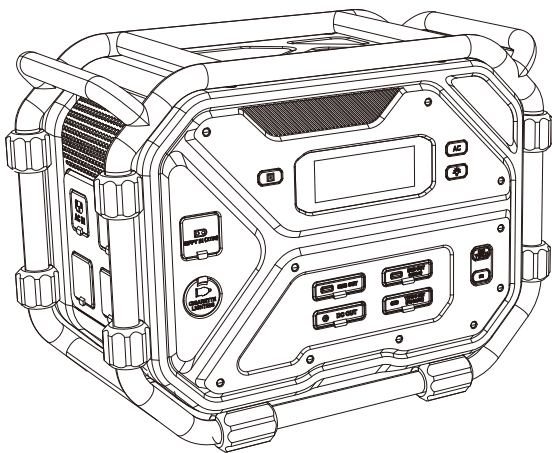




USER MANUAL

Portable Power Station

MP24



www.marsriva.com

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IMPORTANT SAFETY INSTRUCTIONS

Read carefully before use to avoid electric shock, personal injury, or fire hazards.

1. DANGER: Critical Electrical Safety

- **Grid Isolation:** NEVER connect the AC output port of this product to any electrical wires of the power company or household wall outlets. Doing so creates a high risk of electric shock, fire, or damage to the unit.
- **Moisture & Liquids:** Do not operate this unit with wet hands. Keep the device away from rain, seawater, beverages, or any liquid. Liquid ingress can cause short circuits and pose severe safety hazards.

2. WARNING: Operational Precautions

- **Medical Devices:** This product generates electromagnetic waves. If you use a pacemaker or a similar implantable medical device, consult your doctor or the device manufacturer before operation.
- **Unauthorized Modification:** Do not attempt to disassemble, repair, or modify the product. Unauthorized work may cause overheating, fire, or electric shock.
- **Damage Control:** If the unit is deformed, cracked, or damaged due to impact or dropping, discontinue use immediately. Replace any damaged charging cables or plugs promptly.

3. CAUTION: Handling & Environment

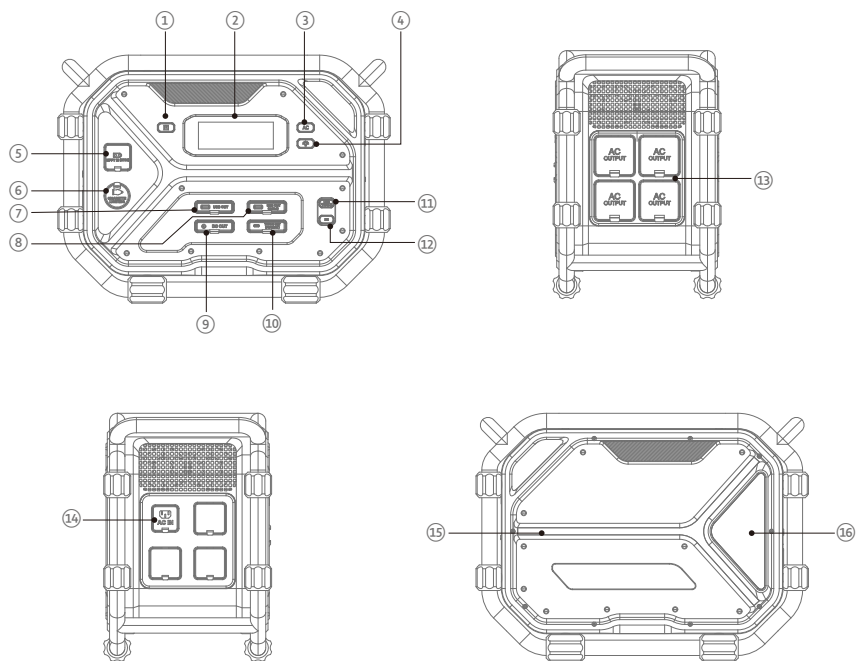
- **Temperature Limits:** Operate the unit only within the specified ambient temperature range of -10°C to 45°C.
- **Hazardous Environments:** Do not use or store the product in environments with excessive steam, dust, smoke, or flammable gases.
- **Connection Security:** When connecting electrical appliances, ensure the plugs are inserted firmly into the ports to prevent poor contact, which may lead to overheating or fire.
- **Child Safety:** Keep the unit out of the reach of children at all times.
- **End-of-Life:** This product contains a battery. Do not dispose of it with household garbage; please recycle it in accordance with local laws and regulations.

