and Rear (DC side) views of the inverter with labeled components.

5. Setup

Follow these steps for proper installation of your inverter.

5.1. Mounting the Inverter

Choose a dry, well-ventilated location for mounting the inverter. Use the provided mounting screws and plastic anchors to secure the inverter firmly to a stable surface. Ensure there is sufficient space around the unit for airflow, especially around the cooling fans.

5.2. Connecting to the Battery

1. Ensure the inverter's ON/OFF switch is in the 'OFF' position.
2. Connect the red battery cable to the inverter's positive (+) terminal and then to the battery's positive (+) terminal.

3. Connect the black battery cable to the inverter's negative (-) terminal and then to the battery's negative (-) terminal.
4. Ensure all connections are tight and secure. Loose connections can cause overheating and damage.

5.3. Grounding the Inverter

Connect the provided earth terminal cable to the inverter's earth terminal and then to a reliable ground point (e.g., vehicle chassis, earth rod). This is crucial for safety.

5.4. Connecting the Remote Control

Plug the remote control cable into the remote control port on the inverter. Mount the remote control unit in a convenient location using the provided screws and anchors. The 450cm cable allows for flexible placement, enabling remote monitoring and control of the inverter's status.

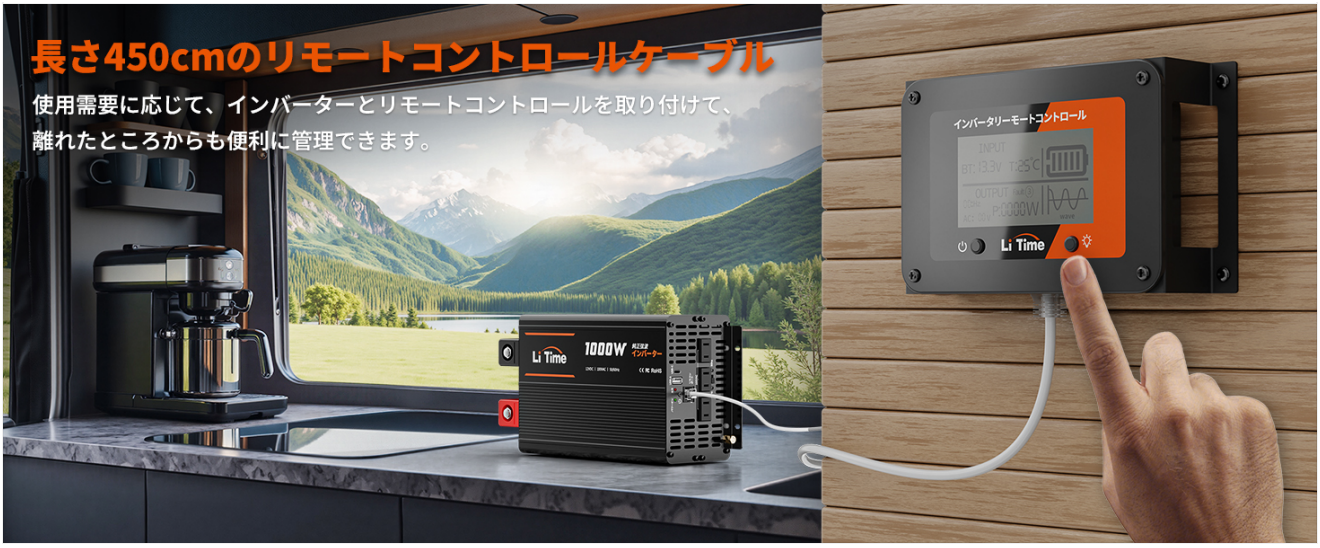

Figure 5: Remote control setup for convenient monitoring and operation.

6. Operating Instructions

6.1. Powering On/Off

Press the ON/OFF switch on the inverter or the remote control to power the unit on or off. The LED indicator will illuminate when the inverter is active.

6.2. Setting Output Frequency

The inverter features a switch to select between 50Hz and 60Hz output frequencies. Adjust this switch according to the requirements of your connected appliances and local power standards. This allows for versatile use in different regions.

