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› TerraVolt IEE P2400 Portable Solar Generator User Manual

TerraVolt P2400

TerraVolt IEE P2400 Portable Solar Generator User Manual

1. PRODUCT OVERVIEW

The TerraVolt IEE P2400 is a portable solar generator designed to provide reliable power for various applications, including home backup, RV use, camping, and outdoor activities. It features a high-capacity LiFePO4 battery and multiple output ports to power a wide range of devices.



Image 1.1: The TerraVolt IEE P2400 Portable Solar Generator, showcasing its display and multiple power outlets.

Key Features

- **2400W Output, 2048WH Capacity:** Powers up to 99% of common appliances.
- **1800W Fast AC Charging:** Reaches 80% charge in approximately 55 minutes, full charge in 70 minutes.
- **LiFePO4 Battery:** High stability, over 3500 charge-discharge cycles, and an estimated 12-year lifespan.
- **5-8ms EPS Switch:** Provides uninterrupted power for critical devices during outages.
- **Smart App Control:** Monitor and manage the power station remotely.
- **Quiet Operation:** Operates at below 30dB.
- **Portability:** Equipped with wheels and a telescoping handle for easy transport.

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Video 1.1: An overview of the IEE P2400 Portable Power Station's features and applications.

2. SETUP

2.1 Unboxing and Initial Inspection

Carefully remove all components from the packaging. Verify that all items listed in the packing list are present and undamaged. The package includes:

- 1 × P2400 Power Station
- 1 × AC Charging Cable
- 1 × Car Charging Cable
- 1 × Solar Charging Cable
- 1 × User Manual
- 1 × Warranty Card
- 1 × 4-in-1 Data Cable

2.2 Initial Charging

Before first use, fully charge the P2400 power station. Connect the AC charging cable to the AC input port on the unit and then to a wall outlet. The display will indicate charging status. A full charge via AC takes approximately 70 minutes.

2.3 App Installation and Connection

For smart control and monitoring, download the dedicated mobile application. Search for 'TerraVolt' or 'IEE Power' in your device's app store. Follow the in-app instructions to connect your P2400 via Bluetooth or Wi-Fi.

Power Your Home Essentials

2400W/2048Wh Station for 99% of Appliances



(1500W)
Cutting machine
1.3 hours



(450W)
Electric wrench
5.0 hours



(300W)
Water pump
6.5 hours



(1300W)
Chainsaw
1.5 hours



(1000W)
Chainsaw
2.0 hours



Image 2.1: The TerraVolt IEE P2400 being controlled and monitored via a mobile application, showing real-time status.

3. OPERATION

3.1 Powering On/Off

To power on the unit, press and hold the main power button until the display illuminates. To power off, press and hold the main power button again until the display turns off.

3.2 Connecting Devices

The P2400 offers 16 versatile output ports:

- 4 × AC Outlets (2400W continuous, 5000W peak)
- 4 × USB-A Ports (30W × 4)
- 4 × USB-C Ports (100W × 2, 30W × 2)
- 2 × Car Sockets

- 2 × DC5521 Ports

Connect your devices to the appropriate ports. Ensure that the total power consumption of connected devices does not exceed the P2400's rated output.



Image 3.1: Close-up view of the TerraVolt IEE P2400's front panel, detailing the various output ports including AC, USB, and car sockets.

3.3 Charging the P2400

The P2400 supports multiple charging methods:

- **AC Wall Outlet:** Use the provided AC charging cable for fast charging (1800W input).
- **Solar Panels:** Connect compatible solar panels (up to 1000W input) using the solar charging cable. Optimal charging requires direct sunlight.
- **Car Charger:** Use the car charging cable to charge from your vehicle's 12V outlet.
- **AC + Solar Dual Charging:** Combine AC and solar input for the fastest charging times, achieving a full charge in approximately 1 hour.

1800W AC High-Speed Charging

1.2-Hour Full Charge



1800W
AC Charging



1800w+500w
AC + Solar Panel



Max 500W
Solar Charging



Max 120W
Car charging



Image 3.2: The TerraVolt IEE P2400 connected for both AC wall charging and solar panel charging, illustrating its versatile input options.

3.4 Emergency Power Supply (EPS) Function

The P2400 features an EPS system that provides seamless power transfer in 5-8 milliseconds during a power outage. Connect critical devices to the AC outlets of the P2400, and it will automatically switch to battery power if the main grid fails, ensuring uninterrupted operation.

3.5 Usage Scenarios

The P2400 is suitable for various applications:

- **Home Backup:** Power essential home appliances during outages.
- **Outdoor Activities:** Ideal for camping, RV trips, and outdoor events.
- **Work Sites:** Power tools and equipment in remote locations.



Image 3.3: A collage showing the TerraVolt IEE P240 in different environments, including a workshop, a home kitchen, and an outdoor camping setup, demonstrating its versatility.