SPECIFICATIONS

GENERAL INFO	
Rated Power	2400W (Max.)
Peak Power	4800W (Max.)
Battery Capacity	2400Wh (48V / 50Ah)
Battery Type	LiFePO4 Battery
Net Weight	26.5 kg
Dimension (W×D×H)	512 × 259 × 377 mm
AC OUTPUT	
AC Output (230V Model)	230VAC, 50Hz, 2400W (Max.)
AC Output (120V Model)	120VAC, 60Hz, 2400W (Max.)
Waveform	Pure Sine Wave
UPS Switch Time	≤10ms
DC OUTPUT	
USB-A Output (×4)	5V ≡ 3A, 9V ≡ 2A, 12V ≡ 1.5A, 18W (Max.)
USB-C1 Output	5/9/12V ≡ 3A, 15/20V ≡ 2A, 40W (Max.)
USB-C2 Output	5/9/12/15V ≡ 3A, 20/28V ≡ 5A, 140W (Max.)
Total USB Output	252W (Max.)
DC 5521 Output	12V ≡ 5A, 60W (Max.)
DC 5525 Output	24V ≡ 4.5A, 108W (Max.)
Car Power Output	12V ≡ 10A, 120W (Max.)
Car Power Output+DC 5521	120W (Max.)
Light	3W
INPUT	
AC Charging (230V Model)	200–240VAC, 50Hz, 800–1500W (Adjustable)
AC Charging (120V Model)	100–130VAC, 60Hz, 600–1200W (Adjustable)
DC Charging (XT60)	25–145VDC, 25A, 1500W (Max.)
ENVIRONMENT	
Charge Temperature	0°C to 45°C (32°F to 113°F)
Discharge Temperature	-10°C to 45°C (14°F to 113°F)
Storage Temperature	-10°C to 45°C (14°F to 113°F)

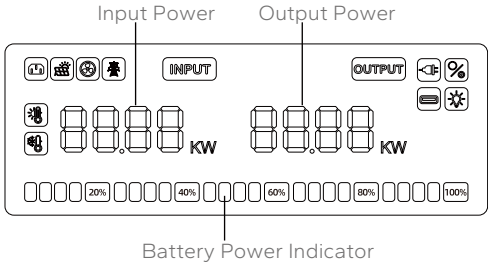
Specifications are subject to change without notice and all product drawings are for reference only. Consult MARSRIVA for the latest design and specifications.

FUNCTION INDEX



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

LED SCREEN GUIDE



AC Charging Icon

The icon lights up to indicate that the product is in the AC charging state.



PV Charging Icon

The icon lights up to indicate that the product is in a DC charging state.



Fan Icon

The icon lights up to indicate that the fan function is on.



Grid-Connected Icon

The icon lights up to indicate that the product is in the grid-connected state.



High Temperature Warning Icon



Low Temperature Warning Icon



AC Output Icon

The icon lights up to indicate that the AC output function is turned on.



DC Output Icon

The icon lights up to indicate that the cigarette lighter, DC5521, and DC5525 output functions are turned on.



USB/TYPE-C Output Icon

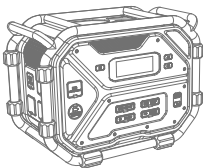
The icon lights up to indicate that the USB/TYPE-C output function is turned on.



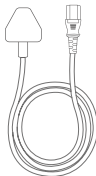
Light Icon

The icon lights up to indicating that the lighting function is turned on to.

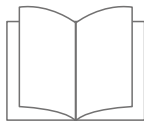
WHAT'S IN THE BOX



Power Station × 1



AC Charging Cable × 1



User Manual × 1

Note: Cable types may vary depending on the destination region.

OPERATING INSTRUCTIONS

Long press the Power On/Off button for 2–3 seconds to turn on the device.

How to use USB / Type-C output

- Long press the Power button for 2–3s to turn on the product.
- Short press the "USB/TYPE-C Output" button. The USB/Type-C icon on the display lights up, indicating the function is active.
- Connect your devices via USB/Type-C cable. The devices enter charging mode.
- After charging, unplug the cables and turn off the power.

How to use AC output

- Long press the Power button for 2–3s to turn on the product.
- Short press the "AC Output" button. The AC icon on the display lights up, indicating AC function is active.
- Insert the power cable and connect your devices.
- After use, unplug the cables and turn off the power.

How to use DC12V / Cigarette Lighter output

- Long press the Power button for 2–3s to turn on the product.
- Press the "DC/Cigarette Lighter Output" button. The DC icon on the display lights up, indicating DC12V/DC24V/cigarette lighter functions are active.
- Insert the cable and connect your devices.
- After use, unplug the cables and turn off the power.

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 breathing Y light;
- The fifth gear is burst flash Y light;
- In any gear, long press 2s-3s to turn off the light.

