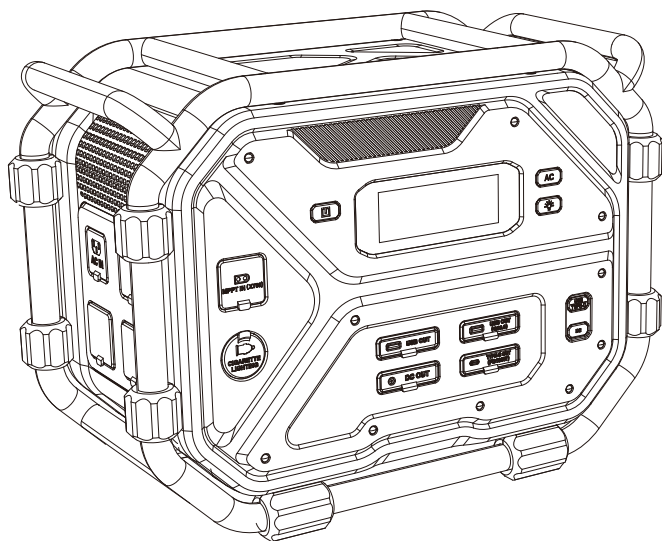




USER MANUAL

Portable Power Station 2400W

MP24



www.marsriva.com

Thank you for purchasing our product. This manual is intended to guide you in the safe and effective use of this product.

This manual describes the proper operation, inspection, and maintenance of this product. If this product is not used properly, it may result in electric shock, personal injury, or other hazards. Please read this manual carefully before using this product.

After reading this manual, please keep it in a safe place so that you can refer to it at any time (please note that the pictures in this manual are for reference only and the product may differ from the pictures).

WARNINGS

1. This product generates electromagnetic waves during use and charging, so if you wish to power an implantable pacemaker or similar device, be sure to check with your doctor or medical institution and the device manufacturer before using it.
2. Do not attempt to disassemble or modify the product, as this may cause the product to overheat and cause a fire or electric shock. If the product is deformed or damaged due to dropping or impact, do not continue to use the product to avoid safety accidents.
3. If the charger, charging cable and plug are damaged, please replace them in time to avoid safety accidents.
4. Please use the product under the ambient temperature of $-10^{\circ}\text{C} \sim 45^{\circ}\text{C}$ as specified in the instruction manual. Do not place the product in liquids or corrosive gases to avoid safety accidents. Do not use the product in environments with large amounts of steam, dust, fumes or flammable gases to avoid safety accidents.
5. Please do not operate the product or charge the product with wet hands to avoid electric shock accidents; when used outdoors, please note that the product should not be touched by liquids such as rain, seawater, drinks, etc., so as to avoid safety accidents caused by short circuit due to the liquid flowing into the product.
6. Do not connect the AC output to any electrical wires of the power company or indoor wires to avoid electric shock or fire. It is recommended to use the charging cable equipped in the package, if you need to use other charging cables to charge the product in case of emergency, please use a cable that meets the charging voltage and charging current requirements in the instruction manual, to avoid safety accidents.
7. If you notice any abnormal odor, overheating, discoloration or deformation during charging, please unplug the charger from the outlet promptly, otherwise it may cause overheating or fire. When connecting the power plug of electrical equipment to this product, please insert the plug firmly into the root, otherwise it may lead to electric shock or fire.
8. Keep out of the reach of children to avoid electric shock or injury caused by improper operation.
9. Do not store this product in a humid, dusty, or hot environment as this may degrade the insulating properties of the product and cause overheating or fire. Storage at high temperatures may also shorten battery life.
10. This product should not be disposed of with household garbage; please recycle according to local laws and regulations.