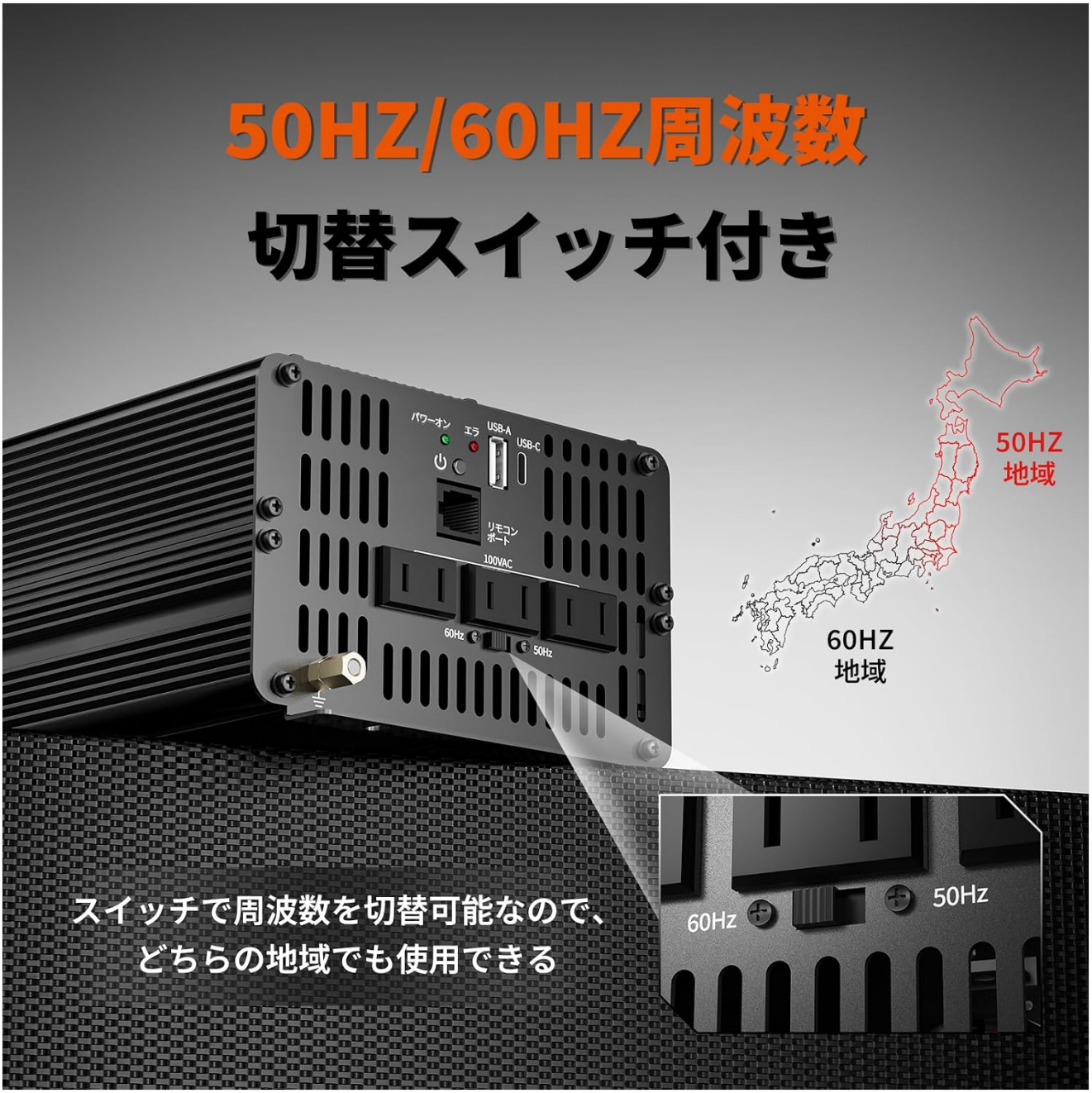

Figure 6: Frequency selection switch for 50Hz or 60Hz operation.

