EcoVolt P2400

EcoVolt P2400 Portable Power Station User Manual

Model: P2400

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1. Introduction

1.1 Product Overview

The EcoVolt P2400 Portable Power Station is a versatile and high-capacity energy solution designed for various applications, including camping, RV travel, emergency backup, DIY projects, and outdoor work. Featuring a robust 2048Wh LiFePO4 battery and a continuous output of 2400W (5000W peak), it can power a wide range of devices and appliances. The P2400 offers multiple charging options and output ports, intelligent app control, and an uninterruptible power supply (UPS) function for critical devices.



Image: The EcoVolt P2400 Portable Power Station providing power in an outdoor environment, demonstrating its versatility for various devices.

1.2 Safety Instructions

- Read all instructions before operating the device.
- Do not disassemble, repair, or modify the unit. Incorrect reassembly may cause fire or electric shock.
- Keep the power station away from heat sources, direct sunlight, and flammable materials.
- Do not expose the unit to water or excessive humidity.
- Ensure adequate ventilation during use to prevent overheating.
- Use only original or certified charging cables and accessories.
- Keep out of reach of children and pets.
- In case of fire, use a dry powder fire extinguisher. Do not use water.

2. Package Contents

Please check that all the following items are included in your package:

- 1 × EcoVolt P2400 Portable Power Station (2400W)
- 1 × AC Charging Cable
- 1 × MC4 to XT90 Solar Charging Cable
- 1 × User Manual

3. Product Features

- **High Power Output & Capacity:** 2048Wh capacity with 2400W continuous output (5000W peak), capable of powering up to 99% of common devices and appliances.
- **Advanced LiFePO4 Battery:** Durable and safe LiFePO4 battery with over 4000 charge cycles, providing a lifespan of 10-15 years.
- **Multiple Charging Modes:** Supports AC, solar, car, and combined AC+solar charging for rapid replenishment.
- **16 Output Ports:** Includes 4 AC outlets, 4 USB-A ports, 4 Type-C PD ports, 2 car lighter sockets, and 2 DC5525 ports for simultaneous device charging.
- **Ultra-Fast Charging:** Charges to 80% in approximately 45 minutes with combined AC+solar input.
- **Uninterruptible Power Supply (UPS):** Automatic switchover in less than 0.01 seconds during power outages to protect sensitive electronics.
- **Smart App Control:** Monitor battery status, adjust charging speed, and control power on/off via WiFi or Bluetooth.
- **Quiet Operation:** Operates at a low noise level of approximately 35 dB, suitable for quiet environments.
- **Portable Design:** Equipped with wheels and a telescopic handle for easy transport.
- **Comprehensive Safety:** Integrated BMS (Battery Management System) protects against overcharge, overvoltage, short circuit, and overheating.

4. Setup

4.1 Unpacking

Carefully remove the EcoVolt P2400 Portable Power Station and all accessories from the packaging. Inspect the unit for any signs of damage. If any components are missing or damaged, contact customer support immediately.

4.2 Initial Charge

It is recommended to fully charge the EcoVolt P2400 before its first use to optimize battery performance and lifespan. Connect the AC charging cable to the power station and a wall outlet. The display will indicate the charging status.

4.3 App Installation

For enhanced control and monitoring, download the EcoVolt app from your device's app store (iOS or Android). Follow the in-app instructions to connect your P2400 via WiFi or Bluetooth. This allows you to supervise battery status, adjust charging speed, and control power output remotely.

5. Operating Instructions

5.1 Powering On/Off

To power on the EcoVolt P2400, press and hold the main power button for a few seconds until the display illuminates. To power off, press and hold the main power button again until the display turns off.

5.2 Charging the Power Station

The P2400 supports multiple charging methods:

- **AC Charging:** Connect the AC charging cable to the power station and a standard wall outlet. Max input is 1800W, allowing a full charge in approximately 1.2 hours.
- **Solar Charging:** Connect compatible solar panels (up to 500W via XT90/MPPT port) using the provided MC4 to XT90 cable. Charging time varies based on sunlight intensity and panel wattage.
- **Car Charging:** Use a car charger (not included) to charge the unit from your vehicle's 12V outlet. This method is slower and typically used for maintaining charge.
- **AC + Solar Combined Charging:** For the fastest charging, combine AC and solar inputs (up to 2300W total). This can achieve a full charge in approximately 1 hour.



Image: Visual representation of the four charging methods for the EcoVolt P2400, including AC, solar, car, and combined AC+solar charging.

