CTOLITY AP2000

CTOLITY AP2000 Portable Power Station User Manual

Model: AP2000 | Brand: CTOLITY

1. Introduction

This user manual provides comprehensive instructions for the safe and efficient operation, maintenance, and troubleshooting of your CTOLITY AP2000 Portable Power Station. Please read this manual thoroughly before using the product and keep it for future reference.



Image 1.1: The CTOLITY AP2000 Portable Power Station with included 800W solar charging kit.

2. Safety Instructions

Always follow these safety precautions to prevent injury or damage to the product.

- Do not expose the power station to water or excessive humidity.
- Do not disassemble, repair, or modify the unit.
- Keep away from open flames and high temperatures.
- Ensure proper ventilation during use and charging.
- Use only the provided or approved charging accessories.
- Keep out of reach of children and pets.
- Avoid dropping or subjecting the unit to strong impacts.

The AP2000 features a 16-Layer BMS Safety system, providing protection against overcharge, over-discharge, short-circuit, and overheating. Its V0 fireproof shell enhances safety.

3. Product Overview

The CTOLITY AP2000 Portable Power Station is a high-capacity energy solution designed for various applications, from outdoor adventures to home backup. It features a durable LiFePO4 battery and multiple output ports.



Image 3.1: The AP2000 Portable Power Station, highlighting its compact design suitable for outdoor use.

3.1 Key Features

- **Battery:** 2048Wh (640,000mAh) automotive-grade LiFePO4 battery with 3,000+ charge cycles to 80% capacity retention.
- **Output:** 4x 2400W pure sine wave AC outlets (110V/220V), 13 total output ports including 100W PD Type-C, QC3.0 USB-A, and 12V DC.
- **Charging:** 1000W Turbo Charging (AC), 600W MPPT optimized solar charging, 12V/8A car charging.
- **Safety:** 16-Layer Battery Management System (BMS) for comprehensive protection.
- **Additional:** 4-mode LED lighting.

3.2 Package Contents

Verify that all items are present in the package:

- CTOLITY AP2000 Portable Power Station
- AC Adapter
- Car Charger Cable
- SolarSaga Parallel Adapter Cable (for solar kit models)
- User Manual (this document)



Image 3.2: The LiFePO4 battery technology ensures over 3000 charge cycles, designed for more than 10 years of use.

4. Setup and Initial Use

4.1 Unpacking

Carefully remove the power station and all accessories from the packaging. Inspect for any signs of damage. If any components are missing or damaged, contact customer support immediately.

4.2 Initial Charging

Before first use, it is recommended to fully charge the AP2000. This can be done via AC wall outlet, solar panel, or car charger.

- **AC Charging:** Connect the AC adapter to the power station's AC input port and then to a standard wall outlet. The unit supports 1000W Turbo Charging, allowing a full charge in approximately 2 hours.
- **Solar Charging:** Connect compatible solar panels (up to 600W max input) to the power station using the SolarSaga Parallel Adapter Cable. Ensure panels are positioned for maximum sunlight exposure. Full charge in approximately 4 hours with optimal solar input.
- **Car Charging:** Connect the car charger cable to the power station's DC input port and then to your vehicle's 12V auxiliary power outlet.

