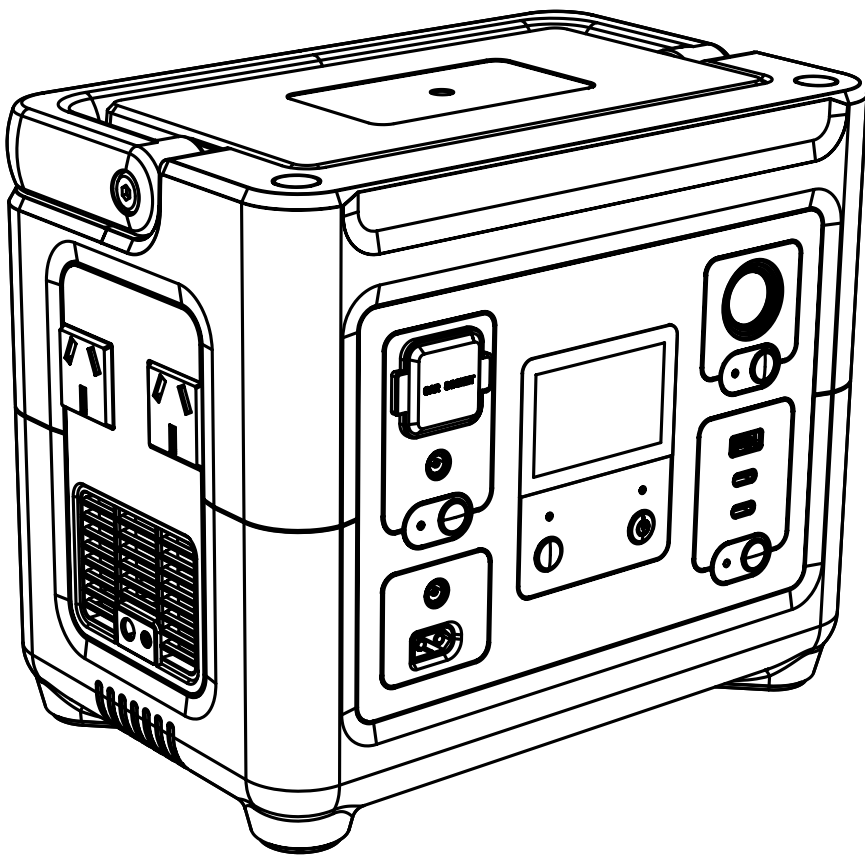




**NRGVault**

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# User Manual



**PWR-PV500-PS**

# INTRODUCTION

This product is a portable energy storage power generator. It can be used as a power source for emergency relief, outdoor camping, office equipment, entertainment and much more. It is compact enough for portability but capable enough to power small to medium appliances.

# MAINTENANCE



- Clean with a soft dry cloth only. DO NOT use any water or liquids as this could lead to damage of internal components and electric shock.



- When not using the unit for extended periods, disconnect from the power outlet and any connected devices, then power off the unit.



- Charge the unit to approx. 80% battery every 3 – 6 months during extended periods of storage.



- Indoor storage only.



- Recommended storage temperature: 0 - 25°C.

# GENERAL SAFETY

The NRGVault range of portable power stations has been made to the highest standards for safety and reliability. Please retain the user manual for important safety information about your device. This manual will help you learn the features and specifications of the device to assist with operability and satisfaction during use. Failure to follow these guidelines for proper use and care of your device may result in damage to the unit, or injury to yourself and others.



- Keep children and pets away from the device.



- DO NOT expose the unit to fire, liquids, dirt, or other contaminants as this could lead to fire or electric shock.



- DO NOT place the unit on an unstable, uneven, or slippery surface.



- Always use the unit in a well ventilated and spacious area.



- DO NOT dismantle, crush, puncture, or squeeze the unit.



- DO NOT insert any foreign objects into the vents, ports, or other openings.



- Always operate or store the device in accordance with the specified temperature range.



- DO NOT ignore warnings from other manufacturers when using this device.



- NEVER use a damaged device or a device with a damaged battery with this unit. This may lead to fire, fluid leaks, overheating, or explosion.



- Use approved accessories only. Improper use or incompatible accessories may result in fire, explosion, or other safety hazards.