SPECIFICATIONS

GENERAL INFO	
Rated Power	2400W Pure Sine Wave (Peak Power 4800W)
Rated Capacity	2621Wh (51.2V / 51200mAh)
Battery Type	Lithium-iron Battery (LiFePO4)
Cycle Life	6000 Cycles @80% EOL
Grid Connection Power	800W (Max.) (Customizable)
Weight	25.6kg
Dimensions	501 × 255 × 378 mm

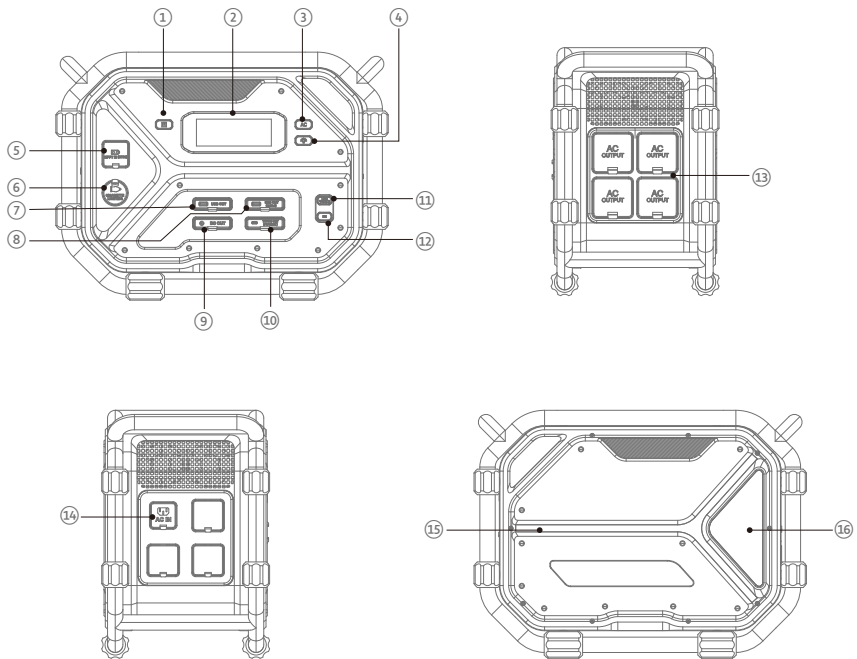
OUTPUT	
Type-C1	5V≡3.0A / 9V≡2.0A / 12V≡2.0A / 15V≡2.0A / 20V≡2.0A, 40W (Max.)
Type-C2	5V≡3.0A / 9V≡3.0A / 12V≡3.0A / 15V≡3.0A / 28V≡5.0A, 140W (Max.)
USB-A (QC3.0*4)	5V≡3.0A / 9V≡2.0A / 12V≡1.5A, 18W (Max.)
DC5521	13V≡5.0A, 65W (Max.)
DC5525	24V≡4.5A, 108W (Max.)
Cigarette Lighter	13V≡10.0A, 130W (Max.)
AC Output * 4	220V, 50Hz, 2400W (Max.)

INPUT	
XT60 Input	25V – 140V, 1100W (Max.) (Supports MPPT Charging)
AC Input	200V – 240V, 50Hz, 1500W (Max.)

ENVIRONMENTAL OPERATING TEMPERATURE	
Working Temperature	0°C to 45°C
Storage Temperature	-10°C to 45°C



Specifications are subject to change without notice and all product drawings are for reference only. Consult MARSRIVA for the latest design and specifications.

FUNCTION






- ① Main Power On / Off Button
- ② Display Screen
- ③ AC On / Off Button
- ④ Lighting On / Off Switch
- ⑤ MPPT & XT60 Charging Port
- ⑥ Cigarette Lighter Outlet
- ⑦ USB-A Output QC3.0
- ⑧ USB-A Output QC3.0
- ⑨ DC Output 12V&24V
- ⑩ Type-C Output Port
- ⑪ USB & Type-C On/Off Button
- ⑫ DC Output On / Off Button
- ⑬ AC Output port
- ⑭ Grid-Connected & AC Input
- ⑮ Y-shaped LED Light
- ⑯ Big LED Light



1. Power Button

Long press the "" button for 3s to turn on the device, the LCD display will light up. Press and hold the "" button for 3s to turn off the power.


2. AC Output Function

After the product is turned on, press the "" button, the AC output is turned on, and the "" icon on the screen lights up. When the "" button is pressed again, the AC output is turned off.


3. DC Output Function

After the product is turned on, short press the "" button, the "" icon on the screen lights up, and the 5525, 5521 and cigarette lighter output ports start normally; Then you can connect your devices through the standard connection cable.

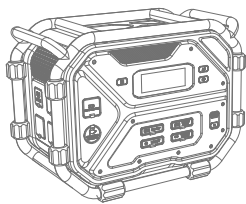
4. USB & Type-C Output Function

After the product is turned on, short press the "" button, the USB & Type-C output function start normally, the "" icon on the screen lights up. Then plug in the USB cable or Type-C cable to your devices, the devices will be charged.

