EcoVolt PowerMax 2400

EcoVolt OSCAL PowerMax 2400 Solar Power Station User Manual

Model: PowerMax 2400

Introduction

This manual provides essential instructions for the safe and efficient operation of your EcoVolt OSCAL PowerMax 2400 Solar Power Station. Please read this manual thoroughly before using the device and retain it for future reference. The PowerMax 2400 is a versatile, high-capacity portable power station designed for various applications, including home backup, outdoor activities, and emergency power needs.

Product Overview and Key Features

The EcoVolt OSCAL PowerMax 2400 is a robust solar power station featuring a 1872Wh LiFePO4 battery and a 2400W output (5000W peak). It is designed for reliability and portability, weighing approximately 53 lbs (24.45 kg).

Key Features:

- **High Capacity & Output:** 1872Wh capacity with 2400W rated power, capable of powering 99% of common appliances.
- **Expandable Design:** Supports up to 10 BP2400 battery packs, expanding total capacity to 20592Wh.
- **Fast & Adjustable Charging:** Achieves 0-100% charge in 80 minutes via AC input. Features intelligent input current adjustment (0W-1400W AC) and combined AC+Solar charging up to 1500W for even faster recharge times.
- **Durable LiFePO4 Battery:** Built-in LiFePO4 battery offers over 3500 charge/discharge cycles, providing a lifespan of approximately 15 years. Includes a Battery Management System (BMS) and Control Unit (MCU) for enhanced safety and performance.
- **Versatile Output Ports:** Equipped with 16 output ports, including 4 AC outlets, 4 USB-A quick charge ports, 2 USB-C PD ports, 2 DC outlets, 1 cigar lighter, and 1 Anderson Connector.
- **Smart APP Control:** Monitor and control the power station's input/output, remaining power, and charging schedule via a mobile application.

- **Integrated Audio & Lighting:** Features dual speakers (25W subwoofer, 10W tweeter) and an ultra-bright 5W LED light with five lighting modes, including an adjustable Morse code flash signal.
- **Wireless Charging:** Includes a 15W wireless charging pad for compatible mobile devices.
- **Ultra-fast EPS Auto Switchover:** Automatically switches to battery power within 0.01 seconds during a power outage when connected to home power.

Package Contents

Upon unpacking, please verify that all items listed below are present and in good condition:

- EcoVolt OSCAL PowerMax 2400 Portable Power Station
- AC Charging Cable
- Car Charging Cable
- User Manual (this document)

Note: If the solar generator includes solar panels, they will be shipped in separate packages.

Visual Product Overview



Figure 1: Front view of the EcoVolt OSCAL PowerMax 2400, showing the display, control panel, and various output ports.



Figure 2: Detailed view of the 16 versatile output ports, including AC, USB-A, USB-C, DC, and car lighter ports, along with wireless charging pads.