- DO NOT place other objects on top of the unit during use or storage.



- DO NOT attempt to modify, repair, or replace any internal components of the unit. If necessary, please contact the manufacturer.



- Turn off immediately in case of malfunction or smoke.



- Use dry powder fire extinguisher in case of fire.

# TIPS FOR SAFE CHARGING



## 1. AVOID OVERCHARGING.

Disconnect power stations and devices after the battery reaches a full charge. Leaving devices on a power station too long may cause them to overheat and can reduce battery life.



## 2. PICK THE RIGHT POWER OUTPUT.

Take special care to match the correct voltage and amp values your device requires when using a power station. Some power stations have multiple output ports so check which one might be the most suitable for your device.



## 3. CHARGE ONLY ON NON-FLAMMABLE SURFACES.

Devices and power stations can get warm or sometimes even hot during charging. Make sure to always place the device and power station on a non-flammable surface when charging. Do not place on beds, pillows, paper, or near any fabric such as curtains or clothing under any circumstances.



## 4. AVOID EXTREME ENVIRONMENTS.

Do not recharge your devices or leave a power station in environments where extreme temperatures can occur. On particularly hot days do not charge or leave your power station in places such as the inside of a car, or an unairconditioned room. If it's possible, try and wait till the evening when temperatures are a bit cooler.



## 5. MONITOR CHARGING.

Recharge your devices while you are nearby, preferably in the same room or another room close by. This way when there is a defective battery or power station, you are able to disconnect it immediately.

## **WHAT'S IN THE BOX**

- **PWR-PV500-PS Portable Power Station**
- **AC Charging Cable**
- **User Manual**

# PRODUCT SPECIFICATIONS

No.	Item	Description		
1	Battery Cell	Battery Cell Type: LiFePO4 Model: 32700 3.2V/6000mAh x 16		
2	Rated Capacity	288Wh (16V/18Ah)		
3	Lifecycle	2500 cycles to 80%		
4	Battery Management System	Under/Over Voltage Protection, Over Current Protection, Short Circuit Protection, Overcharging Voltage Protection, Over Temperature Protection, Overload Protection.		
5	MPPT	Supports Solar Power MPPT charging		
6	Housing	ABS+PC		
7	Input Options	Wall charge	220-240V/50Hz	Max 300w
		Vehicle charge	DC port: 2-28V, 5A	90W
		Solar charge	XT60 port: 12-28V, 5A	90W
8	Output Options	Type-C	PD 100W <sup>[1]</sup>	PD
		Type-C	PD 30W <sup>[2]</sup>	PD
		USB-A (QC3.0) <sup>[3]</sup>	QC3.0 <sup>[3]</sup> Max 18W	QC3.0 <sup>[3]</sup>
		DC5521	13.6V/8A Max 108.8 W	Total share 8A
		12V Car Socket	13.6V/8A Max 108.8 W	
		2 x AC	AC: 220-240V~ 50Hz Rated Power: 500W Overload Protection: 550W 30s Inverter Peak Power: 600W 1s	
9	LED Light Modes	LED Light Modes	1-Light 2-SOS 3-Emergency	Power: 3W
10	Dimensions	245 x 160 x 209mm		
11	Weight	5.15kg		