5. Lighting Function

Short press the "" button to light up the LED. The light has 5 gears: the first gear is medium brightness 50%; the second gear is high brightness 100%; the third gear is "SOS" light mode; the rest of gears are the ambient lighting mode of the Y lights. (Long press the button 2s-3s in any gear can turn off the light.)

PRODUCT PACKAGING



Portable Power Station × 1

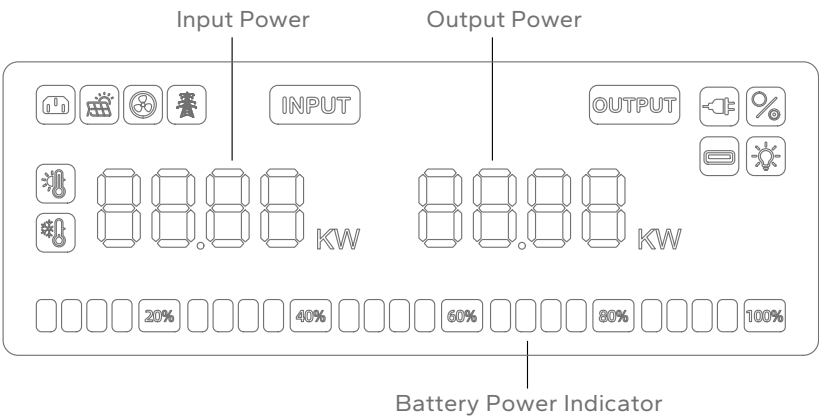


User Manual × 1



AC Charging Cable × 1

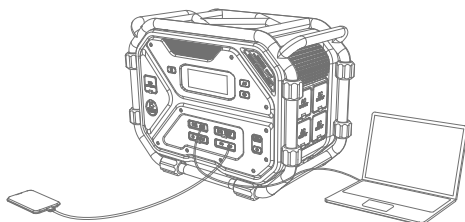
DISPLAY DESCRIPTION



- | | |
|-----------------------|--------------------------|
| AC Charging | USB / Type-C Output |
| Photovoltaic Charging | Lighting |
| Fans | High temperature warning |
| AC Output | Low temperature warning |
| DC Output | Grid Connection |

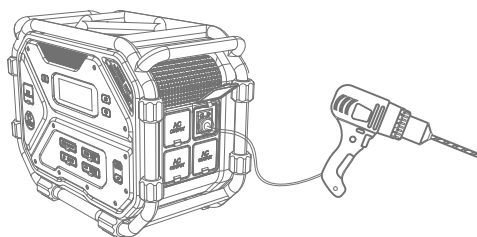
OPERATING INSTRUCTIONS

A: How to use USB / Type-C output



- ① Press and hold the "⏻" for 2s-3s to turn on the power.
- ② Short press the "USB" switch, the "🔌" icon on the display lights up and the USB / Type-C output function is on.
- ③ Short press the "USB" switch again, the USB / Type-C output function is turned off.

B: How to use the AC outlet output



- ① Press and hold the "⏻" 2s-3s to turn on the power.
- ② Short press the "AC" switch, the "🔌" icon on the display lights up and the AC output function is on.

The newly added mode "AC function is turned on by default during mains charging", the product will give priority to the bypass output (for example, the load on the output end is 500W, then the 500W will be output first, and the remaining 1000W will be used to charge our product)

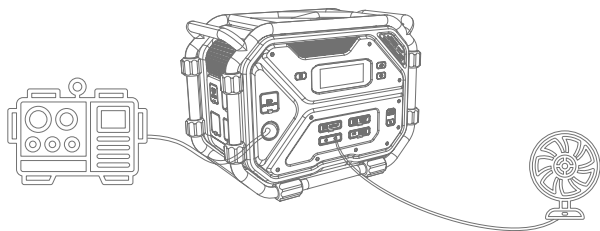
How to turn off the AC function:

- User turns off the ac function by manually pressing the AC switch.
- After releasing the charging state, you can force the AC to turn off by pressing the power off button.
- The product will automatically turn off the AC function when the battery is at its lowest.

