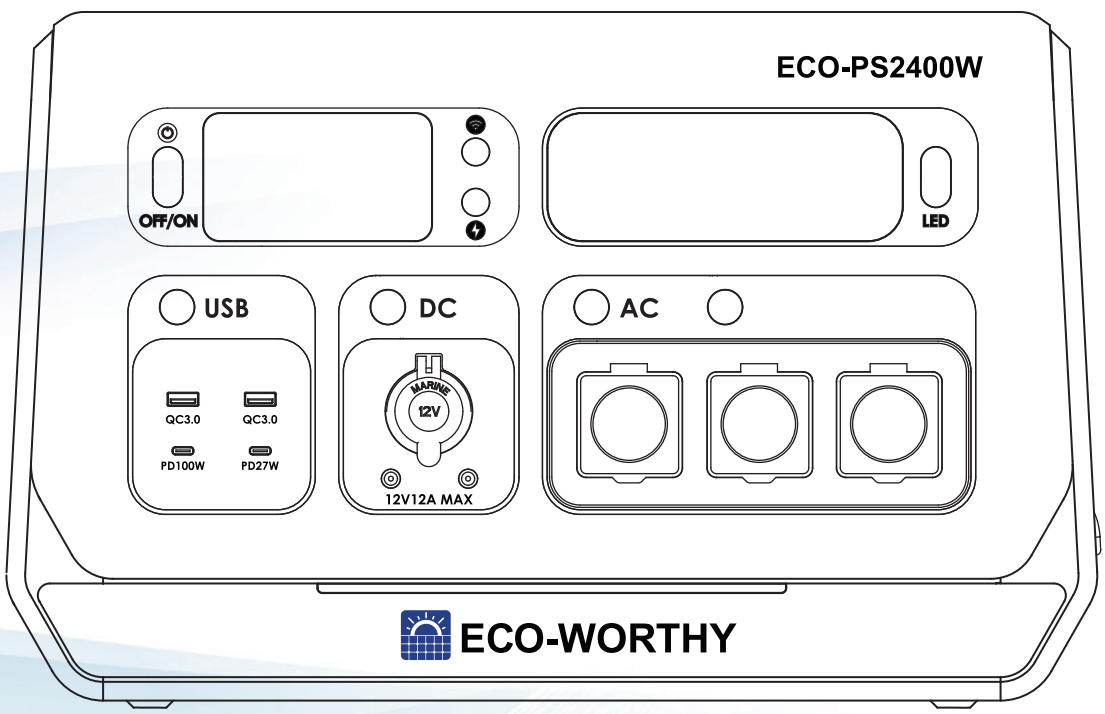
ECO-WORTHY

Version: 1.0

Power Station

ECO-PS2400WDZ01 USER MANUAL V1.0



SUPPORT

If you are experiencing technical problems and cannot find a solution in this manual,please contact ECO-WORTHY for further assistance.

· Call:1-866 939 8222(US)
+44 7553 406988(UK)
+49 6175 6514 999(DE)

· Web://www.eco-worthy.com/

· E-mail: customer.service@eco-worthy.com

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UK
DE

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I. Important Safety Caution

The product has been designed and tested strictly according to the international safety requirements. As with all electrical or electronical devices, there are residual risks despite careful construction. To prevent personal injury and property damage and to ensure long-term operation of the product, read this section carefully and observe all safety information at all times.

1.This power station has a built in lithium battery which is highly sensitive to high temperature - Keep it away from heat sources like direct fire or any heat sources.

2.Please follow the instructions in this manual to correctly connect all charging cables. Do not use third-party cables. Any incorrect connections may damage the machine and even pose an electric shock hazard.

3.Do not touch the live components in standby mode, there may be a risk of electric shock.

4.Do not move the machine while it is operating, there may be a risk of electric leakage.

5.Keep away from moisture or water.

6.Do not disassemble , puncture, incinerate or insert foreign objects into the power station.

7.Do not crush, bend, shred, drop or place heavy objects on top of the device.

8.Do not use the product if damaged or punctured.

9.Always be prepared - Charge the unit every three months also if it is not

10.When connecting to the grid and photovoltaic components, please understand the components and functions of the photovoltaic system, ensure that all electrical connections, voltage, and current meet standards, and ensure that the power station is turned off during the entire connection process.