6.3. Connecting Appliances

Once the inverter is powered on and the frequency is set, you can connect your devices:

- **AC Appliances:** Plug your 100V AC devices into the three AC outlets. Ensure the total power consumption does not exceed 1000W.
- **USB Devices:** Use the USB-A and USB-C ports to charge compatible electronic devices.

The inverter can simultaneously power up to five devices (3 AC, 1 USB-A, 1 USB-C), meeting diverse power needs.

6.4. Remote Monitoring

The remote control unit allows you to monitor the inverter's operational status from a distance. The display shows:

- DC Input Voltage
- Temperature
- Battery Remaining Level
- Error Code (if any)

- Output Frequency
- Output Waveform
- Output Power

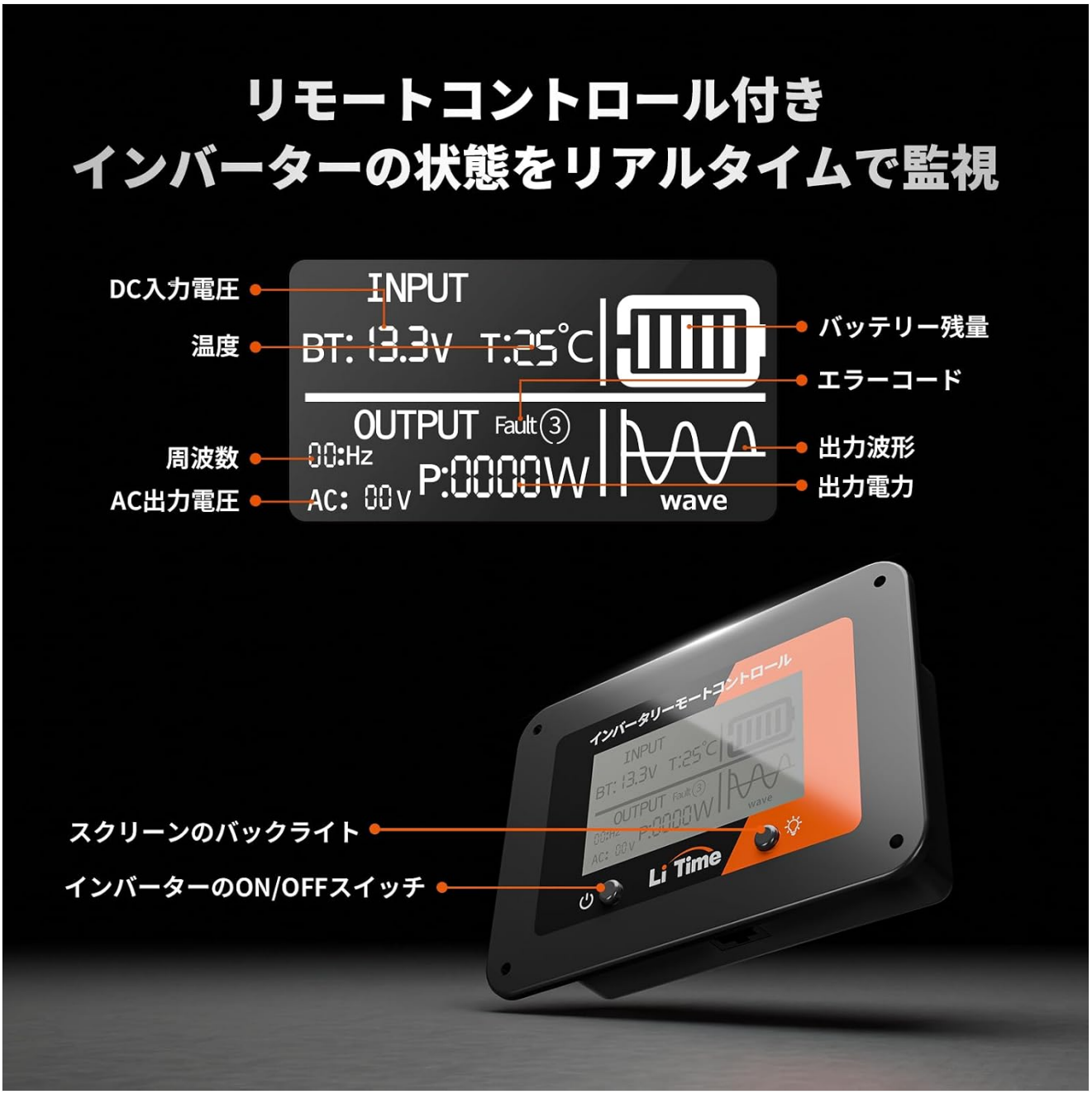

Figure 7: Remote control display showing inverter status.

7. Maintenance

Regular maintenance ensures optimal performance and longevity of your LiTime inverter.

- **Cleaning:** Keep the inverter clean and free from dust and debris. Use a dry cloth to wipe the exterior. Do not use liquid cleaners.
- **Ventilation:** Periodically check that the cooling fans and ventilation openings are not obstructed. Ensure proper airflow.
- **Connections:** Regularly inspect all electrical connections (battery cables, earth cable) to ensure they are tight and free from corrosion.
- **Operating Environment:** The inverter is designed to operate reliably in a wide temperature range from -20°C to 40°C. Avoid exposing it to extreme temperatures outside this range.