Remark: When the mains charging bypass is turned on in charging mode, the total load power will be limited to 1500-2000W.

- ③ Short press the "AC" switch again, the AC output function is turned off.

C: How to use DC port output



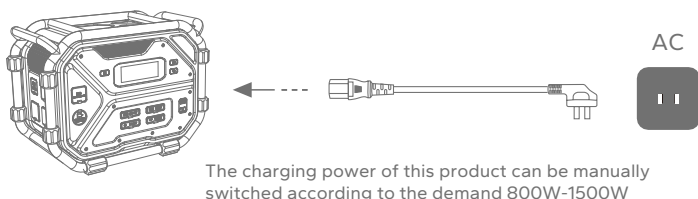
- ① Press and hold the "⏻" for 2s-3s to turn on the power.
- ② Short press the "DC" switch, the "% " icon on the display lights up and the DC12V / DC24V and cigarette lighter output functions are turned on.
- ③ Short press the "DC" switch again, the DC output function is turned off.

PRODUCT CHARACTERISTICS

- ① When the battery pack voltage is too low, the product will enter the over-discharge protection state. The product only can be used after being charged.
- ② When the temperature is around -10°C, only USB and LED illumination functions can be used; when the ambient temperature is above -5°C, AC power can be turned on and the USB / Type-C and DC ports can be turned on normally (within +2°C temperature error).
- ③ Due to the low-temperature characteristics of lithium-ion iron phosphate batteries, it is recommended that this product be used in an environment of -3°C or higher.
- ④ Charge / Discharge Limit: The product limits the charge / discharge function when the battery is in a low temperature (-20°C) or high temperature (60°C) state.
- ⑤ Energy Saving Mode:
 - When the product is turned on, it will be forced to shut down when there is no operation for 5-15 minutes.
 - When the product turns on the function, there is no load, or the total load power is less than 8W, the product enters the energy-saving mode and will be forced to shut down after 10 hours.

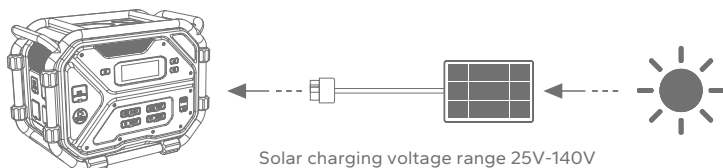
CHARGING METHODS

1. Charging with mains power



- Connect the utility power to the product charging socket through the charging cable, when the AC charging icon on the display lights up and the power icon blinks in a running light, it indicates charging. It takes about 3 hours to get fully charged.
- Long press AC key for about 3s to enter the switching mode, the display charging icon flashes, short press AC key to select 800W / 1200W / 1500W charging power.
- If the internal temperature of the product becomes too high during charging, the product will stop charging and discharging.
- When the battery is fully charged, the screen power display bar shows 100% power, indicating that the charging is complete, the over-charging protection function is activated, and the charging will stop automatically. Please disconnect the charging cable from the device and unplug it from the power outlet in time.

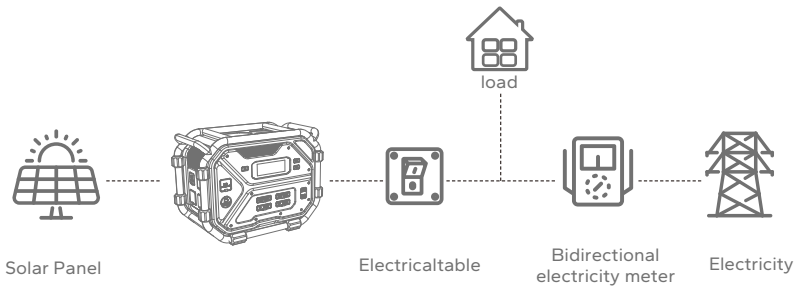
2. Charging with solar panels



- Place the solar panel in direct sunlight (unobstructed).
- This product supports MPPT charging mode, when the solar panel output port is connected to the product's MPPT charging port, the PV charging icon appears on the display, indicating normal charging.
- If the internal temperature of the product rises during the charging process, the fan will be activated to cool the device.
- When the battery is fully charged, the screen power display bar shows 100%, indicating that the charging is complete, the overcharging protection function is activated and the charging will stop automatically. Please remove the charging cable from the product, and remove the solar panel.