ENERGY-SAVING MODE

The product features automatic energy-saving behavior to conserve battery power:

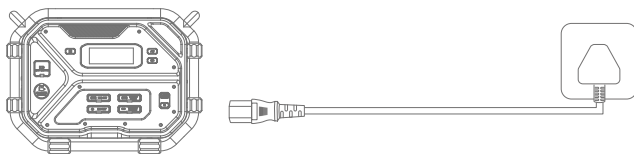
- **Auto Shutdown (No Operation):** After the product is turned on, if no input or output operation is detected within 5 minutes, the product automatically shuts down.
- **Low-Load Shutdown:** When the product has functions enabled but no load, or the total load power is less than 10W, the product will enter energy-saving mode and force shutdown after 10 hours of continuous operation.

INPUT CONFIGURATION

MP24 supports AC charging, solar charging, and car charging:

Note: When both mains power and solar panel are connected simultaneously, the system automatically enters parallel mode, combining both inputs for faster charging.

AC Charging



Use the included AC cable to connect to a socket. The screen lights up to show charging status.

- **Power Switching: (120V model: 600W-1200W/ 230V model: 800W-1500W)**

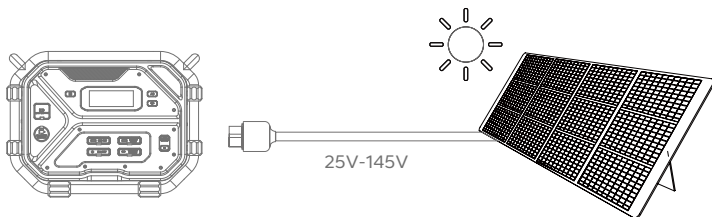
Unstable Grid: Lower power prevents overcurrent protection in low-voltage areas.

Cost Efficiency: Fast charge at 1500W during off-peak hours; switch to 800W during peak hours to save costs.

Setting Method: Long-press the AC button to set. Long-press again to save & exit, or wait 1 min to auto-exit.

- Over-temp Protection: Auto-stops charging/discharging if overheated.
- Full Charge: Auto-stops at 100%.

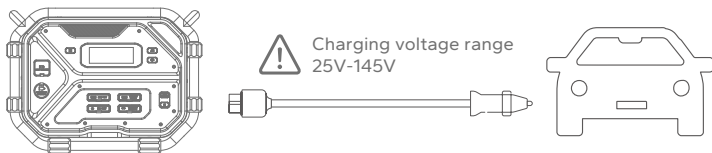
Solar Charging



Connect a compatible solar panel to the charging port. The solar charging icon on the display lights up, with input power shown and the battery bar animating, indicating the product is charging.

- MPPT input range: 25-145VDC, 25A, max 1500W.
- Use compatible solar panels that meet the voltage and current specifications.

Car Charging

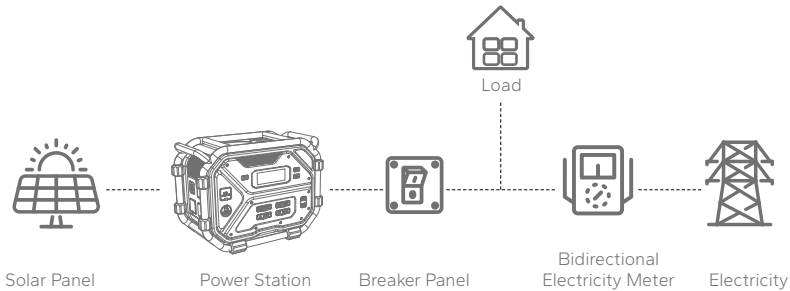


- Insert the charging cable into the vehicle's cigarette lighter socket, then connect the other end to the XT60 input port on the device.
- Start the vehicle to initiate the charging process.
- The battery indicators will flash to confirm charging. If the internal temperature rises, the cooling fan will activate automatically.
- Charging stops automatically once the battery is full. Please disconnect the cable from both the vehicle and the device when charging is complete.

GRID CONNECTION FUNCTION

Transmitting surplus power from backups to the national grid.

Self-generation and self-consumption, with surplus power fed to the grid.



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/500W/600W/700W/800W (the maximum power is 800W).

After selecting power, long press DC key or wait for 10 seconds to force exit.

ERROR CODE & TROUBLESHOOTING

When abnormalities occur, the product will force-close the corresponding function. Disconnect the load first, then press the corresponding function button to clear the error icon and restart the function.

Error Codes

Error Code	Cause	Solution
111 111	Inverter communication abnormality	Restart the device. If the fault persists, contact customer service.
222 222	Inverter high temperature	Reduce load, ensure ventilation, allow device to cool before restart.
333 333	Inverter overload protection	Reduce overall load. Toggle AC output switch to reset.
444 444	Inverter short circuit protection	Inspect connected appliances for short circuits. Remove faulty devices and restart.
555 555	Battery low voltage protection	Charge the device immediately. All outputs disabled until voltage recovers.
666 666	Battery low temperature protection	Move to a warmer location (above -5°C). Allow to acclimate before restart.
777 777	Battery high temperature protection	Allow to cool below 55°C. Ensure ventilation before restart.
888 888	Inverter communication abnormality	Restart the device. If the fault persists, contact customer service for RMA.

