POTEK PI-750

POTEK 750W Power Inverter User Manual

Model: PI-750
Brand: POTEK

1. Introduction

This manual provides essential information for the safe and efficient operation of your POTEK 750W Power Inverter. This device converts 12V DC power from your vehicle's battery or cigarette lighter outlet into 110V AC household power, along with 5V DC USB power, allowing you to operate various electronic devices on the go. Please read this manual thoroughly before installation and use.

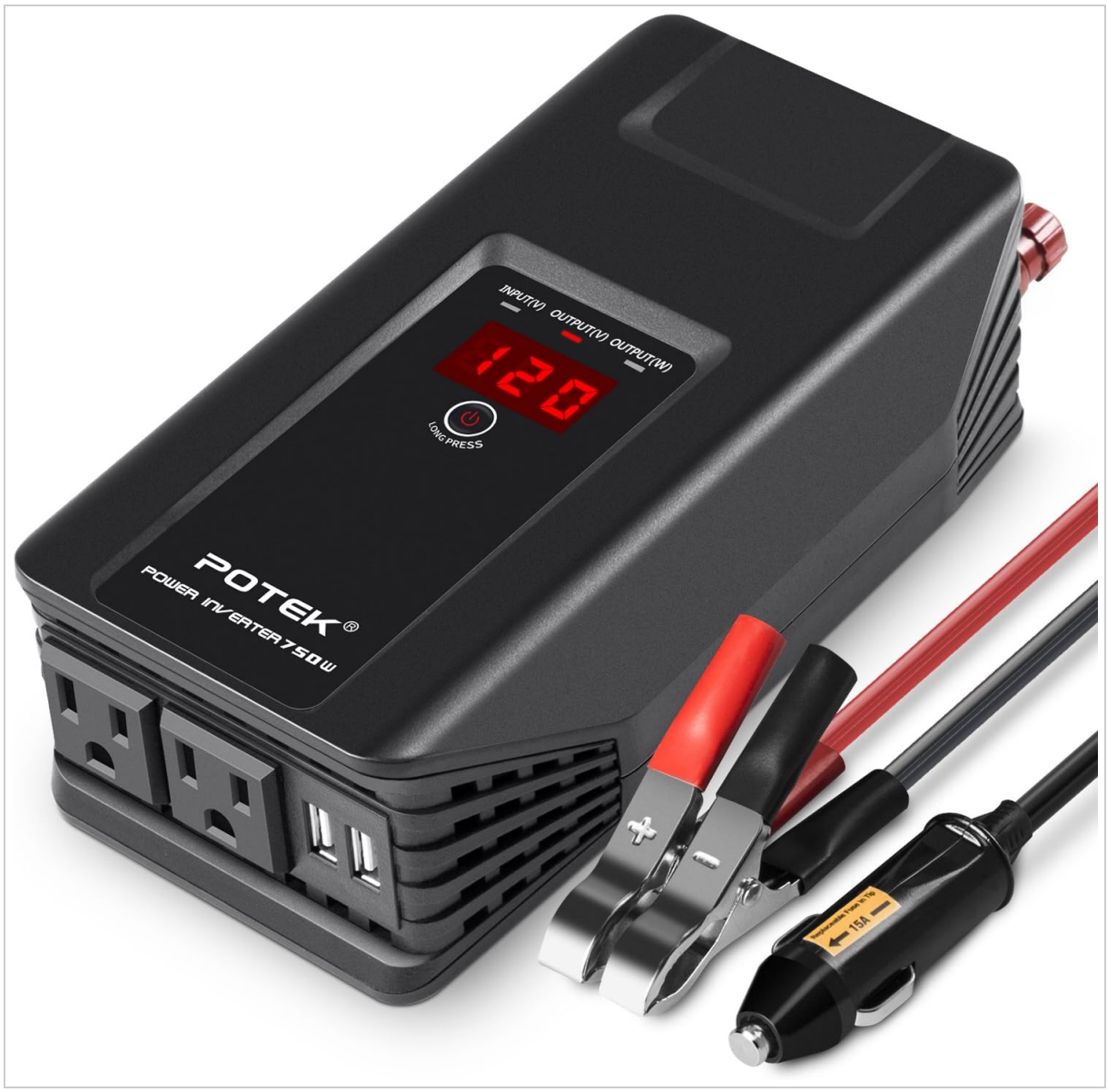

Image 1.1: POTEK 750W Power Inverter with battery clamps and cigarette lighter adapter.

2. Safety Information

IMPORTANT: Read all operating instructions and safety warnings before installing or using the inverter.