GRID CONNECTION FUNCTION

Transmitting surplus power from backups to the national grid.
Self-generation and self-consumption, with residual power going online.



How The Product Turns on The Grid-Connected Mode?

1. After the product is turned on, connect one end of the AC charging cable to the AC charging port of the product, and the other end to the utility outlet (at this time, the charging status can be seen); then press the "AC" button to turn on the AC output function (at this time, it is no-load status); and then simultaneously press the "⏏" button and "AC" button, at this time, a buzzer will be heard and the "⚡" icon will appear on the screen, indicating that the grid-connected mode has been activated (again long press the "⏏" button and "AC" button can turn off the grid-connected mode)
2. When the product is connected to both PV power and utility power, the product will be forced to enter the grid-connected mode.

How to set the grid-connected power?

Long press the "DC" button, the screen "⚡" icon flashes, indicating that the grid-connected power switching function has been turned on, and the customer can switch the grid-connected power according to the actual demand; at this time, short press the "DC" button, enter the grid power adjustment mode, the input power in the display shows "800W" you can short press the "DC" button again to select 100W/200W/300W/400W/600W/700W/800W (the maximum power is 800W). After selecting power, long press DC key or wait for 10 seconds to force exit.

LIGHTING SYSTEM TURN ON

Light Switch Logic:



- The first gear headlights on 50%;
- The second gear headlights on 100%;
- The third gear headlights show "SOS";
- The fourth gear is running Y light;
- The fifth gear is burst flash Y light;
- The sixth gear is burst flash Y light (in any gear, long press 2s-3s to turn off the light).

COMMON TROUBLESHOOTING TIPS

When the product is abnormal, the corresponding function will be forced to shut down, and the corresponding icon will flash and report error. At this time, you can press the corresponding function key to release the abnormal error reporting icon, and press the key to restart the corresponding function again. When the product triggers the hardware protection, the output port will be shut down, and there will not be any icon on the screen to indicate that there is an error reporting status. The output will be restored automatically after the disconnection of the load.

- ① When USB/Type-C triggers overcurrent or short-circuit protection, the port shuts down output and USB/Type-C icon blinks on screen to warn of overcurrent or short-circuit.
- ② When the DC5521/DC5525/Cigarette lighter port triggers overcurrent or short-circuit protection, the port output shuts down and the DC icon blinks on screen to warn of overcurrent or short-circuit.

Note: The DC5521 output port is purely hardware protected, so the screen will not display an error message after the DC5521 output is overloaded or short-circuited.

- ③ When AC output triggers over-temperature, overload or short-circuit protection, the outlets automatically shuts down the output, and the AC icon on the screen blinks to report the error. Press the AC button to release the alarm, and after about 30s, press AC button again to turn on the output.
- ④ When the battery temperature reaches 65 °C, the over-temperature protection is activated and all outputs shut down. At this time the temperature icon "  " and the battery icon flashes (1 flash per second), the fan works. Until the battery over-temperature is lifted (the temperature drops to 50 – 55 °C), then the corresponding functions restore.
- ⑤ When the battery temperature reaches -25 °C, the low-temperature protection is activated and all outputs shut down. At this time the temperature icon "  " and the battery icon flashes (1 flash per second), until the battery low-temperature is lifted (the temperature returns to -5 °C), then the corresponding functions restore.
- ⑥ When the battery is in a low voltage state, the battery icon flashes (1 flash per second) and turns off all outputs function, and the product will shut down within 1 minute if not charged.

Error Code:

111 111	Inverter communication abnormality
222 222	Inverter high temperature abnormality
333 333	Inverter overload protection
444 444	Inverter short circuit protection
555 555	Battery low voltage protection
666 666	Battery low temperature protection
777 777	Battery high temperature protection
888 888	BMS communication abnormality