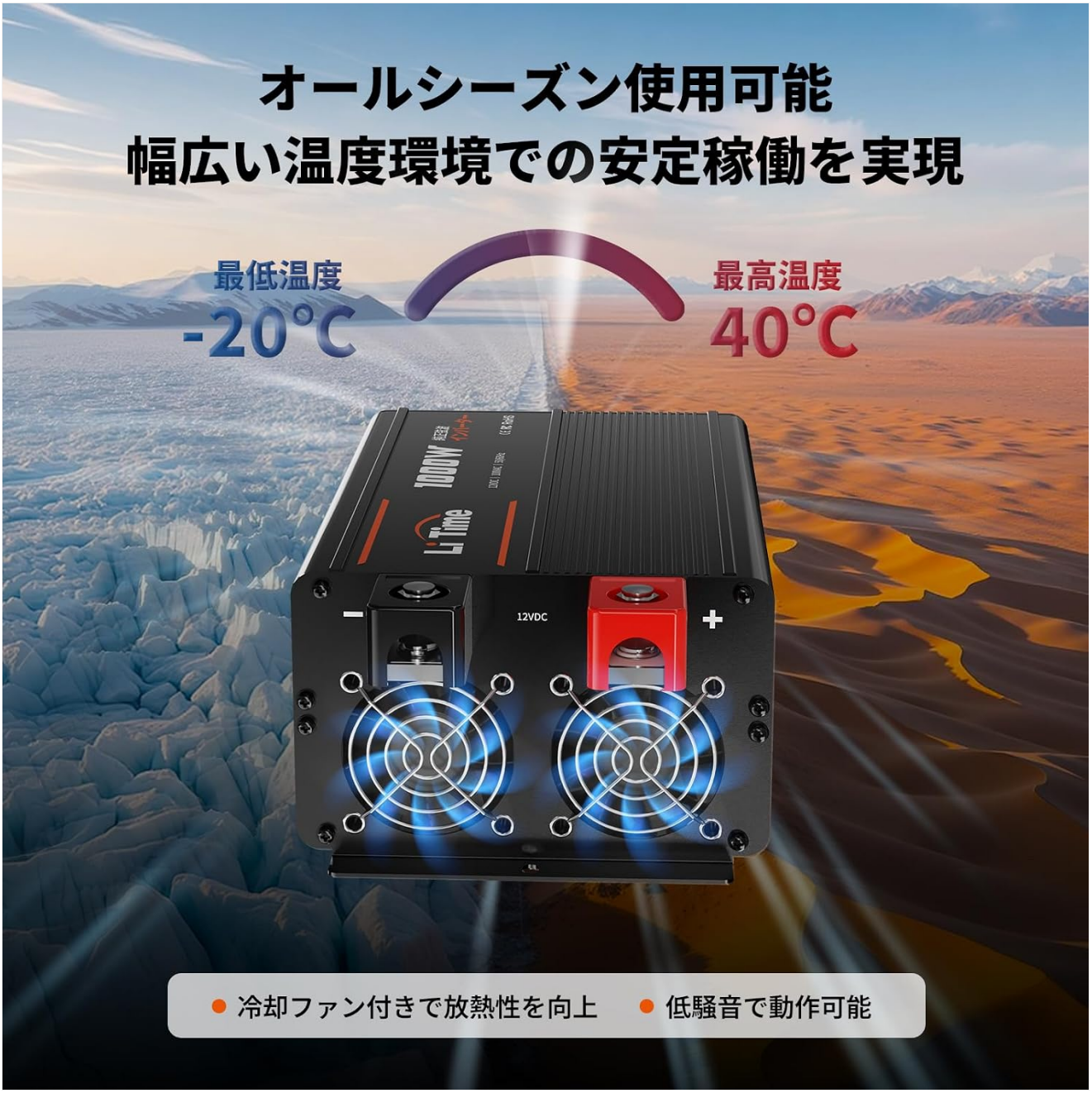

Figure 8: Dual cooling fans and wide operating temperature range (-20°C to 40°C).

8. Troubleshooting

The LiTime inverter is equipped with multiple protection features. If an issue occurs, the remote control display may show an error code. Refer to the following common issues and their solutions:

Problem	Possible Cause	Solution
Inverter not turning on	Loose battery connections, low battery voltage, faulty ON/OFF switch.	Check battery connections. Charge battery if voltage is low. Ensure switch is fully engaged.
No AC output	Overload, short circuit, overheat, low/over voltage protection activated.	Reduce load. Check for short circuits in connected devices. Allow inverter to cool down. Check battery voltage.
Low Voltage Alarm/Protection	Battery voltage is too low.	Disconnect load and recharge the battery.
Overvoltage Protection	Input voltage exceeds safe limits.	Check battery charging system. Ensure input voltage is within 12V DC range.

Problem	Possible Cause	Solution
Overheat Protection	Inverter temperature is too high.	Reduce load. Ensure proper ventilation and clear cooling fans. Allow unit to cool.
Overload Protection	Connected load exceeds 1000W rated output.	Disconnect some appliances to reduce the load.