- Ensure proper ventilation around the inverter. Do not block ventilation openings.
- Do not expose the inverter to direct sunlight or extreme temperatures. Keep it in a cool, dry environment.
- Disconnect the positive battery terminal before performing any wiring to the inverter to prevent electrical shock or damage.
- Do not leave the power inverter in the ON position when your vehicle's engine is off, as this can drain the vehicle's battery.
- This inverter is equipped with multiple protection features including over-voltage, overload, over-current, under-voltage, overheating, and short circuit protection. If a fault occurs, the inverter may shut down automatically.
- Do not use high-power electric devices such as hair dryers, electric heaters, curling irons, or vacuum cleaners with this inverter, as they may exceed its wattage capacity.
- Never exceed the maximum continuous power rating of 750W. The peak power is 1500W.

- When using the cigarette lighter outlet, the maximum allowed continuous power is 150W. For loads higher than 150W, always use the battery clamp cables connected directly to the 12V battery.
- Do not attempt to open or service the inverter yourself. Internal fuses are not user-replaceable. Refer all servicing to qualified personnel.

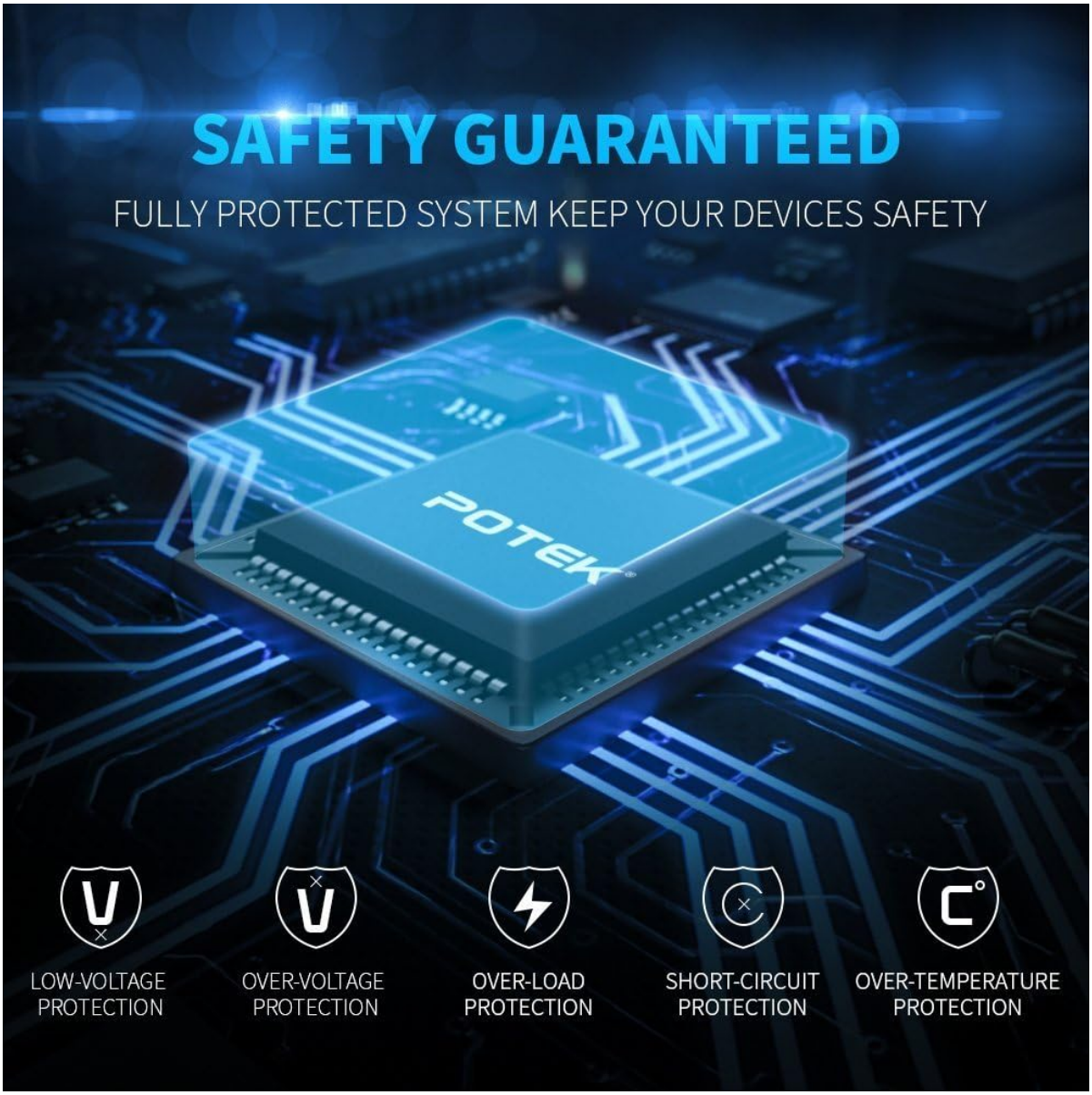

Image 2.1: Built-in safety protections of the POTEK Power Inverter.