2400W x 2048WH

Revolutionize Your Outdoors

IEE Power Station for All Your Gear

The image shows a man and a woman sitting at a table outdoors, enjoying a meal and drinks. A TerraVolt IEE P2400 power station is connected to various appliances, including a coffee machine, electric oven, induction cooker, and air conditioner. The power station is a large, rugged, orange and black unit with multiple outlets and a digital display. The background shows a white van and a scenic landscape with mountains and a blue sky.

			
Coffee machine (550W) 3.7H	Electric oven (160W) 12.5H	Induction cooker (1800W) 1.1H	Air conditioner (1150W) 1.7H

Image 3.4: The TerraVolt IEE P2400 powering various appliances during an outdoor activity, including a coffee machine, electric oven, induction cooker, and air conditioner, with their respective wattages and estimated runtimes.

Real-Time Monitor & Control

Intuitive-Intelligent-User-friendly



0 to 100%
in **2 hours.**



Max. **500W**
Solar input



Image 3.5: The TerraVolt IEE P2400 providing power for various power tools in a workshop setting, such as a cutting machine, electric wrench, water pump, and chainsaw, along with their estimated runtimes.

4. MAINTENANCE

4.1 Battery Care

The P2400 uses a durable LiFePO4 battery. To maximize its lifespan:

- Avoid fully discharging the battery frequently.
- Store the unit in a cool, dry place away from direct sunlight.
- If storing for extended periods, charge the unit to approximately 50-80% every 3-6 months.

Safe & Reliable

Automotive Grade

LiFePO₄ Battery

12 Years
Lifespan

Last **8X** longer than the average

CNAS Certified
LiFePO₄

Passed **48** rigorous battery cell tests



*After 4000+ cycles, the LFP battery retains around 80% of its original capacity and lasts 8x longer than the average (500+ cycles)

Image 4.1: An internal view of the TerraVolt IEE P2400, highlighting its automotive-grade LiFePO₄ battery cells and their 12-year lifespan.

4.2 Cleaning

Use a soft, dry cloth to clean the exterior of the power station. Do not use liquid cleaners or immerse the unit in water. Keep ventilation openings clear of dust and debris.

4.3 Storage

When not in use, store the P2400 in a stable, upright position. Ensure it is protected from extreme temperatures and moisture. The built-in wheels and handle facilitate easy movement for storage.



Image 4.2: A person effortlessly transporting the TerraVolt IEE P2400 using its integrated telescoping handle and dual wheels, emphasizing its portability.

5. TROUBLESHOOTING

5.1 No Power Output

- Ensure the power station is turned on.
- Check the battery level on the display. Recharge if the battery is low.
- Verify that the specific output port (AC, USB, DC) is activated. Some ports may have individual power buttons.
- Confirm that the connected device is functioning correctly and its power requirements do not exceed the port's capacity.

5.2 Slow Charging

- **AC Charging:** Ensure the AC cable is securely connected and the wall outlet is providing sufficient power.
- **Solar Charging:** Check solar panel orientation for maximum sunlight exposure. Ensure panels are clean and

undamaged. Verify the solar charging cable connection.

- **Car Charging:** Ensure the vehicle's engine is running for optimal charging.

5.3 Overload Protection Activated

If the power station detects an overload, it will automatically shut down to protect itself. Disconnect some devices and restart the unit. Ensure the total wattage of connected devices is within the P2400's limits (2400W continuous, 5000W peak).

5.4 App Connection Issues

- Ensure Bluetooth or Wi-Fi is enabled on your mobile device.
- Restart the P2400 and your mobile device.
- Try re-pairing the device through the app.
- Ensure the app is updated to the latest version.

6. SPECIFICATIONS

Feature	Specification
Brand	TerraVolt
Model Name	P2400 Portable Power Station
Wattage	2400 watts (Running & Starting)
Output Wattage	2400
Peak Output Wattage	5000 watts
Battery Type	LiFePO4
Battery Capacity	2048WH
Charging Time (AC)	1.2 hours (80% in 55 minutes)
Max Solar Input	1000W
Total Power Outlets	16
UPS Switching Time	5-8ms
Noise Level	Below 30dB
Item Weight	50 Pounds
Product Dimensions	17.5"L x 11.7"W x 14.5"H
Material	Lithium Iron Phosphate
UPC	664404869924

7. WARRANTY AND SUPPORT

7.1 Warranty Information

The TerraVolt IEE P2400 Portable Solar Generator comes with a **5-year warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

7.2 Customer Support

For technical assistance, troubleshooting, or warranty inquiries, please contact TerraVolt customer support. You can typically find contact information on the manufacturer's official website or through the retailer where you purchased the product. Support is available to respond to issues within 24 hours.