II. Preface

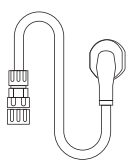
Thank you for purchasing this 2400W Portable Power Station. The portable power station can connect to AC wall outlets, solar panels, and DC power sources and is designed to keep your electronic devices powered both during an emergency and while on the go.

It comes equipped with AC outlets, 12V DC output ports, a car port,
Type-C port and fast charging USB ports 3.0 for your convenience. Perfect for outdoor adventures and home backup, it is compatible with most electronic devices such as drones, projector, coffee maker, blender,refrigerator, cooling fan, microwave.

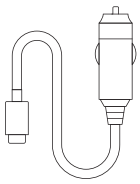
You can charge your electrical or digital devices with this unit in case of a power failure or when you are out or on a road trip. It also works as an emergency power kit. Especially, it' s suitable for locations that are prone to severe weather patterns and natural disaster related power failures including typhoons, floods, hurricanes, earthquakes, forest fires, snowstorms and low-temperature disaster-prone areas.

The power station is also suitable for camping and works well in keeping outdoor electrical appliances charged for uses such as night time power
supply, medical power supply and general household electricity storage.

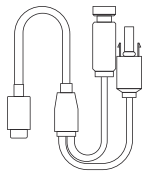
III. Package Contents

❶ 

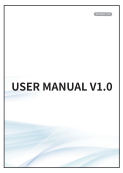
1*AC Power Cord

❷ 

1*DC Cable

❸ 

1*MC4 Cable

❹ 

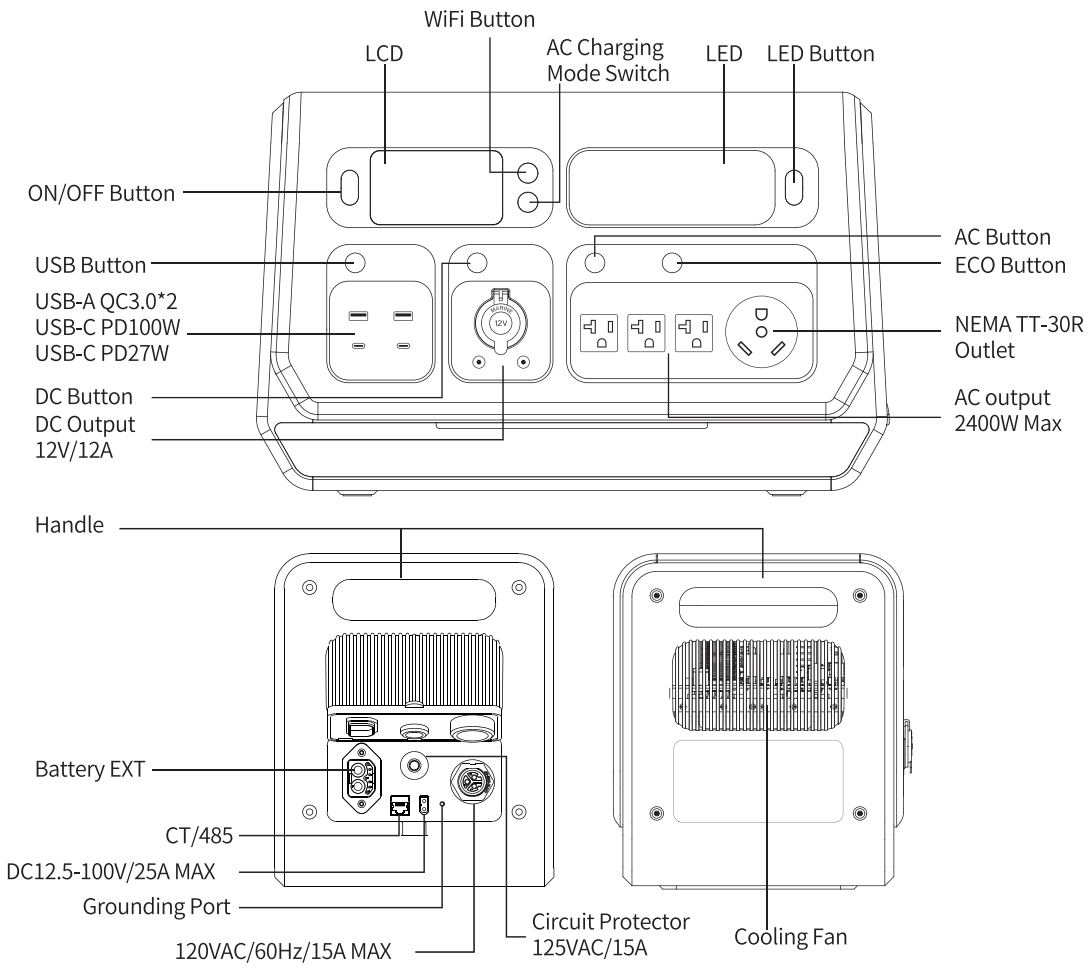
1*User Manual

IV. Technical Specification

Battery Capacity	LiFePO4 2048Wh±5%(40Ah/51.2V)
AC Input Charging	AC 100~120V/1500W Max
Car Input Charging	DC 12.5V~15V/8A 120W Max
Solar Input Charging	DC16V~100V/25A 1200W Max
Output Port	AC Output*3: 120V, 60Hz, 2400W, Peak 4800W TT-30R AC Output*1:AC120V/30A Max When the battery capacity ⩽ 5%, AC output will be off When the battery capacity ⩽ 3%, DC&USB outputs will be off. (In order to protect the battery cycle life.)
	USB Output 1: QC18W Max (5V2.4A&9V2A&12V1.5A) USB Output 2: QC18W Max (5V2.4A&9V2A&12V1.5A) USB Type-C 1: PD100W (5V3A&9V3A&12V3A&15V3A&20V5A) USB Type-C 2:PD27W (5V3A&9V3A&12V2.25A&15V1.8A&20V1.35A)
	1*Cigarette/Lightek13.8V/12A Max +2*DC5521 Rated Oufput 13.8VA Max (Total 12A Max)
AC Output Waveform	Pure Sine Wave
LED Light	3W MAX, 3 Levels (L/M/H adjustable) with SOS function
Safety Protection	Short-Circuit Over-Current Over-Voltage Low-Voltage Over-Load Over-Temperature
Battery Cycle Life	3500 times, SOH ⩾ 70%
Pass-Through Charging	Support
Weight & Size	23.5kgs/51.8lbs 5.465*260*295mm/18.31in*10.24in*11.61in
Environmental Operating Temperature	Charge Temperature: 0~40°C (32~104°F) Discharge Temperature: -10~40°C (14~104°F)

