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CTOLITY XP1000

CTOLITY XP1000 Portable Power Station User Manual

MODEL: XP1000

1. Safety Instructions

Please read and understand all safety instructions before operating the CTOLITY XP1000 Portable Power Station. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Do not disassemble, repair, or modify the unit.
- Do not expose the unit to fire or extreme temperatures.
- Avoid contact with liquids. Do not immerse the unit in water.
- Use only approved accessories and charging cables.
- Keep the unit away from children and pets.
- Ensure proper ventilation during use and charging to prevent overheating.
- Do not use the unit if it is damaged or appears to be malfunctioning.

2. Package Contents

Verify that all items are included in your package:

- XP1000 Portable Power Station
- AC Charging Cable (Input)
- Car Input Charging Cable (Car to XT60 Input)
- Solar Charging Cable (MC4 to XT60 Input)
- User Manual

WHAT'S IN THE BOX



Figure 2.1: What's in the Box

3. Product Overview

The CTOLITY XP1000 is a portable power station featuring a 1024Wh LiFePO4 battery and 1600W AC output (2600W surge). It is designed to provide reliable power for various applications, including outdoor camping, RV travel, and home backup during outages.

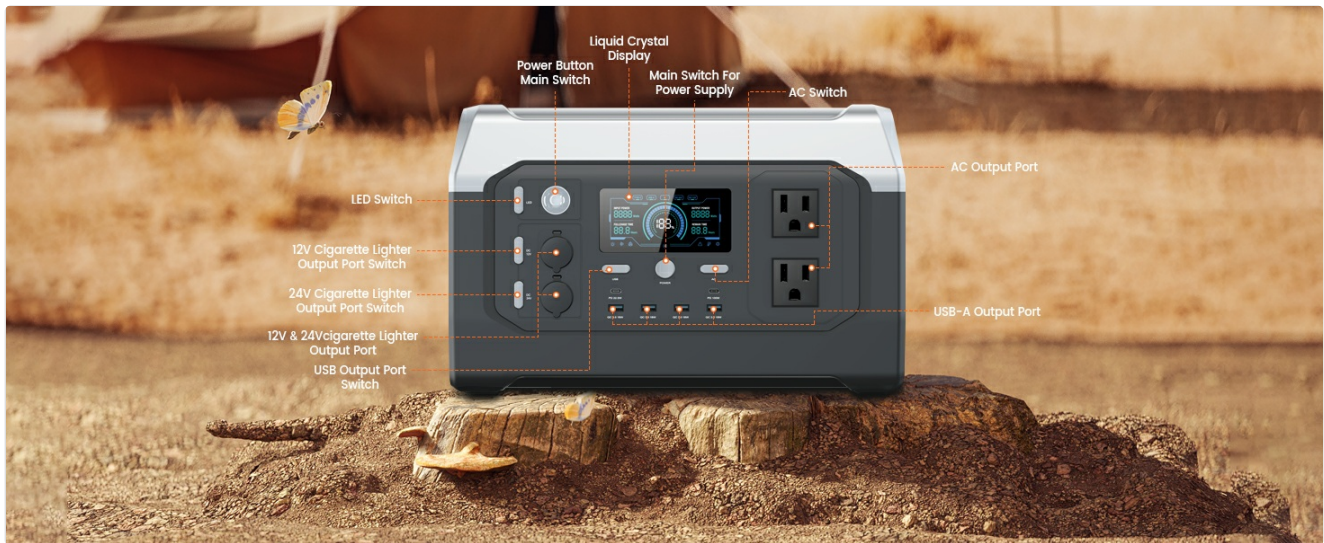


Figure 3.1: XP1000 Front Panel Overview

3.1. Ports and Controls

- **Power Button:** Turns the unit on/off.
- **Liquid Crystal Display (LCD):** Shows input/output power, battery percentage, remaining charge/discharge time, and status indicators.
- **AC Output Ports (x2):** 1600W pure sine wave AC output for household appliances.
- **USB-A Ports (x4):** QC3.0 (18W) for fast charging compatible devices.
- **USB-C Ports (x2):** One PD100W and one PD22.5W for high-speed charging of laptops, tablets, and smartphones.
- **DC Car Charging Output (x2):** 12V output for car-powered devices.
- **LED Light:** Integrated light with multiple modes.
- **XT60 Input Port:** For solar and car charging.
- **AC Input Port:** For wall charging.