3. Package Contents

Please verify that all items are present in the package:

- 1x POTEK 750W Power Inverter
- 1x Car Cigarette Plug Adapter
- 2x Car Battery Clip Cables (one red for positive, one black for negative)
- 2x Spare Fuses (Note: These are external fuses, internal fuses are not user-replaceable)
- 1x User Manual (this document)

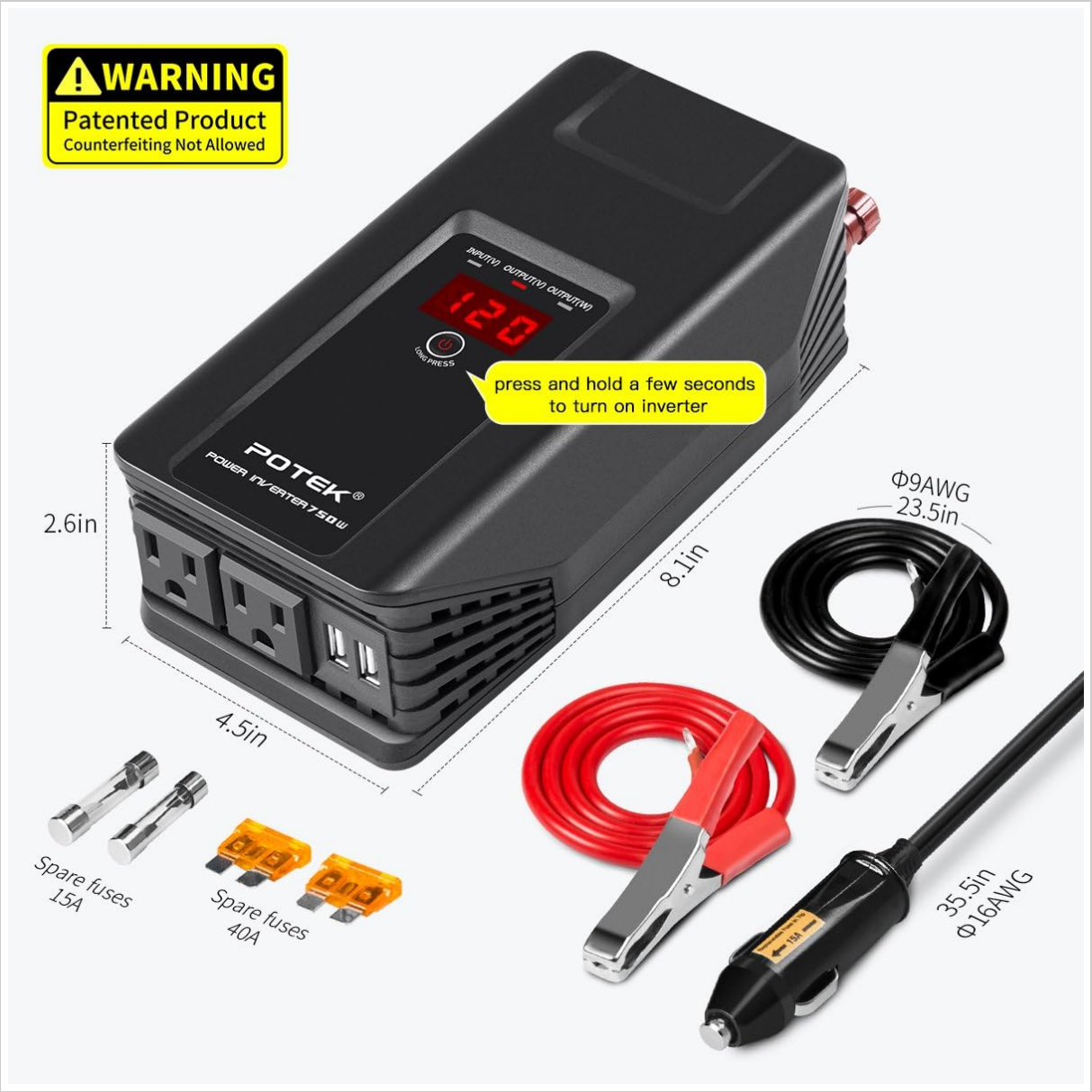

Image 3.1: Contents of the POTEK 750W Power Inverter package.