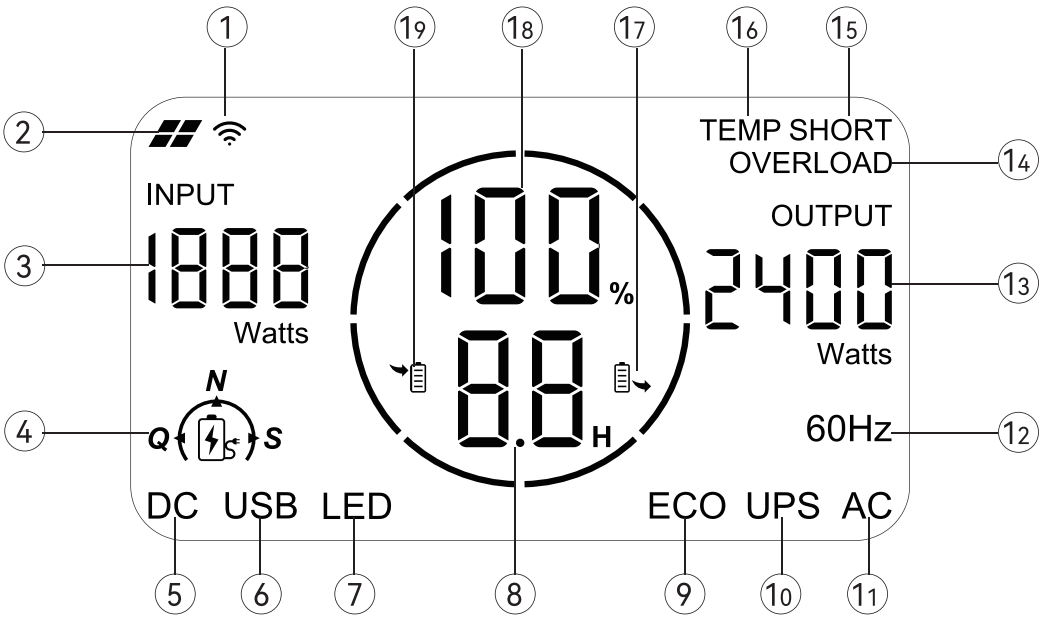
V. Using Your 2400W Power Station

1. Long press the on/off button 3 seconds or press any of the port buttons to turn on the power station. To turn off the power station long press the turn on/off button 3 seconds.
2. The individual port buttons turn on or off the power to their respective ports. To conserve power, turn off ports when not in use. Read the LED screen to know which port is turned on.
3. Plug in your devices.
4. The power station supports full pass-through charging, so you can charge the power station and run your devices at the same time.



*The circuit protector is an electrical safety switch designed to protect your unit from damage caused by over-current or short circuit. When the AC output exceeds 15A or 2500W, it will trip automatically. Press it once to reset the unit after these symptoms cleared.
*Grounding port is for some electrical appliances that require grounding.
*CT/485 port is for after-sales service or adding other functions in the future.

VI. LCD Display



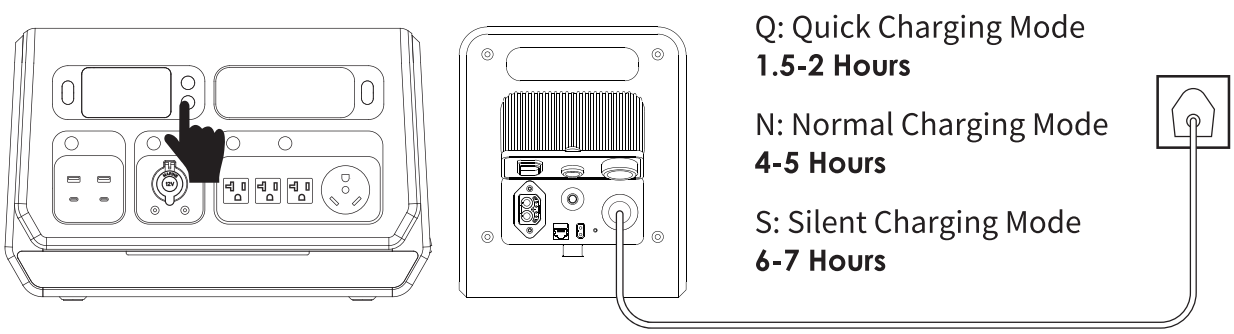
①	WiFi Indicator	⑪ AC	AC Output Indicator
②	Solar Panel Input Indicator	⑫ 60Hz	Output Frequency
③ INPUT 1888 Watts	Input Power	⑬ OUTPUT 2400 Watts	Output Power
④ N Q S	Charging Mode Indicator(Q,N,S)	⑭ OVERLOAD	Overload Warning
⑤ DC	DC Output Indicator	⑮ SHORT	Short-circuit Warning
⑥ USB	USB Output Indicator	⑯ TEMP	Temperature Warning
⑦ LED	LED Indicator	⑰	Output State Indicator
⑧ 88 H	Remaining Usage Time or	⑱ 100 %	Remaining Battery Percentage
⑨ ECO	ECO Function Indicator	⑲	Input State Indicator
⑩ UPS	UPS Function Indicator		

*The remaining usage time depends on the real-time output wattages of the loaded devices.
The remaining hours tells the remaining charge/discharge time. It will prioritize displaying the remaining discharge time when charging and discharging simultaneously.
*(The remaining time may has errors and the data is for reference only.)