INTUITIVE LCD DISPLAY FOR CLEAR UNDERSTANDING

When you use the product, corresponding icons will light up on the LCD screen.

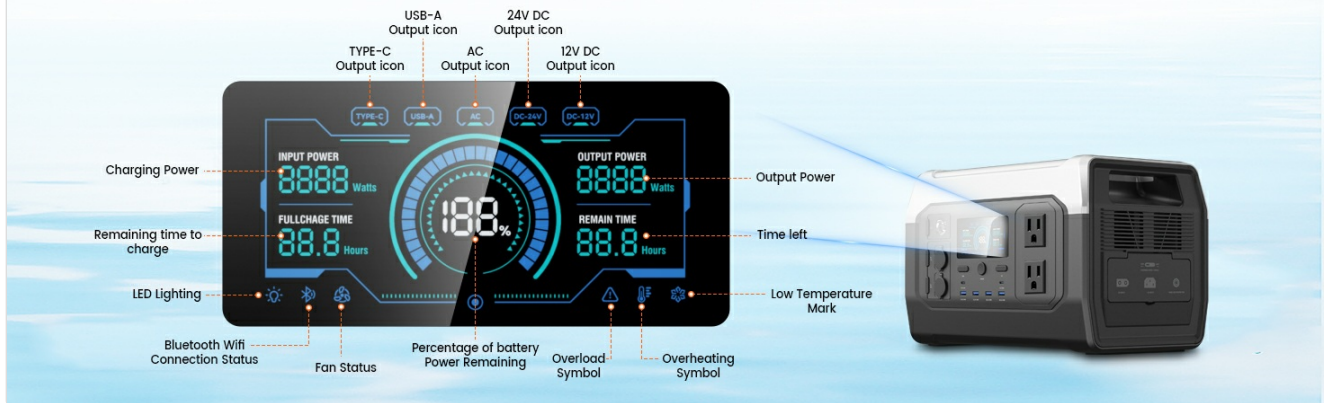


Figure 3.2: Intuitive LCD Display

4. Setup

Before first use, ensure the power station is fully charged. Unpack the unit and all accessories. Place the power station on a stable, flat surface with adequate ventilation.

Your browser does not support the video tag.

Video 4.1: Unboxing and Initial Setup of the CTOLITY XP1000 Power Station. This video demonstrates opening the package, identifying the included cables (solar, AC, car), and connecting the solar panel to the power station for charging.

5. Charging the Power Station

The XP1000 offers multiple charging options:

- **AC Wall Outlet:** Connect the AC charging cable to the power station's AC input port and then to a standard wall outlet. The unit can fully recharge in approximately 1.2 hours with 1000W AC input.
- **Solar Panel:** Connect a compatible solar panel (up to 500W) to the XT60 input port using the provided solar charging cable. The built-in MPPT charge controller optimizes solar input, allowing for a full charge in about 2 hours under optimal sunlight.
- **Car Charger:** Use the car input charging cable to connect the power station to your vehicle's 12V car outlet. This is ideal for recharging on the go.

RECHARGE ANYWHERE

3 Ways To Recharge



Figure 5.1: Recharge Anywhere



Figure 5.2: Charging Options

6. Operating the Power Station

To operate the XP1000, press the main power button to turn on the unit. The LCD will illuminate, displaying the battery status and other information. To activate specific output ports (AC, DC, USB), press their respective power buttons.

6.1. Connecting Devices

- **AC Devices:** Plug your AC appliances directly into the AC output ports. Ensure the total wattage does not exceed 1600W (or 2600W surge).
- **USB Devices:** Connect your USB-A or USB-C devices to the corresponding ports. The power station will automatically detect and deliver optimal charging.
- **DC Devices:** Plug 12V DC devices into the car charging output ports.



Figure 6.1: Power Up to 10 Devices



Figure 6.2: Power Your Needs

6.2. Applications

The XP1000 is versatile for various scenarios:

- **Outdoor Activities:** Power for camping, RV trips, outdoor movies, and remote work.
- **Home Backup:** Keep essential appliances running during power outages.
- **Work Sites:** Operate power tools where grid power is unavailable.