4. Product Features

- **High Power Output:** Provides 750W continuous DC to AC power and 1500W peak power.
- **Versatile Charging:** Equipped with dual AC outlets and dual USB charging ports (DC 5V/2A) for charging laptops, tablets, smartphones, cameras, and more.
- **Advanced Protection:** Features comprehensive safety protections including over-voltage, overload, over-current, under-voltage, overheating, and short circuit protection.
- **Digital Display:** Integrated LCD display shows real-time input voltage (V), output voltage (V), and output wattage (W) for easy monitoring.
- **Smart Cooling Fan:** The intelligent cooling fan operates silently and activates only when the output power exceeds 200W, ensuring efficient heat dissipation.
- **Flexible Connectivity:** Includes both a 39-inch cigarette lighter cord for low-power applications (up to 150W) and battery clamp cables for higher power demands (up to 750W).

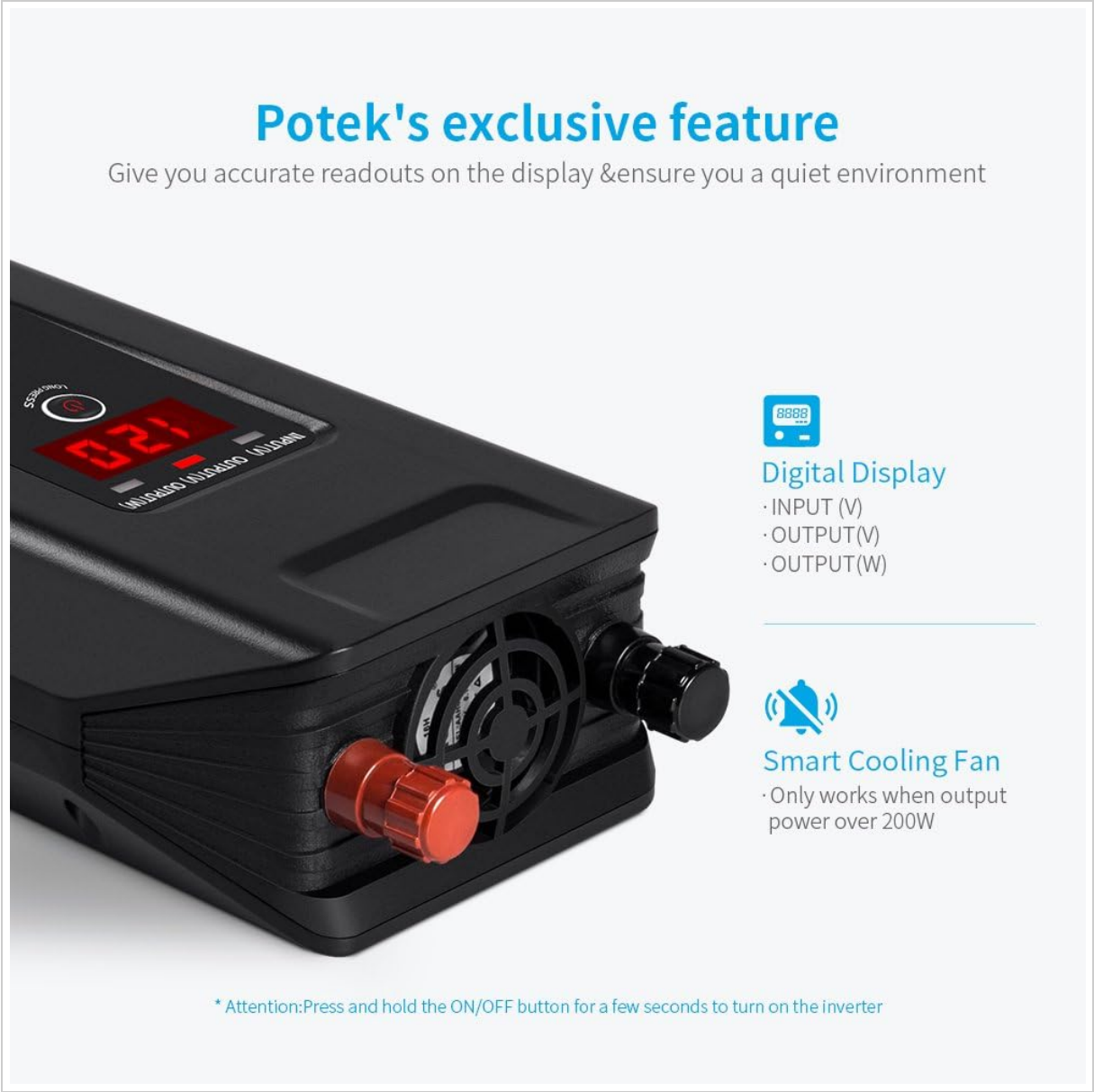

Image 4.1: Digital display and smart cooling fan feature.