Ⅶ. Ways to Recharge

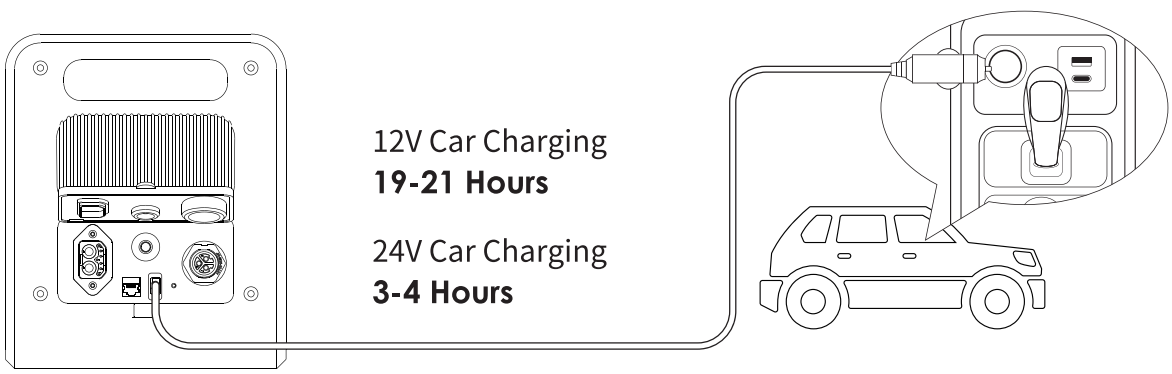
1.AC Wall Charging

Please plug the unit into the standard wall outlet and start charging.
This power station supports Quick/Normal/Silent charging modes. The default charging mode of the unit is “N” charging mode, Press the AC Charging button to switch these 3 charging modes.



2.DC Vehicle Charging

Please connect the unit directly to the vehicle plug-in cigarette lighter port via the car charging cable.



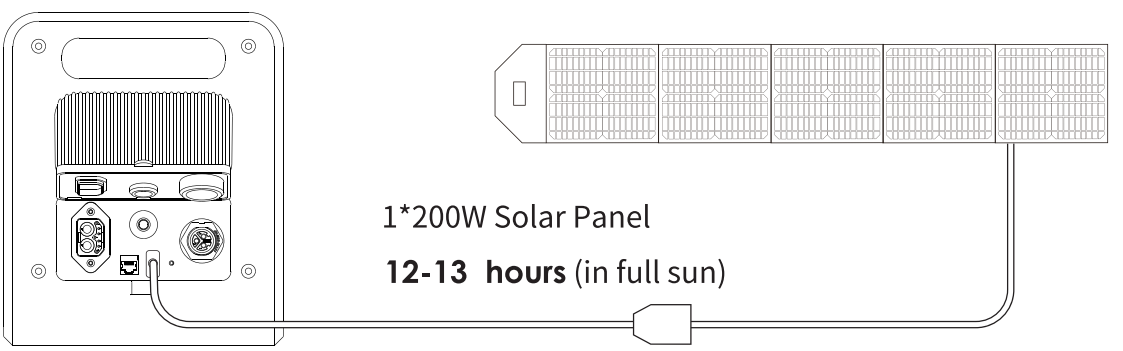
⚠ Cigarette lighter MUST be fully inserted into the lighter port of the machine.

3.Solar Charging

Safety Precautions When Charging

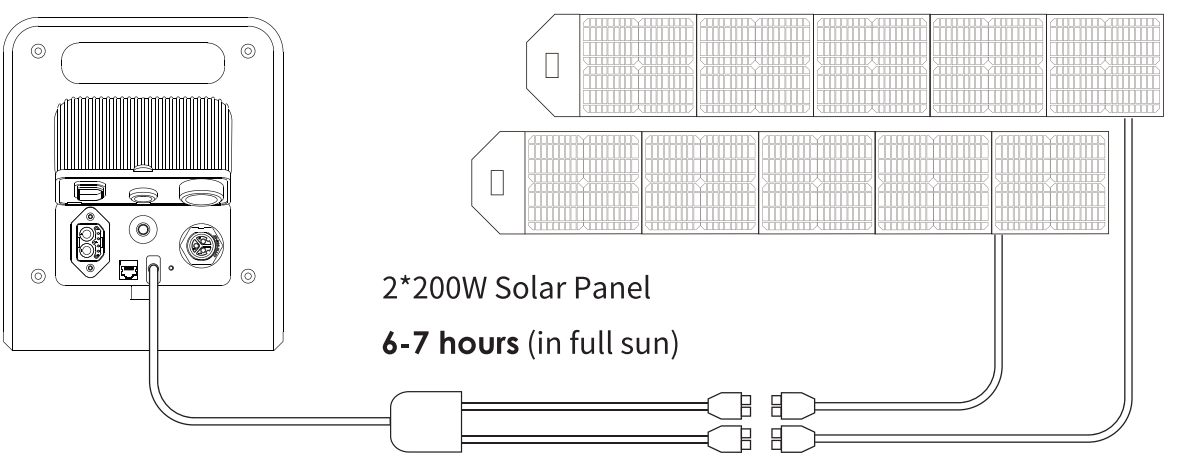
1) Never use higher than DC 100V to recharge this power station.
ONLY use solar panels with compatible voltage.
2) Please ensure that the voltage of all solar panels connected in series is the same, and try to use the same type of solar panel.
3) Please don't put the power station in direct sunlight while charging in the high temperature environment.
4) Please ensure that your solar panels only charge the power station, they are prohibited from charging other photovoltaic equipment simultaneously.