PRECAUTIONS FOR PRODUCT USE

- ① Please pay attention to the input and output voltage range when using this product, the input voltage and power range required by your equipment are within the range of the energy storage power supply, and the correct use can prolong the service life of the energy storage power supply.
- ② The connecting cables must be matched because various load cables correspond to different devices. Therefore, in order to properly use the storage power supply to power your equipment, please use the guaranteed original connection cable.
- ③ Energy storage power supply needs to be placed in a dry environment for preservation, the correct preservation method can extend the service life of the energy storage power supply.
- ④ Please fully discharge this product every 2 months to improve the life of the product's battery cell.
- ⑤ Do not place this product in a place where the temperature is too high or too low.
- ⑥ Too high or too low an ambient temperature can shorten the life of electronic products and cause serious damage to the product casing.
- ⑦ Do not wipe the product with corrosive chemical solvents. Appearance stains can be scrubbed with a cotton swab moistened with a small amount of anhydrous alcohol.
- ⑧ When using the product, please gently hold and put, do not fall or violent disassembly.
- ⑨ This product has high voltage inside please do not disassemble it by yourself to avoid possible safety accidents.
- ⑩ It is recommended to fully charge the product for the first time to avoid inconvenience caused by insufficient power. After the device is fully charged and the charging power cord is unplugged, the fan will continue to work for about 5-10 minutes to dissipate the heat of the device. (The service life of the device may vary with the temperature of the scene).
- ⑪ When the equipment fan is in operation, care should be taken to prevent dust particles or foreign matter from being sucked into the interior of the equipment, or it will easily cause damage to the internal equipment.
- ⑫ After the termination of the discharge, the device fan will continue to work to reduce the temperature of the device to reach a reasonable temperature, the specific time is about 30 minutes (the specific time may vary with the temperature of the scene). At the same time charging and discharging, the device temperature is too high, will trigger the automatic power off protection.
- ⑬ During the charging and discharging process, please connect the device to the charging and discharging equipment before turning on the charging and discharging. Otherwise, sparks may appear, which is normal.
- ⑭ After discharging, please leave the product standing for about 30 minutes for the temperature to drop before arranging charging to improve the service life of the product's battery.

WARRANTY POLICY

Please read the warranty carefully and keep it in a safe place.

- ① This product will be repaired if it fails during the warranty period for normal use in accordance with the operating instructions. The parts replaced during this period are the property of our company.
- ② For replacement or warranty, please send this warranty card together with the product.
- ③ No free repairs will be made during the warranty period if any of the following conditions apply.
 - Failure or damage due to failure to observe the precautions recorded in the instruction manual.
 - Failure or damage caused by improper storage (failure of the product's battery due to prolonged failure to recharge the product).
 - Failure or damage caused by the use of an adapter other than the specified power supply and within the specified voltage range.
 - Private repair of faults or damage caused by dismantling or modification.
 - Damage to the surface coating and exterior is not covered by the warranty.
 - Product outer packaging and product accessories are not covered by the warranty.
- ④ Failure or damage due to force majeure (force majeure refers to unforeseen, unavoidable or insurmountable objective events, including natural disasters such as floods, fires, explosions, lightning, earthquakes and storms, as well as societal events such as wars, disturbances, etc.).
- ⑤ This manual is for use only in (this sales area), the final interpretation right belongs to the company.
- ⑥ Please keep this manual in a safe place as it will not be distributed separately to users.
- ⑦ If the name of the distributor is not written or stamped, ask the distributor from whom you purchased the product for proof of the date of purchase and the name of the distributor, and issue a receipt to the distributor. If you do not have such proof, please contact your dealer or the company from which you purchased the product. If you purchased the product from our online store, please be sure to provide proof of the date of purchase, such as an invoice, order number, or a screen shot of your order history.

The company is solely responsible for the revision and description of this manual. and has the right to reserve the right to print the prospectus without notice.

Some of the pictures in this manual are schematic diagrams for reference only. if the pictures do not match the real thing, the real thing shall prevail.

Thank you for purchasing Marsriva product

PRODUCT WARRANTY CARD

Product :

Model :

Purchase Date (DD / MM / YY) :

Customer Name :

Telephone Number :

E-mail Address :

Dealer's Name and Address :

Serial Number* :



This warranty applies only if the product was newly manufactured on the date of purchase and not sold as used, refurbished, or manufacturing seconds. Please keep the proof of purchase and this warranty card for future service requests.

IMPORTANT!

Please store this card in a secured location for future reference.

Marsriva reserves the right to request this card before accepting repair requests.

This does not affect or limit your mandatory statutory rights.

Marsriva Technology Co., Ltd.

Website: www.marsriva.com

E-mail: support@marsriva.com

Made in China



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