1. PD 100W = USB-C Power Delivery can deliver up to 100W of power.

2. PD 30W = USB-C Power Delivery can deliver up to 30W of power.













3. QC3.0 = Quick Charge 3.0 can charge devices up to 4 times faster than conventional charging.

# GENERAL SPECIFICATIONS

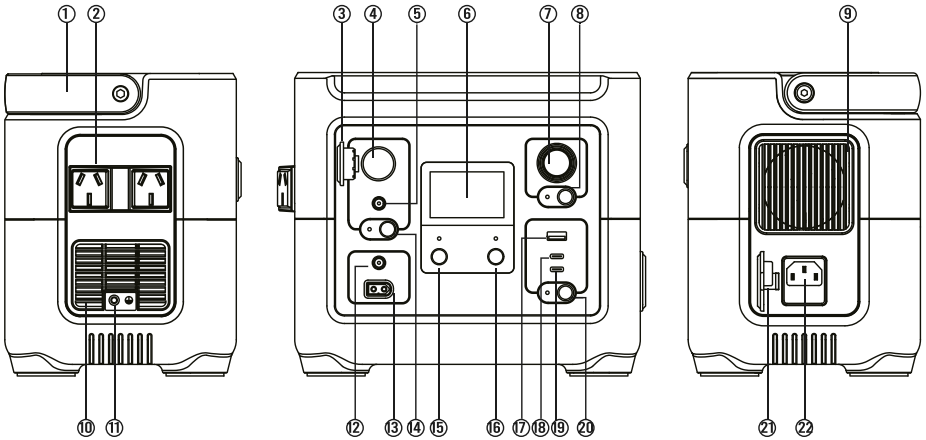
No.	Item	Parameter
1	Battery Cell Standard Voltage	3.2V
2	Cells Configuration	5S3P
3	Battery Pack Voltage	16V
4	Output Waveform	Pure Sine Wave
5	Operating Environment	0~40°C
6	Working Humidity	20%~90% No condensation at 20-90% of humidity
7	Storage Temperature	Normal indoor storage temperature. Recommended storage temperature: 0 ~ 25°C (Range)
8	Standby Time	Recommend: Recharge every 3 months. Required: Must be recharged every 6 months.

# USE CASE

(approximations only)

	<b>Table Lamp</b> 50 hours		<b>Mini Fridge</b> 4 – 5 hours
	<b>iPhone 12</b> 20+ Charges		<b>Cordless Drill</b> 8+ Charges
	<b>Tablet</b> 8+ Charges		<b>Fan</b> 6 hours
	<b>Laptop</b> 3 – 4 Charges		<b>CPAP Device</b> 5 – 6 hours
	<b>Camera</b> 15+ Charges		<b>TV</b> 3 hours
	<b>Drone</b> 5+ Charges		<b>Bluetooth Speaker</b> 30+ Charges