Note:
Please make sure your solar panels comply with Open Circuit Voltage of DC16-100V. The Max Solar Input Power of the power station is 1200W.



1*200W Solar Panel

12-13 hours (in full sun)



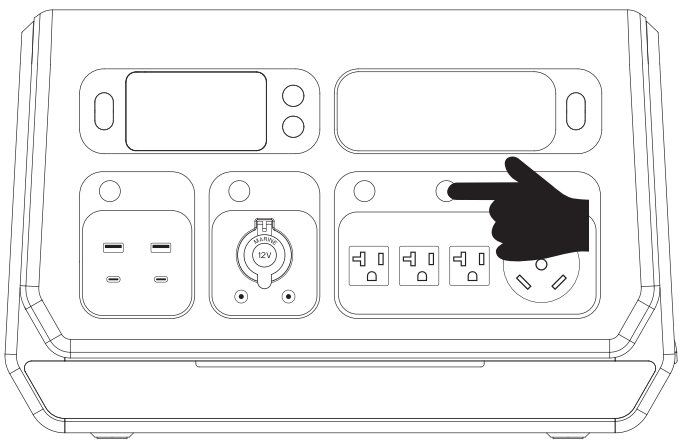
2*200W Solar Panel

6-7 hours (in full sun)

Ⅷ. Mode

ECO Mode

The prerequisite for activating ECO Mode is to turn on the AC button.
Turn on ECO Mode, the AC power will automatically turn off when AC load is ⩽50W or no load over 4 hours to save power drain.



Auto-Sleep Mode

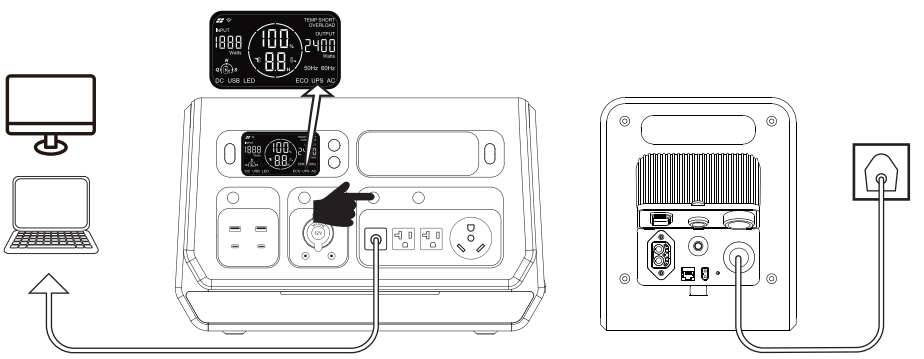
If the ECO Mode is off, to avoid forgetting to turn off the output during use that results in battery consumption, the unit will turn to Auto-Sleep Mode when no device is connected or the connected device is less than or equal to a certain value.
When without charging, and the AC&DC&USB outputs ⩽ 2W, the device will automatically shut down after 1 hour.

ATS Mode

This function refers to the automatic activation of UPS function every time the power station is connected to the mains power and turned on.
Long press the AC button for 3 seconds to turn on or turn off the ATS function.
The flashing AC icon indicates successful setup.