Figure 6.3: Take Power Outdoors



Figure 6.4: Home Emergency Power



Figure 6.5: Power for Tools

7. LED Light Function

The XP1000 includes an integrated LED light with multiple modes for various situations:

- **Low:** Provides soft illumination for general use.

- **High:** Brighter light for increased visibility.
- **Strobe:** Flashing light for signaling or emergencies.
- **SOS:** International Morse code signal for distress.

BRIGHT YOUR NIGHT

3 LED Modes For Any Situation



Low



High



Strobe

SOS

SOS



Figure 7.1: Bright Your Night



Figure 7.2: Light Up Anywhere

8. Battery Management System (BMS)

The CTOLITY XP1000 is equipped with advanced LiFePO4 (Lithium Iron Phosphate) battery cells, known for their long lifespan of over 3,000 charge cycles to 80% capacity. A sophisticated Battery Management System (BMS) is integrated to ensure safe and reliable operation. The BMS provides comprehensive protection features:

- Overcharge Protection
- Over-discharge Protection
- Over Current Protection
- Over Voltage Protection
- Short Current Protection
- Overload Protection
- Thermal Protection
- Battery Failure Protection

LIFEPO4 BATTERY WITH BMS PROTECT

3000 full charge cycles $\geq 80\%$ capacity



Overcharge protection



Over-discharge protection



Over Current protection



Over Voltage protection



Short Current Protection



Overload protection



Thermal protection



Battery Failure Protection



Figure 8.1: LiFePO4 Battery with BMS Protection

SAFE AND LONG-LASTING

Leading BMS System 8-fold protection circuit installed



Overcharge protection



Over-discharge protection



Over Current protection



Over Voltage protection



Short Current Protection



Overload protection



Thermal protection



Battery Failure Protection



Figure 8.2: Safe and Long-Lasting BMS

9. Maintenance

To ensure the longevity and optimal performance of your XP1000 Portable Power Station, follow these maintenance guidelines:

- **Storage:** Store the unit in a cool, dry place away from direct sunlight and extreme temperatures. For long-term storage, charge the battery to 50-80% every 3-6 months.
- **Cleaning:** Use a dry, soft cloth to clean the exterior of the unit. Do not use abrasive cleaners or solvents.
- **Ventilation:** Ensure the ventilation vents are clear of dust and debris to prevent overheating.
- **Battery Health:** Avoid fully discharging the battery frequently to maximize its lifespan.

10. Troubleshooting

If you encounter issues with your XP1000, refer to the following common problems and solutions:

- **Unit Not Turning On:** Ensure the battery is charged. If not, connect to a power source.
- **No Output from Ports:** Check if the specific output button (AC, DC, USB) is pressed and illuminated. Ensure the connected device is within the power station's wattage limits.
- **Slow Charging:** Verify that the charging cable is securely connected. For solar charging, ensure panels are in direct sunlight and free from obstructions. Check the wattage of your AC adapter or solar panel.
- **Overload Indicator:** If the overload indicator appears on the LCD, disconnect some devices to reduce the load. The unit will automatically reset after a short period.
- **Overheating Indicator:** If the overheating indicator appears, move the unit to a cooler, well-ventilated area and allow it to cool down before resuming use.

If the problem persists, please contact CTOLITY customer support for assistance.

11. Specifications

Brand	CTOLITY
Model Name	XP1000 portable power station
Wattage	1024 Watt-hours
Output Wattage	1600 Watts (2600W Surge)
Voltage	110 Volts
Fuel Type	Electric
Power Source	Battery Powered
Battery Type	LiFePO4 (Lithium Iron Phosphate)
Battery Cycles	3,000+ cycles to 80% capacity
AC Input	1000W (Full charge in 1.2 hours)
Solar Input	Up to 500W (Full charge in ~2 hours)
Item Weight	37.48 Pounds
Product Dimensions	15.67"L x 8.97"W x 10.08"H
Material	ABS
Special Features	1600W AC Output, Adjustable, BMS Protection, Fast charging, Portable

12. Warranty and Support

The CTOLITY XP1000 Portable Power Station comes with a **1 Year Manufacturer Warranty**. For warranty claims, technical support, or any questions regarding your product, please contact CTOLITY customer service through the retailer where you purchased the product or visit the official CTOLITY website for contact information.