5. Setup

The POTEK 750W Power Inverter offers two connection methods depending on your power requirements:

5.1. Connecting via Cigarette Lighter Outlet (Up to 150W)

1. Ensure the inverter is turned off.
2. Insert the car cigarette plug adapter firmly into your vehicle's 12V cigarette lighter outlet.
3. Connect the other end of the cigarette plug adapter to the inverter's DC input port.
4. This method is suitable for devices requiring up to 150 watts of continuous power.

5.2. Connecting via Battery Clamp Cables (Up to 750W)

1. Ensure the inverter is turned off.
2. **Safety First:** Disconnect the positive (+) battery terminal of your vehicle's battery before making any connections to the inverter.
3. Connect the red battery clamp cable to the positive (+) terminal of the inverter.
4. Connect the black battery clamp cable to the negative (-) terminal of the inverter.

5. Connect the red battery clamp to the positive (+) terminal of your vehicle's 12V battery.
6. Connect the black battery clamp to the negative (-) terminal of your vehicle's 12V battery.
7. Reconnect the positive (+) battery terminal of your vehicle's battery.
8. This method is required for devices requiring more than 150 watts, up to the inverter's full 750 watts continuous power.

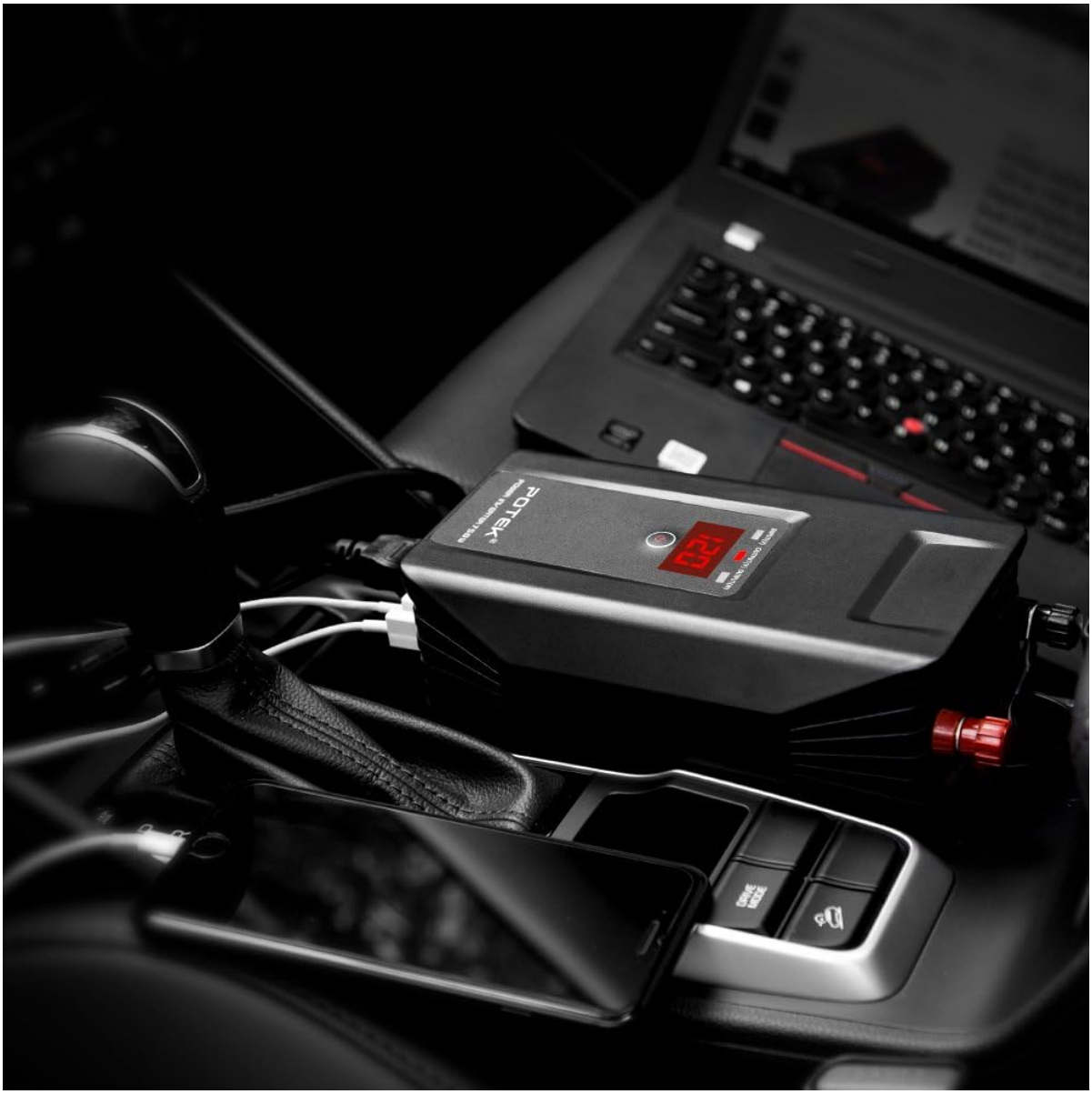

Image 5.1: Inverter connected in a vehicle for charging devices.

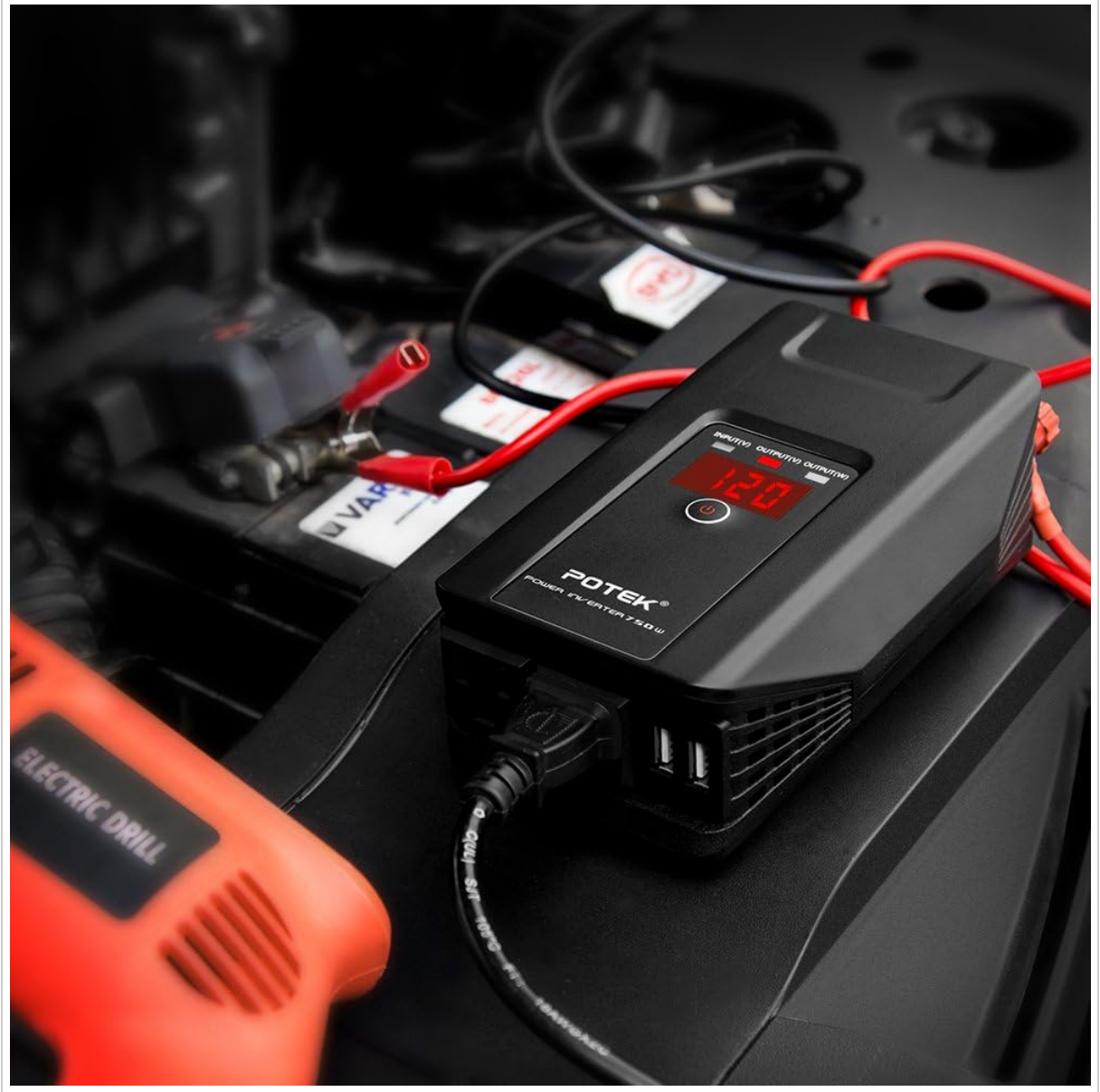

Image 5.2: Inverter connected directly to a car battery for higher power applications.