UPS

UPS Bypass Mode: Connect the power station with the AC power, then turn on the AC output, and the ‘UPS’ ‘AC’ will be on display. When on this mode, the AC power will directly support the loads on AC output ports and charge the unit.
Note: Max. output power: 1800W.The UPS Bypass Mode prioritizes providing AC output power, then the excess power will supply for charging the power station. The AC inverter is disabled under UPS Bypass Mode. The unit won’ t enter this mode unless connecting with AC power AND turning on the AC output.



IX. Usage

Emergency:

The power station can be used as an emergency power supply during power failures. It is especially suitable for locations that are prone to severe weather patterns and natural disasters including floods, hurricanes, earthquakes, forest fires, and snowstorms.

Outdoor Activities:

Camping, outdoor celebrations, fishing, climbing, outdoor photography, RC helicopter and drone charging, farming and bird watching.

Home Backup:

Home and office electrical device charging, energy-saving lamps, television, mini refrigerators, holiday decoration lights, printers, laptops, fans and smart mobile phones.

X . Usage time of devices

 **Projector** (100W) **18.4 Hrs**	 ***Mini Cooler** (90W) **20.5 Hrs+**	 **Blender** (300W) **6.1 Hrs**	 **Coffee Maker** (550W) **3.3 Hrs**	 **Electric Grill** (1600W) **1.1 Hrs**	 **Washer** (500W) **3.7 Hrs**
 **Hand Drill** (60W) **30.7 Hrs**	 ***Refrigerator** (520W) **3.5 Hrs+**	 ***Air Conditioner** (1150W) **1.6 Hrs+**	 **Microwave** (1160W) **90 Min**	 **CPAP** (40W) **46 Hrs**	 **TV** (110W) **16.7 Hrs**

NOTES:

1.Run time=2048Wh*90%(conversion rate)/Your device's power(Watts).

2.Support all electronic devices less than 2400 Watts.

3.It is recommended to use a DC port instead of an AC outlet to power your CPAP machine.

4.*The usage time for refrigeration machines with compressors mainly depends on temperature setting and start frequency of compressors, it' s usually lasting longer time than certain reference time.

5.The above charging times are calculated as a reference guide only. The actual usage time will depend on the power of the connected devices.

XI. FAQS and Solutions

1. How do I know whether my appliance can work well with the 2400W power station?

Please check the rated label of your device first. If the device's operating power is within 2400W, you can use the device normally.

2. How long can it run my device?

Running time =2048*90% conversion rate / Device Rated Power

Eg. If your run a run a 1,000W microwave oven with it, the running time will be:

2048Wh × 90% /1000W ≈ 1.84hrs

Please Note:

1) The formula is NOT suitable for inductive loads with compressors, like refrigerator, air conditioner, etc.

2) The above data is for reference ONLY.

3.Why is there any sound during use or charging?

This product with intelligent temperature control system, built-in fans help our product to get better cooling and securing usage, slight noise is normal during using or charging.

4. Can I charge the 2400W power station while a device is plugged in?

Yes, this unit support Pass-Through Charging,you can simultaneously charge other devices while recharging the power station.

5. How to keep this product when it is not used for a long time?

If the battery is to be unused for a long time (more than 3 months), please recharge it every 3 months to keep the battery power above 50% if you don't use it.(It’ s recommended to check and charge every 3 months).

Store it in a dry and cool place with temperature range between -4°F~140°F, and humidity 20%~85%RH.

Avoid contact with corrosive substances, and far from fire and heat Sources.

6. Can it be used to jump start a car?

No,it cannot be used to jump start a vehicle. However, it can be used as power supply for automobiles. You can recharge the car via a power supply cord, which is available for purchase separately.

7. Why is the output to the low-power device automatically turned off after several hours?

If the ECO mode is on, the AC power will automatically turn off when AC load is ⩽ 50W or no load over 4 hours to save power drain.

If the ECO Mode is off, to avoid forgetting to turn off the output during use that results in battery consumption, the unit will turn to Auto-Sleep Mode when no device is connected or the connected device is less than or equal to a certain value. When without charging, and the AC&DC&USB outputs ⩽ 2W, the device will automatically shut down after 1 hour.