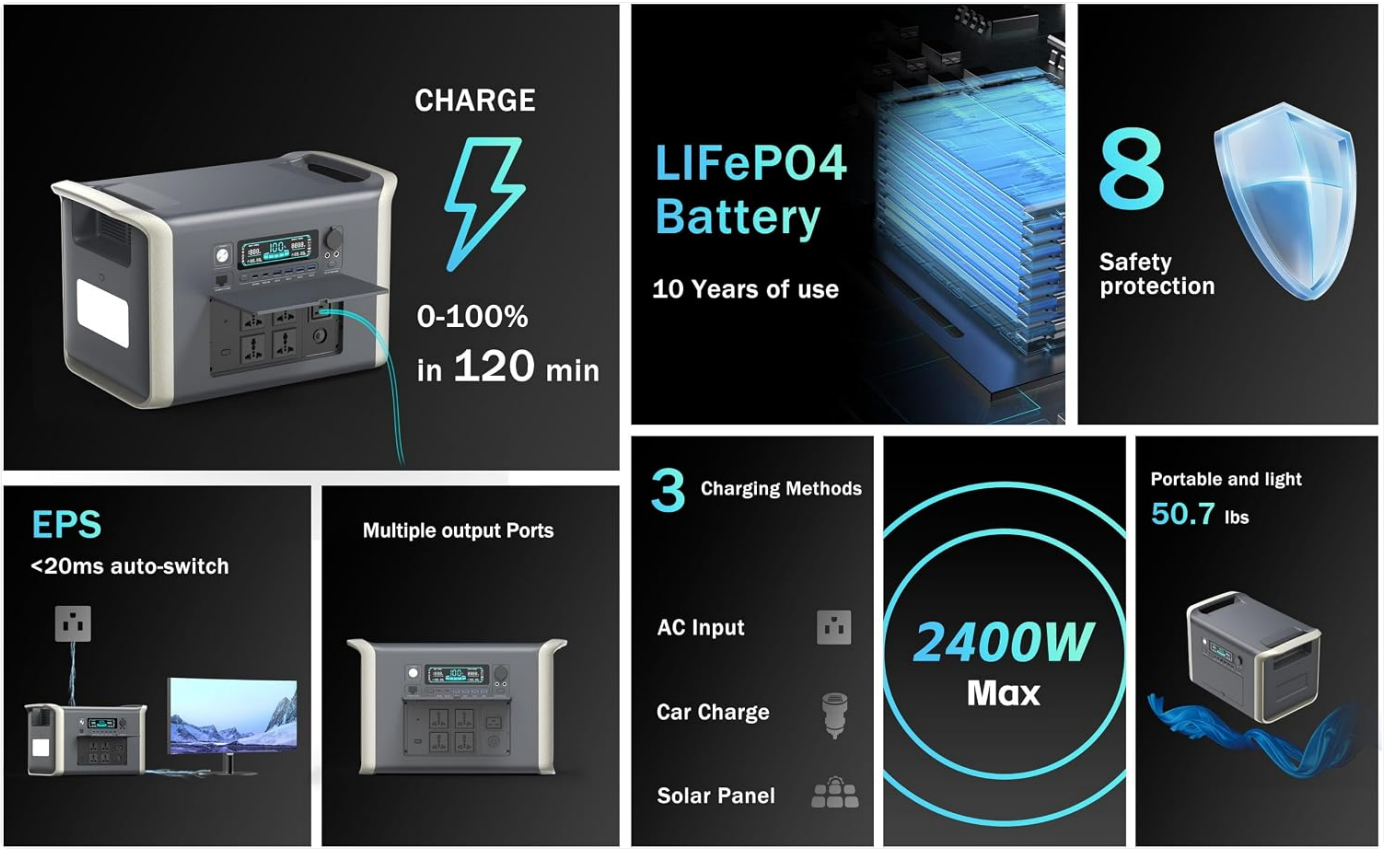


Image 4.1: Visual representation of the AP2000's charging capabilities and safety features, including 0-100% charge in 120 minutes via AC, LiFePO4 battery, and 8 safety protections.

5. Operating Instructions

5.1 Powering On/Off

Press and hold the main power button for 3 seconds to turn the unit on or off. The LCD display will illuminate, showing battery level and output status.

5.2 Using AC Outputs

To use the AC outlets, press the AC power button. The AC indicator on the display will light up. Plug your devices into the 4x 2400W pure sine wave AC outlets. The AP2000 can handle peak loads up to 4800W.

5.3 Using DC and USB Outputs

Press the DC power button to activate the 12V DC ports. For USB devices, simply plug them into the USB-A (QC3.0) or USB-C (100W PD) ports. These ports are typically active when the unit is on.

5.4 LED Light Operation

The AP2000 features a 4-mode LED light. Press the light button to cycle through different modes: low, medium, high, and SOS. Press and hold to turn off.

5.5 UPS Functionality

The AP2000 includes an Uninterruptible Power Supply (UPS) function. When connected to an AC input and powering devices, it can automatically switch to battery power in less than 20ms during a power outage, ensuring continuous operation for sensitive electronics.



Image 5.1: The AP2000 demonstrating its versatility with multiple charging modes, including 1000W AC input, 500W solar panel input, and 120W car charging.

6. Maintenance

6.1 Cleaning

Wipe the exterior of the power station with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure all ports are free of dust and debris.

6.2 Storage

For long-term storage, charge the unit to 50-80% capacity and store in a cool, dry place away from direct sunlight and extreme temperatures. Recharge every 3-6 months to maintain battery health.



Image 6.1: The AP2000 in an outdoor camping scenario, demonstrating its utility for portable power needs.

7. Troubleshooting

Problem	Possible Cause	Solution
Unit does not turn on.	Battery is depleted.	Charge the power station using AC, solar, or car charger.
AC output not working.	AC output not enabled; device draws too much power.	Press the AC power button. Reduce load; ensure device wattage is within 2400W.
Slow solar charging.	Insufficient sunlight; panels not optimally angled; dirty panels.	Adjust panel angle, ensure clear sky, clean panel surface.
Unit overheats.	Poor ventilation; excessive load.	Ensure clear airflow around the unit. Reduce connected load.

8. Specifications

Feature	Detail
Model Name	AP2000
Battery Type	LiFePO4 (Lithium Iron Phosphate)
Capacity	2048Wh (640,000mAh)
AC Output	4x 2400W (Pure Sine Wave, 4800W Peak)
DC Output	12V DC ports

Feature	Detail
USB Output	USB-A (QC3.0), USB-C (100W PD)
AC Input (Charging)	1000W Max (Turbo Charging)
Solar Input (Charging)	600W Max (MPPT Optimized)
Car Input (Charging)	12V/8A
Dimensions	20"L x 12"W x 12"H
Weight	60 Pounds
Operating Temperature	-10°C to 50°C

9. Warranty and Support

9.1 Warranty Information

The CTOLITY AP2000 Portable Power Station comes with a**2-year manufacturer's warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by misuse, accident, unauthorized modification, or natural disasters.
For warranty claims, please retain your proof of purchase.

9.2 Customer Support

If you encounter any issues or have questions regarding your CTOLITY AP2000, please contact our customer support team. Refer to the contact information provided on the product packaging or the official CTOLITY website.
For the latest information and FAQs, please visit the official product support page.

© 2025 CTOLITY. All rights reserved.