6. Operating Instructions

6.1. Turning the Inverter On/Off

To turn the inverter ON, press and hold the power button for a few seconds until the digital display illuminates. To turn the inverter OFF, press and hold the power button again for a few seconds.

6.2. Using AC Outlets and USB Ports

- Once the inverter is on, plug your AC devices into the 110V AC outlets.
- Plug your USB-powered devices into the 5V DC USB ports.
- Ensure the total wattage of all connected devices does not exceed the inverter's continuous power rating (750W).

6.3. Understanding the Digital Display

The integrated LCD display provides real-time information:

- **INPUT (V):** Shows the current DC input voltage from your battery (e.g., 12.5V). This helps monitor your battery's charge level.

- **OUTPUT (V):** Displays the AC output voltage (e.g., 110V or 120V).
- **OUTPUT (W):** Indicates the current wattage being drawn by your connected devices. This helps ensure you stay within the inverter's power limits.

6.4. Smart Cooling Fan Operation

The smart cooling fan is designed to operate quietly. It will only activate when the inverter's internal temperature rises due to power draw exceeding approximately 200W. This ensures efficient cooling while minimizing noise during low-power operation.

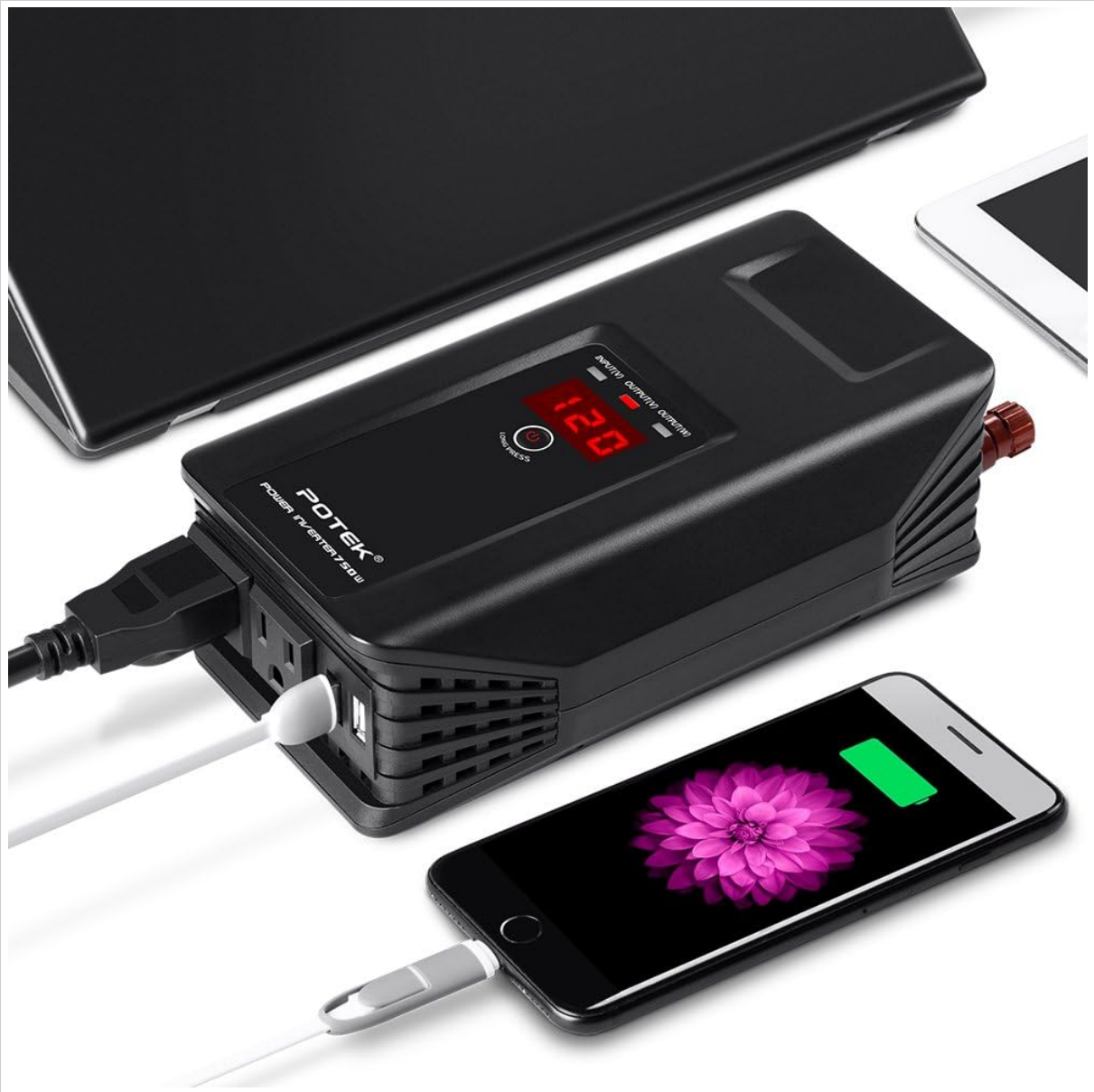

Image 6.1: Inverter in use, charging multiple devices simultaneously.