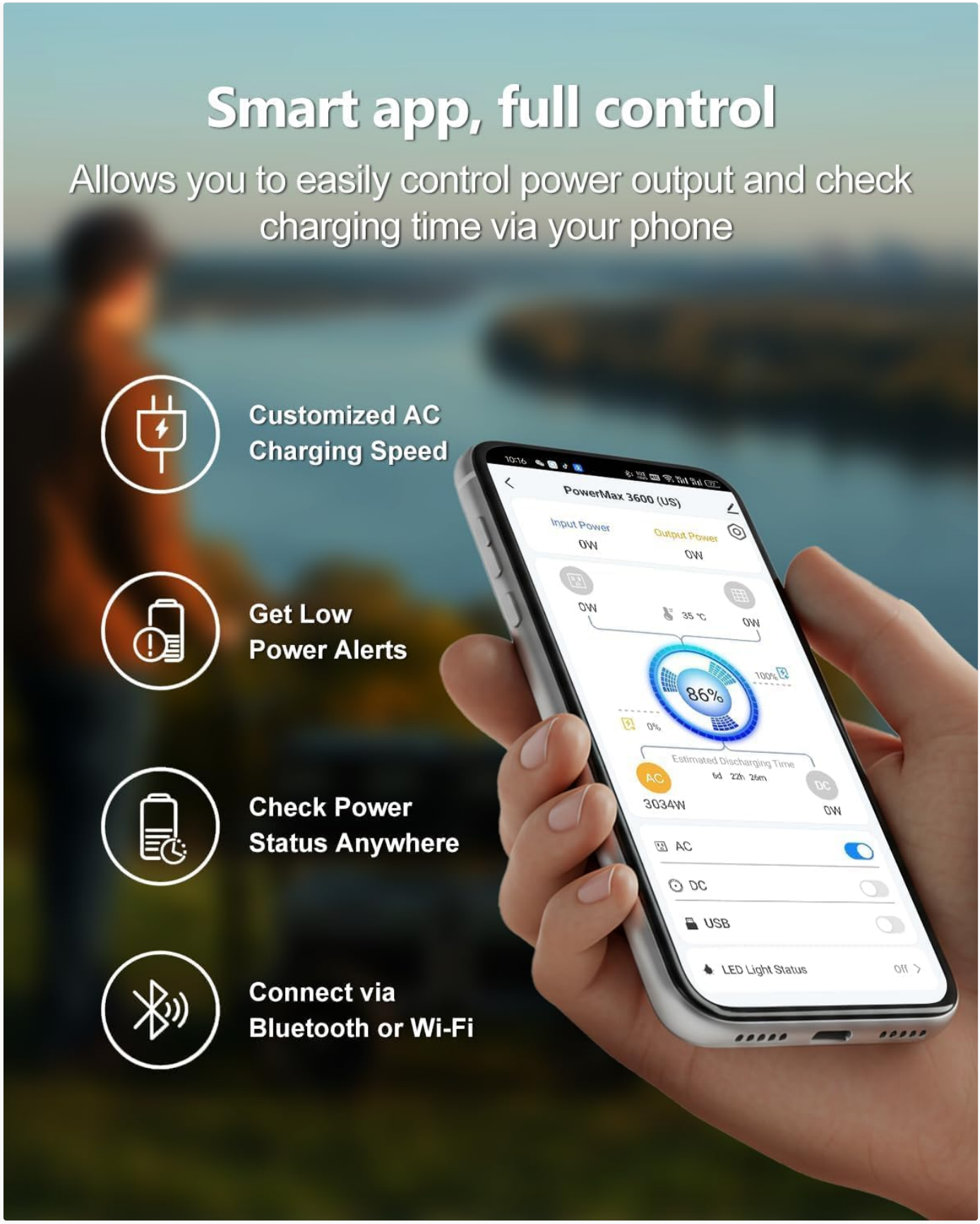


Figure 3: Illustration of the mobile application interface for controlling and monitoring the PowerMax 2400.



Figure 4: The PowerMax 2400 with additional battery packs, demonstrating its expandable capacity feature.



Figure 5: The PowerMax 2400 being charged by solar panels in an outdoor setting.

Setup Instructions

1. **Unpacking:** Carefully remove the PowerMax 2400 and all accessories from the packaging. Retain packaging for potential future transport or storage.
2. **Initial Charge:** Before first use, fully charge the PowerMax 2400 using the provided AC charging cable. Connect the AC charging cable to the AC input port on the device and then to a standard wall outlet. The display will indicate charging status.
3. **Placement:** Place the power station on a stable, flat surface in a well-ventilated area. Ensure adequate clearance around the vents for proper heat dissipation. Avoid direct sunlight or extreme temperatures.
4. **App Connection (Optional):** Download the EcoVolt mobile application from your device's app store. Follow the in-app instructions to connect your PowerMax 2400 via Bluetooth or Wi-Fi for remote monitoring and control.
5. **Expanding Capacity (Optional):** If using additional BP2400 battery packs, refer to their specific manual for connection instructions. The PowerMax 2400 supports cableless stacking for expanded capacity.

Operating Instructions

Turning On/Off:

- To turn on the PowerMax 2400, press and hold the main power button until the display illuminates.
- To turn off, press and hold the main power button until the display turns off.

Charging the Power Station:

- **AC Charging:** Connect the AC charging cable to the AC input port and a wall outlet. The device supports 0W-1400W adjustable AC input. A full charge takes approximately 1.6 hours.
- **Solar Charging:** Connect compatible solar panels (up to 800W) to the solar input port. For optimal charging, position panels to receive maximum sunlight.

- **Car Charging:** Use the provided car charging cable to connect to your vehicle's 12V auxiliary power outlet.
- **Combined Charging:** For fastest charging, combine AC and solar input (up to 1500W total) to achieve a full charge in approximately 1.5 hours.

Using Output Ports:

- **AC Outlets:** Press the "AC ON/OFF" button to activate the AC outlets. Plug in your AC-powered devices. Ensure total wattage does not exceed 2400W (5000W peak).
- **USB Ports (USB-A, USB-C):** These ports are typically active when the unit is on. Plug in your USB-powered devices.
- **DC Outlets (DC5521, Car Lighter, Anderson):** Press the "DC ON/OFF" button to activate DC outputs. Connect your 12V DC devices.
- **Wireless Charging:** Place your Qi-compatible device on the wireless charging pad on top of the unit.