# PRODUCT DIAGRAM



**1** - Handle

**2** - AC Output Port

**3** - Dust Cover

**4** - 12V Car Socket

**5** - DC Output Port

**6** - LCD Display

**7** - LED Torch

**8** - LED Torch ON/OFF Switch

**9** - Cooling Hole

**10** - Cooling Hole

**11** - Ground Connection

**12** - DC Input Port

**13** - Solar Panel Input Port

**14** - DC ON/OFF Switch

**15** - AC ON/OFF Switch

**16** - Main Power Button

**17** - QC3.0 USB-A Output Port

**18** - PD30W USB-C Output Port

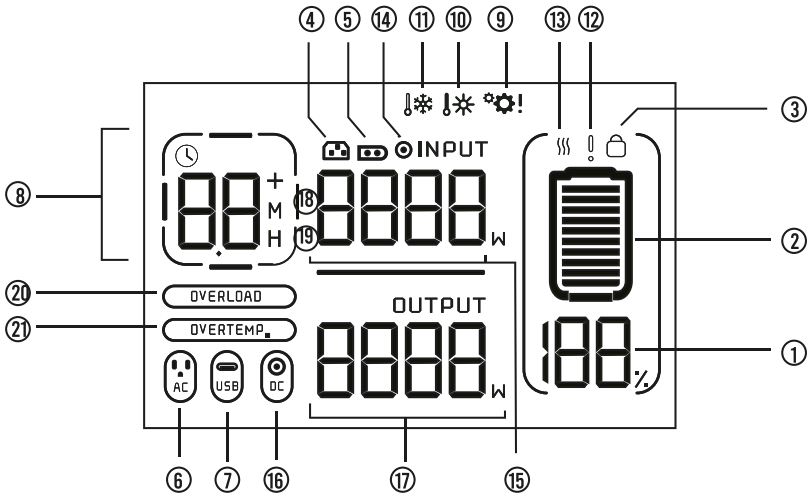
**19** - PD100W USB-C Output Port

**20** - USB ON/OFF Switch

**21** - Dust Cover

**22** - AC Input Port

# LCD DISPLAY



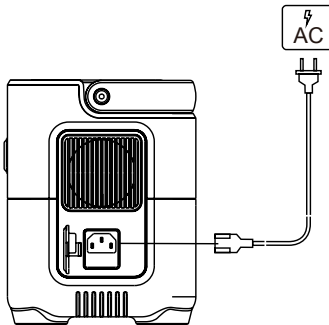
Battery Information Indicator	①		Battery Power Level %	⑫		Battery failure/low voltage indicator
	②		Battery Power Level	⑬		Battery high/low temperature indicator
	③		Battery Lock Protection			
Input Indicator	④		AC Input	⑭		DC Input
	⑤		Solar Input	⑮		Input Power
Output Indicator	⑥		AC Output Indicators	⑯		DC/Car Outlet Output
	⑦		USB Output Indicators	⑰		Output power
Remaining time Indicator	⑧		Remaining discharge/charge time	⑱		Minutes
				⑲		Hours
Protection Indicator	⑲		System Failure Indicator	⑳		Overload Protection Indicator
	⑩		Over Temperature Indicator	㉑		Over Temperature Protection Indicator
	⑪		Low Temperature Indicator			

# CHARGING

- Please charge the PWR-PV500-PS before using.
- Charge the battery to 80% before extended storage. Check the PWR-PV500-PS remaining power level every 3-6 months and charge again.
- There are 3 input ports on the PWR-PV500-PS:
  - 1 x AC input port.
  - 1 x Solar input port.
  - 1 x DC5521 port.

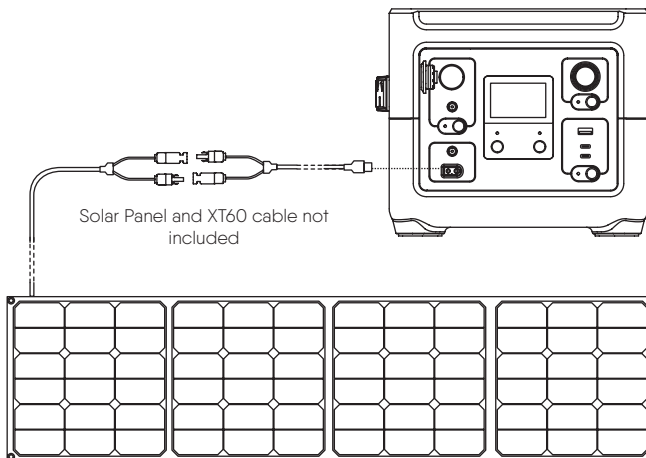
# AC CHARGING

- AC Charging: AC power supply (such as a wall socket) can be used to charge the PWR-PV500-PS with a maximum power of 300W through the AC charging port (figure 22 in Product Diagram).
- A full charge via AC charging takes approx. 80 minutes.



# SOLAR CHARGING

- The PWR-PV500-PS supports Solar Panel charging rated at 90W.
- Solar power can be used to charge the PWR-PV500-PS with a maximum power of 90W through the XT60 port (figure 13 in Product Diagram)
- A full charge from a 90W Solar Panel will take between 4-7 hours (dependant on sunlight intensity).



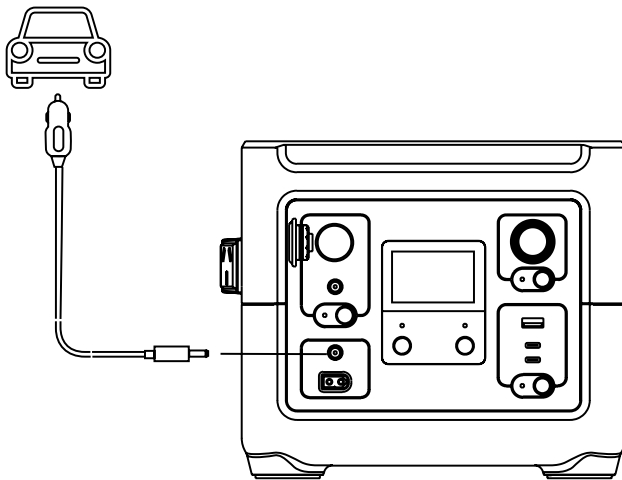
## CAUTION:

- **The maximum voltage of solar panels that the PWR-PV500-PS can support is 28V, and the maximum current is 5A.**
- **The PWR-PV500-PS must be charged by solar panels with a voltage lower than 28V.**
- **If the input voltage exceeds 28V it has a risk of damaging the product.**

# CAR CHARGING

- PWR-PV500-PS supports car charging rated at 90W.
- The 12V socket in a car can be used to charge the PWR-PV500-PS with a maximum power of 90W through the DC port (figure 12 in Product Diagram).
- A full charge via a 12V car charger will take approx. 3-4 hours.