Port-Level Protection

Symptom	Solution
USB-QC ×4 over-current / short circuit	Port force-closes output, USB/Type-C icon flashes. Disconnect load, press function button to clear error, restart function.
PD ×2 over-current / short circuit	Port force-closes output, icon does not flash. Disconnect load, reduce power to restore output. If short persists, port remains disconnected.
DC5521 / DC5525 / Cigarette over-current / short	Port force-closes, DC icon flashes. Disconnect load, press button to clear error, restart function.
AC over-temperature / overload / short circuit	AC auto-closes, AC icon flashes. Output resumes after abnormal condition is resolved.
Discharge high-temp protection (>60°C)	All outputs closed. Error code displayed. Resumes when temp drops below 50°C.
Charge over-temp protection (50°C)	Charging disabled. Error code displayed. Resumes when temp drops below 45°C.
Discharge low-temp protection (<-10°C)	All outputs closed. Error code displayed. Resumes when temp rises above -5°C.
Charge low-temp protection (<0°C)	Charging force-closed. Error code displayed. Resumes when temp rises above 1°C.
Battery low voltage	All outputs closed. Device auto-shuts down within 1 minute if not charged.

PRECAUTIONS FOR PRODUCT USE

1. Handling & Storage

- **Handle with care:** Avoid dropping, violent impact, or unauthorized disassembly. The unit contains high-voltage components; disassembly poses a significant safety risk.
- **Environment:** Store in a dry, well-ventilated area. Avoid extreme temperatures, as they will degrade battery life and potentially damage the casing.
- **Cleaning:** Do not use corrosive solvents. Use a soft cloth or cotton swab with a small amount of isopropyl alcohol (90%+) for cleaning.

2. Operational Guidelines

- **Compatibility:** Ensure your devices are within the power and voltage range of this unit.
- **Cables:** Always use the original provided cables to ensure safety and performance.
- **Startup Sequence:** Please connect your device to the power station before turning on the unit's output.
Note: Slight sparking when connecting high-load devices is normal.
- **Fan Care:** Keep air vents clear of dust and debris. During operation, the fan may continue to run for a short time after discharge to regulate internal temperatures; this is normal.

3. Battery Maintenance

- **Initial Use:** Please fully charge the device before its first use.
- **Long-term Maintenance:** To maintain battery health, fully discharge and recharge the unit at least once every 2 months
- **Thermal Safety:** If the device reaches high temperatures during operation, it will trigger an automatic power-off protection. After discharge, allow the device to rest for 30 minutes before recharging to extend battery longevity.

WARRANTY POLICY

1. Warranty Coverage

During the warranty period, we provide free repair services for failures occurring under normal use as specified in the manual. Replaced parts shall become the property of the company. Please retain this warranty card and submit it with your product for all service requests.

2. Limited Warranty (Exclusions)

Free repair services do not apply to the following conditions:

- Failure to follow the instruction manual or safety precautions.
- Improper storage, including battery failure due to prolonged lack of recharging.
- Use of non-specified power adapters or operation outside the rated voltage range.
- Unauthorized disassembly, modification, or self-repair.
- Cosmetic damage (exterior/surface coating) or damage to packaging and accessories.
- Damage caused by force majeure (e.g., natural disasters, war, or social unrest).

3. Proof of Purchase

If the dealer stamp is missing, please provide a valid proof of purchase (e.g., receipt, invoice, or online order screenshot). If you cannot provide proof of purchase, please contact your authorized retailer or our support team directly.

Important Notice:

Documentation: Please store this manual in a secure place.

Accuracy: Illustrations in this manual are for reference only; the actual product shall prevail.

Policy Updates: The company reserves the right to modify manual content and printing specifications without prior notice.

Thank you for choosing MARSRIVA

PRODUCT WARRANTY CARD

[PRODUCT INFORMATION]

Model :

Serial Number (S/N):

Purchase Date (DD / MM / YYYY)

Dealer Name & Address :

[CUSTOMER INFORMATION]

Name :

Email Address :

Phone Number :

WARRANTY TERMS & CONDITIONS

This warranty applies exclusively to original, newly manufactured products. It does not cover items sold as used, refurbished, or manufacturing seconds. Please retain this card alongside your original proof of purchase (receipt or invoice) to validate your warranty status.

IMPORTANT

Please store this document in a secure location for future reference. Marsriva reserves the right to request this card and proof of purchase prior to authorizing repair services. This policy does not affect or limit your mandatory statutory consumer rights.

MARSRIVA Technology Co., Ltd.

Website: www.marsriva.com

E-mail: support@marsriva.com

Made in China

Specifications are subject to change without notice,
all product drawings are for reference only.