Short Circuit Protection	Short circuit detected at the output.	Immediately disconnect all loads and check for short circuits in cables or appliances.

9. Specifications

Detailed technical specifications for the LiTime 12V 1000W Pure Sine Wave Inverter.

- **Brand:** LiTime
- **Model Number:** L12V1KW-Z-JP
- **Rated Output Power:** 1000W
- **Peak Output Power:** 2000W
- **Input Voltage:** 12V DC
- **Output Voltage:** 100V AC
- **Output Waveform:** Pure Sine Wave
- **Frequency:** 50Hz / 60Hz (Switchable)
- **Conversion Efficiency:** ≥90%
- **Operating Temperature:** -20°C to 40°C
- **Dimensions (L x W x H):** 30 cm x 7.6 cm x 17.3 cm
- **AC Outlets:** 3
- **USB-A Output:** 5V/3A
- **USB-C Output:** 5V/3A, 9V/2A, 12V/1.5A
- **Remote Control Cable Length:** 450 cm
- **Recommended Use:** Vehicles, Camping, Marine, Home Backup, Off-Grid Systems, Emergency Power

10. Warranty and Support

The LiTime 12V 1000W DC-AC Inverter comes with a **2-year manufacturer's warranty**. If you encounter any issues or have questions regarding your product, please contact LiTime customer support for prompt and professional assistance. Our dedicated support team is available to help you with any concerns.
For support, please visit the official LiTime website or contact your retailer.