Note: A 12V DC5521 cable (sold separately) is required.



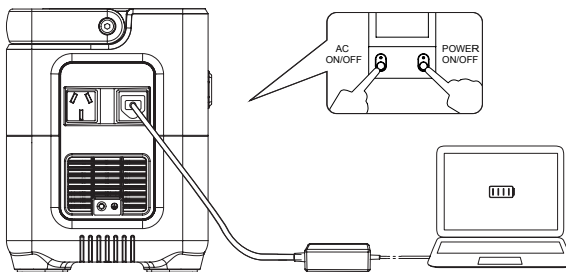
## CAUTION:

- The maximum voltage of car charging the PWR-PV500-PS can support is 28V, and the maximum current is 5A.
- The PWR-PV500-PS must be charged by car with a voltage lower than 28V.
- If the input voltage exceeds 28V it has a risk of damaging the product.

# HOW TO USE AC OUTPUT

Under the condition that the total power does not exceed 500W, all AC outlets can work together at the same time.

1. Long press the main power button 3 seconds to turn on. The main power indicator and the screen lights up, then enters the standby state.
2. Plug in AC appliances.
3. Tap the AC on/off switch to turn on the AC output function. The product starts to supply power to external AC appliances.
4. Long press the AC power on/off switch to turn off the AC output.
5. When not using the product for a long time, please long press the main power switch for 3 seconds to turn off to save power.

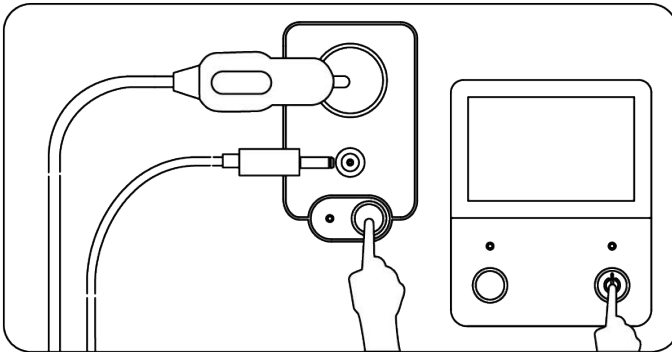


## NOTE:

**When the AC out function is turned on, the AC icon on the LCD display will light up, then perform a system power check for approx 8-10 seconds. After the checks are complete, AC power output will be available.**

# HOW TO USE DC OUTPUT

1. Long press the main power button to turn on. The main power indicator and the screen light up, then enters the standby state.
2. Plug in the DC device.
3. Tap the DC on/off switch to turn on the DC function.
4. After use, tap the DC on/off switch to turn off the DC output.
5. When not using the product for a long time, please long press the main power switch for 3 seconds to turn off to save power.

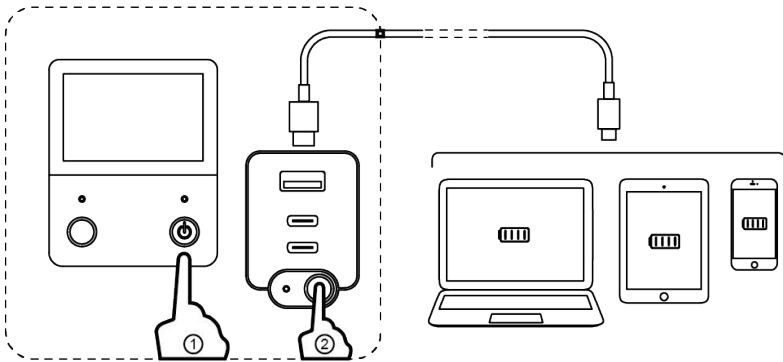


## CAUTION:

When using the PWR-PV500-PS, please do not plug the DC input cable into the DC output connector. This could damage the product.