5.3 Using Output Ports

The EcoVolt P2400 features 16 output ports to power various devices:

- **AC Outlets (4x):** Press the AC power button to activate. Connect appliances requiring standard wall power.
- **USB-A Ports (4x):** Automatically active when the unit is on. Connect USB-powered devices.
- **Type-C PD Ports (4x):** Automatically active when the unit is on. Supports Power Delivery for fast charging compatible devices.
- **Car Lighter Sockets (2x):** Press the DC power button to activate. Suitable for 12V car accessories.
- **DC5525 Ports (2x):** Press the DC power button to activate. For devices requiring a 12V DC barrel connector.



Image: A detailed view of the EcoVolt P2400's output panel, illustrating the variety and number of available ports for connecting multiple devices simultaneously.

5.4 UPS Function

The Uninterruptible Power Supply (UPS) function provides seamless power during outages. When the P2400 is connected to an AC wall outlet and has devices plugged into its AC outputs, it acts as a pass-through power source. In the event of a power failure, the system automatically switches to battery power in less than 0.01 seconds, preventing data loss or interruption for connected critical devices like computers or refrigerators.



Image: The EcoVolt P2400 providing uninterrupted power to a computer setup, demonstrating its rapid UPS protection feature.

5.5 App Control

The EcoVolt app allows for convenient remote control and monitoring of your P2400. Through the app, you can:

- Monitor the real-time battery status and remaining runtime.
- Adjust the AC and solar charging input speeds to optimize charging or reduce electricity costs.
- Remotely turn on or off specific output ports.
- View system diagnostics and error messages.



Image: A user interacting with the EcoVolt P2400 through its mobile application, highlighting the remote control and monitoring capabilities.

6. Maintenance

6.1 Cleaning

Regularly clean the exterior of the power station with a dry, soft cloth. Do not use abrasive cleaners or solvents. Ensure all ports are free of dust and debris. Do not spray water directly onto the unit.

6.2 Storage

When storing the EcoVolt P2400 for extended periods, ensure the battery is charged to approximately 50-80%. Store it in a cool, dry place, away from direct sunlight and extreme temperatures. Recharge the unit every 3-6 months to prevent battery degradation.

6.3 Battery Care

The EcoVolt P2400 uses a LiFePO4 battery, known for its longevity and safety. To maximize its lifespan:

- Avoid fully discharging the battery frequently.
- Avoid storing the unit at 0% or 100% charge for prolonged periods.
- Operate within the recommended temperature range.



Image: An internal view of the EcoVolt P2400's LiFePO4 battery, emphasizing its durability with over 4000 charge cycles and an estimated 15-year lifespan.

7. Troubleshooting

If you encounter issues with your EcoVolt P2400, refer to the table below for common problems and solutions.

Problem	Possible Cause	Solution
Unit does not power on	Battery is completely discharged; Power button not pressed correctly.	Charge the unit using the AC adapter; Press and hold the power button for 3-5 seconds.

Problem	Possible Cause	Solution
AC outlets not working	AC output is not enabled; Overload protection activated.	Press the AC power button to enable output; Reduce the load on the AC outlets.
Solar charging not working	Solar panels not connected correctly; Insufficient sunlight; MPPT controller issue.	Ensure cables are securely connected; Position panels for maximum sunlight; Check panel specifications.
App cannot connect to unit	Bluetooth/WiFi off; Unit too far from phone; App not updated.	Ensure Bluetooth/WiFi is enabled on phone and unit; Move phone closer; Update the app.
Unit is making unusual noise	Cooling fan operating; Internal component issue.	The cooling fan operates normally under load; If noise is excessive or unusual, contact support.

8. Technical Specifications

Feature	Specification
Model Name	P2400
Battery Capacity	2048Wh
Battery Type	LiFePO4
Rated Output Power	2400W
Peak Output Power	5000W
AC Input (Charging)	Up to 1800W
Solar Input (Charging)	Up to 500W (XT90 / MPPT)
Combined AC + Solar Input	Up to 2300W
AC Output Ports	4
USB-A Output Ports	4
Type-C PD Output Ports	4
Car Lighter Sockets	2
DC5525 Output Ports	2
UPS Switching Time	< 0.01 seconds
Noise Level	Approx. 35 dB
Dimensions (L x W x H)	45 x 30 x 37 cm

Feature	Specification
Weight	24 kg
Battery Lifespan	4000+ cycles (to 80% capacity)

9. Warranty and Support

9.1 Warranty Information

The EcoVolt P2400 Portable Power Station comes with a**5-year warranty** from the date of purchase. This warranty covers manufacturing defects and ensures reliable operation 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 natural disasters.

9.2 Customer Support

For any questions, technical assistance, or warranty claims, please contact EcoVolt customer service. Our support team aims to respond to inquiries within 8 hours. Refer to the contact information provided on our official website or your purchase documentation.

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Details

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