7. Maintenance

- Keep the inverter clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- Ensure the ventilation openings are clear and unobstructed to allow for proper airflow and cooling.
- Store the inverter in a cool, dry place away from direct sunlight, moisture, and corrosive materials when not in use.
- Regularly check the battery clamp cables and cigarette lighter adapter for any signs of damage or wear. Replace if necessary.

8. Troubleshooting

If your POTEK Power Inverter is not functioning as expected, refer to the following common issues and solutions:

Problem	Possible Cause	Solution
Inverter does not turn on.	Loose connection, low battery voltage, blown fuse (external).	Check all connections are secure. Ensure battery voltage is within 10-15V DC. Check and replace external fuses if blown.
Inverter shuts down during operation.	Overload, overheating, low/high input voltage, short circuit.	Reduce the load (disconnect some devices). Allow inverter to cool down. Check battery voltage. Ensure no short circuits in wiring or devices.
Fan is not running.	Low power draw.	The fan activates only when output power exceeds approximately 200W. If drawing high power and fan is still not running, contact support.
Output power is lower than expected (e.g., only 150W).	Using cigarette lighter adapter for high-power devices.	For loads over 150W, you must use the battery clamp cables connected directly to the vehicle's 12V battery.
Unit makes unusual noises or smells.	Internal fault, severe overload.	Immediately disconnect the inverter from the power source and all devices. Do not attempt to use it again. Contact customer support.

9. Specifications

Specification	Value
Model Name	PI-750
Rated Power	750W
Peak Power	1500W
Input Voltage	DC 12V (DC 10-15V)
Output Voltage	AC 100V-120V
Output Waveform	Modified Sine Wave
USB Output	DC 5V/2A
Product Dimensions	7.7 x 4.7 x 2.5 inches
Item Weight	1.54 pounds
Display Type	LCD
Recommended Use	Vehicle

10. Warranty and Support

For product support, technical assistance, or warranty inquiries, please contact POTEK customer service. Refer to the contact information provided with your purchase or visit the official POTEK website for the most up-to-date support details.
Optional protection plans may be available for purchase separately to extend coverage beyond the manufacturer's standard warranty. Please refer to the terms and conditions of any such plans for details.

Related Documents - PI-750

	[IOTA IIS 750 High Efficiency 750W Unit Inverter Equipment Instruction Manual] Instruction manual for the IOTA IIS 750 High Efficiency 750W Unit Inverter Equipment. Covers important safety precautions, installation instructions, wiring, operation, automatic testing, troubleshooting, and maintenance.
	[MEAN WELL NPP-750 Series: 750W Battery Charger & Power Supply] Discover the MEAN WELL NPP-750 series, a versatile 750W dual-purpose device functioning as both a high-reliability battery charger and a robust power supply. Ideal for industrial, automotive, and surveillance applications, it features adjustable voltage and current, a 3-stage charging curve, and a wide operating temperature range.
	[MEAN WELL RSP-750 Series 750W Single Output Power Supply] Technical specifications and functional manual for the MEAN WELL RSP-750 series of 750W single output enclosed AC/DC power supplies. Details features, applications, electrical specifications, dimensions, and mounting instructions.
	[Cisco Nexus 9332C Switch Overview and Hardware Features] This document provides an overview of the Cisco Nexus 9332C switch, detailing its hardware features, port configurations, fan modules, and power supply options. It includes information on airflow management and compatibility.

	[MEAN WELL NPB-750 Series: 750W Intelligent Battery Charger] The MEAN WELL NPB-750 series is a 750W intelligent battery charger offering ultra-wide output voltage ranges, auto-ranging charging, CANBus communication, and multiple programmable charging curves. It is designed for various applications including AGVs, e-bikes, specialty vehicles, and telecommunication systems, ensuring reliable and efficient battery charging.
	[Cisco Nexus 9336C-FX2 Switch Overview and Hardware Features] An overview of the Cisco Nexus 9336C-FX2 switch, a 1-RU fixed-port switch for data center deployments, detailing its ports, fan modules, power supplies, and hardware features.