# HOW TO USE USB OUTPUT

1. Long press the main power button to turn on. The main power indicator and the screen light up, then enters the standby state.
2. Tap the USB on/off switch to turn on the USB function.
3. Plug in the USB device.

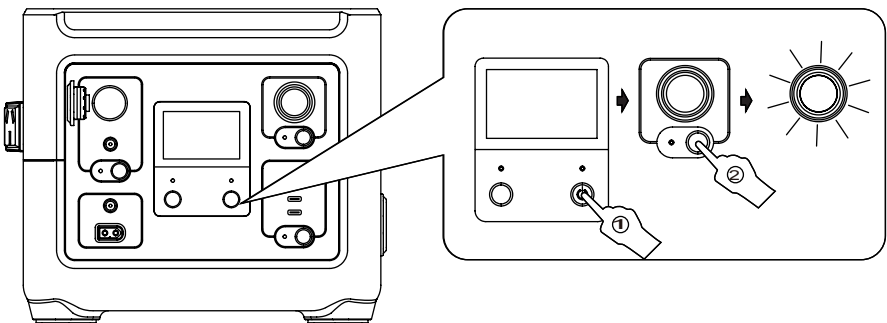


## CAUTION:

When using the PWR-PV500-PS, please do not plug the DC input cable into the DC output connector. This could damage the product.

# HOW TO USE THE LED LIGHT

1. Press and hold the main power button for 3 seconds to power on.
2. Press and hold the LED light button for 3 seconds to turn on the half-bright mode of the LED light.
3. After the half-bright mode is turned on, tap the LED light button to cycle through the following modes: Full-Brightness, SOS and Strobe.
4. After the strobe mode, tap the LED light button again to turn off the LED light.
5. In any mode of the LED light, as long as you press and hold the LED light button for 3 seconds, the LED light can be turned off.



# TROUBLESHOOTING

## **DEVICE NOT CHARGING:**

- Power off/on your device and try charging again.
- Try using another charging cable from your device to the PWR-PV500-PS.
- If using AC or DC output, make sure their respective switches are set to ON.
- Check the device you are trying to charge does not exceed the power rating for the output port being used.
- Check battery levels on the PWR-PV500-PS

## **DEVICE OR POWER STATION GETS HOT DURING CHARGING:**

- It is normal for a device and the power station to generate heat during charging. If you feel that either are too hot, then unplug the device from the power station and wait till it has cooled down.

## **THE POWER STATION IS NOISY:**

- The power station uses an air-cooled system with built-in fans working to help dissipate heat. The fans may spin faster or slower depending on workload.

## **CAN I TAKE THE PWR-PV500-PS ON A PLANE?**

- No, the battery in the unit exceeds the 160Wh regulation.

# TROUBLESHOOTING

continued...

## **HOW DO I CHARGE THE PWR-PV500-PS?**

- The PWR-PV500-PS has 3 charging inputs. AC (Wall Socket), XT60 (Solar Panel) and DC (Car). An AC cable is included for charging via a wall socket. The XT60 and DC cables are not included.

## **HOW DO I KNOW IF THE PWR-PV500-PS IS FULLY CHARGED?**

- Check the LCD display. The power level is indicated as a battery icon and a % number.

## **HOW DO I KNOW HOW MUCH POWER THE PWR-PV500-PS IS SUPPLYING TO A CONNECTED DEVICE?**

- Check the LCD display. The estimated time a connected device can run for will be indicated on the display.

## **CAN THE PWR-PV500-PS OUTPUT POWER TO ANOTHER DEVICE WHILE IT IS BEING CHARGED?**

- Yes, the PWR-PV500-PS can output power while being charged.

## **CAN THE PWR-PV500-PS SIMULTANEOUSLY CHARGE MULTIPLE DEVICES?**

- Yes, all the output ports on the PWR-PV500-PS can be used at the same time as long as the total power output does not exceed 500W.

*Thank you  
for your purchase!*

To get the most out of your product please read the user manual carefully and keep for future use.

For specific information relating to your product such as Spare Parts, FAQs, Warranty claims, and more, please scan the following QR code:



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