EPS Functionality:

When connected to household power, the PowerMax 2400 defaults to EPS (Emergency Power Supply) mode. In the event of a power outage, it will automatically switch to battery power within 0.01 seconds, providing uninterrupted power to connected devices.

App Control:

The EcoVolt app allows you to remotely monitor battery status, control input/output power, and adjust settings. Ensure your power station is connected to the app via Bluetooth or Wi-Fi as per the setup instructions.

Integrated Features:

- **LED Light:** Press the "LED" button to cycle through different lighting modes (e.g., low, medium, high, SOS, strobe).
- **Dual Speakers:** Press the "Music ON/OFF" button to activate the integrated speakers. Use the control buttons to play/pause, skip tracks, and adjust volume.

Product Videos

OSCAL PowerMax 2400 Overview

Your browser does not support the video tag.

This video provides a comprehensive overview of the OSCAL PowerMax 2400 Solar Power Station, highlighting its features, portability, and various applications for emergency power and outdoor use.

OSCAL 2400W Solar Generator Features

Your browser does not support the video tag.

This video demonstrates key functionalities and benefits of the OSCAL 2400W Solar Generator, including its charging capabilities and versatile output options for different scenarios.

Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the power station. Do not use abrasive cleaners or solvents.

Ensure all ports are free of dust and debris.

- **Storage:** When storing for extended periods, ensure the battery is charged to approximately 50-80%. Store in a cool, dry place away from direct sunlight and extreme temperatures. Recharge every 3-6 months to maintain battery health.
- **Ventilation:** Always ensure the ventilation openings are clear and unobstructed during operation and charging to prevent overheating.
- **Battery Care:** Avoid fully discharging the battery frequently, as this can reduce its lifespan. The integrated BMS helps manage battery health.

Troubleshooting

Problem	Possible Cause	Solution
Device not turning on	Battery is completely discharged; Power button not pressed long enough.	Charge the power station using AC power. Press and hold the power button for 3-5 seconds.
AC outlets not working	AC output not activated; Overload protection triggered; Device connected exceeds 2400W.	Press the "AC ON/OFF" button. Reduce the load by unplugging some devices. Check device wattage.
Slow charging via solar	Insufficient sunlight; Solar panels not properly connected; Panels are not compatible.	Adjust solar panel angle for direct sunlight. Ensure connections are secure. Verify panel specifications.
App not connecting	Bluetooth/Wi-Fi off; App not updated; Power station not in pairing mode.	Ensure Bluetooth/Wi-Fi is enabled on your phone and the power station. Restart the app and power station. Follow app pairing instructions.

If the problem persists after attempting these solutions, please contact customer support.

Technical Specifications

Feature	Detail
Brand	EcoVolt
Model Name	PowerMax 2400
Battery Type	LiFePO4
Battery Capacity	1872Wh (Expandable up to 20592Wh)
Rated Output Power	2400W
Peak Output Power	5000W

Feature	Detail
AC Input Power	Max 1400W (Adjustable)
Solar Charging Input	Max 800W
Vehicle Charging Input	Max 240W
AC Output Voltage	110 Volts
Total Power Outlets	16 (4 AC, 4 USB-A, 2 USB-C, 2 DC5521, 1 Car Lighter, 1 Anderson)
Wireless Charging	15W
Product Dimensions (LxWxH)	20.8"L x 11.4"W x 11.8"H (53x29x30.2 cm)
Net Weight	Approx. 53lb / 24.45kg
Material	ABS, Plastic
Special Features	Dual Speakers (25W subwoofer & 10W tweeter), Overload Protection, Portable, Upgraded Stacking Design, Wireless Fast Charging, APP Control, EPS Auto Switchover

Warranty Information

The EcoVolt OSCAL PowerMax 2400 Portable Power Station comes with a**5-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.
Please retain your proof of purchase for warranty claims. The warranty does not cover damage caused by misuse, accidents, unauthorized modifications, or failure to follow the instructions in this manual.

Customer Support

For any questions, technical assistance, or warranty claims, please contact EcoVolt customer support. Providing quality services and products is our goal.
Please visit the official EcoVolt website or refer to your purchase documentation for the most up-to-date contact information.

Online Resources:

- Product FAQs
- Software/Firmware Updates
- Additional User Guides

© 2025 EcoVolt. All rights reserved.

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