8. Is the 2400W power station waterproof?

No, please DO NOT store it in a humid environment for a long time.
Please store it in a dry and cool place.

9. Can I use or charge the 2400W power station in sub-zero temperatures?

Temperature ranges for 2400W power stations are:
AC Charging: 0°C-40°C(32°F- 104°F); Discharge: -10°C- 40°C(14°F- 104°F);
Storage: -20°C- 60°C(-4°F- 140°F).

Technically, it can power electrical devices under such situations, but please avoid
charging it.

10. Are the built-in batteries replacement or upgradeable?

No. If the battery pack is faulty or even dead, please contact our Customer Service.

⚠ CAUTION

a) Do not overcharge the internal battery. See instruction manual.
b) Do not smoke, strike a match or cause a spark in the vicinity of the POWER STATION.
c) Only charge the internal battery in a well ventilated area.
d) Risk of Electric Shock. Connect only to properly grounded outlets.
e) Risk of Injury to Persons. Do not use this product if the power cord or the battery cables are damaged in any way.
f) Keep away from moisture or water. Do not use outdoors on rainy days.

CE RoHS

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XII. Common Trouble Shooting

Failure Description	Types	Solutions
Unit can not charging from AC wall outlets	AC charging fault	1.Please ensure to use original AC power cord. 2.Please check if the AC wall plug is correct connection. 3.If not solved, please contact our after-sales service.
Unit can not charging from solar panel	DC solar charging fault	1.Please ensure solar charging connection is correct under user manual. 2.Please ensure connected solar panel specification is meet specified standard. 3.Please ensure solar panel charging under sunlight environment. 4.4.If not solved, please contact our after-sales service.
LCD Screen icon flash "AC" "DC" "USB"	Over-current protection Short circuit protection Over-voltage protection Low-voltage protection Over-Load protection	Resolve the problem by pulling out plug or remove electrical devices,the product can recover itself after re-start. 5.If not solved, please contact our after-sales service.
High-temperature icon continuous appears	High-temperature warning	Power station can recover itself after battery cooled.

X III.Maintenance and Storage

1.When not using the unit for extended periods of time, power off the unit and disconnect the
AC adapter from the outlet.
2.Charge the unit to 80% capacity every 3-6 months for long-term storage.
3.When the battery capacity drops to 20%, recharge the power station in time to extend the
battery life.
4.Clean the unit with a dry cloth gently and carefully.
5.DO NOT stack anything on top of the unit either in storage or in use.
6.Store it in a dry and cool place with temperature range between -20 °C~60°C, and humidity
20%~85%RH.
7.Avoid contact with corrosive substances fire and heat sources.

VIII. Technical Support

1) Customer service email:

E-mail: customer. service@eco-worthy.com

2) Company address: USA/Germany

Address(US): 4411 East State Hwy D Suite C Springfield, Missouri 65809

Address(DE): ECO-Worthy Europe GmbH Otto-Hahn-Str. 20 61381 Friedrichsdorf - Köppern Germany

3) Customer service telephone numbers:

Tel(DE): +49 6175 6514 999

Tel(US): 1-866-939-8222

Tel(UK): +44 7553 406988

Note:
Customer Service Hours:

US: Mon-Fri 8:3AM - 6:00 PM(CST)

UK: Mon-Fri 9 AM - 5 PM(GMT)

DE: Mon-Fri 9 AM - 5 PM(CET)

4) Official website address:

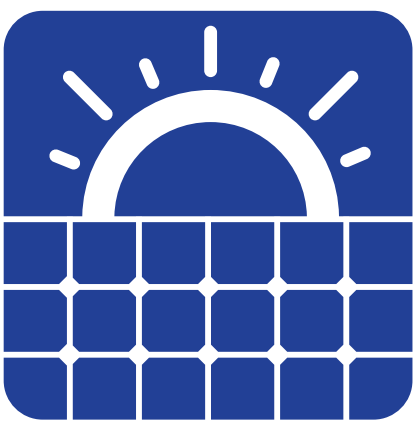
Web: https://www.eco-worthy.com/

5) Official social media:

Facebook: https://www.facebook.com/ecoworthy.store/

Youtube: @ecoworthy

Tiktok: https://www.tiktok.com/@eco_worthy



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