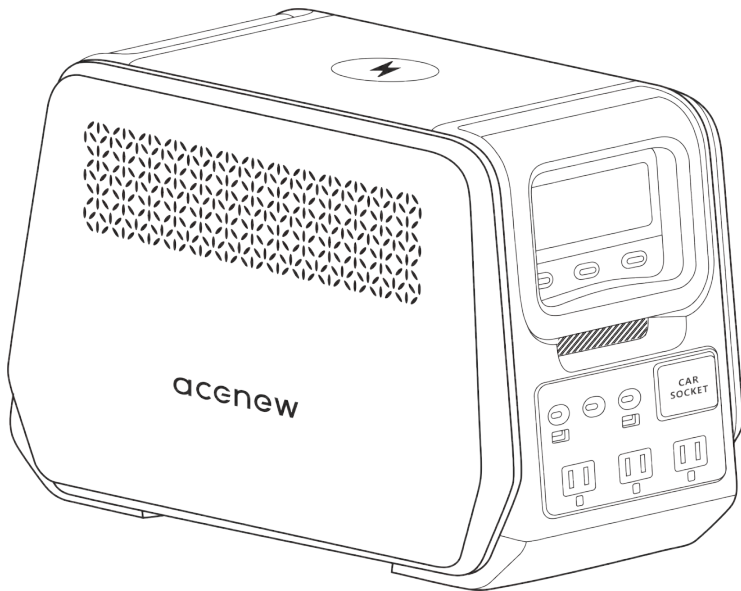


# acnew

## Acnew Neutron 1200 User Manual



【V3.2】

# Disclaimer

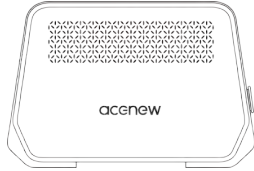
Please carefully read this user manual and fully understand the instructions before use to ensure correct operation. Keep this user manual after reading for future reference. If the product is not operated correctly, it could cause serious injury to you or others, or result in product and property damage. Once you use this product, you are considered to have understood, recognized and accepted all terms and contents of this document. Users shall be responsible for their own actions and all consequences from use of the product. Acenew is not responsible for all losses caused by the user's failure to use the product in accordance with the User Manual.

In compliance with laws and regulations, Acenew reserves the right of final interpretation of this document and all related documents of this product. Acenew has the right to update, revise, or terminate this document without prior notice. Please visit Acenew official website [www.acenew.com](http://www.acenew.com) for the latest product information.

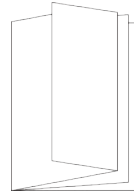
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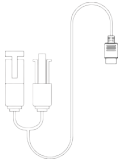
# 1. Packing List



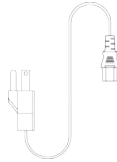
ACENEW Neutron 1200



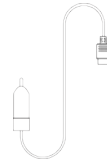
User Manual & Warranty Card



Solar Charging Cable

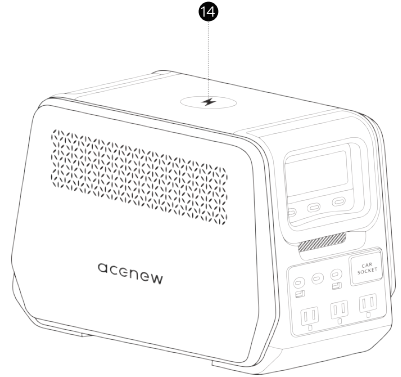
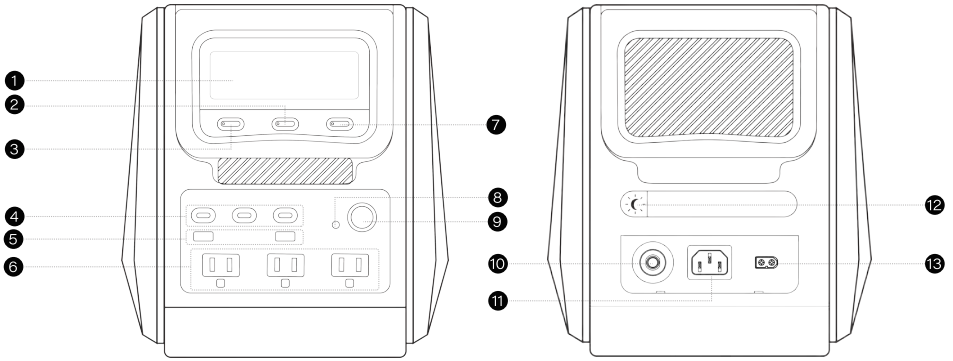


AC Charging Cable



Car Charging Cable

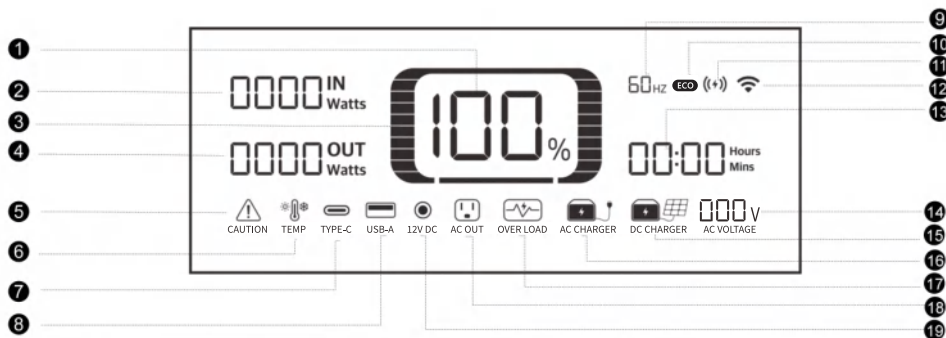
## 2. Product Appearance



1	LCD		
2	Power On/Off switch		
3	AC output switch		
4	USB-C port		
5	USB-A port		
6	AC output port		
7	DC output switch		
8	DC5521 output port		
9	Car charger output port		
		10	
		11	
		12	
		13	
		14	
		10	Overload protection switch
		11	AC charging input port
		12	LED light switch
		13	XT60 charging input port
		14	Wireless charging














# 3. Display screen icon explanation

## 3.1 Icon explanation



1	Battery level percentage	11	Wireless charging use indicator
2	Current input power	12	Signal connection indicator
3	Battery indicator	13	Remaining charging/discharging time
4	Current output power	14	Output voltage indicator
5	Fault alarm	15	DC charging indicator
6	Abnormal temperature alarm	16	AC charging indicator
7	TYPE-C use indicator	17	Overload alarm
8	USB-A use indicator	18	AC output indicator
9	AC frequency	19	DC output indicator
10	Economic model indicator		

## 3.2 Fault Display and Handling Methods

Abnormal Icon Phenomenon	Fault Type	Handling Method
  AC OUT OVER LOAD	AC output overloaded	Remove the over-powered device and press the AC switch or enable the AC port that automatically shuts down due to overload on the app.* Electrical appliances must be used within the rated power range.
  USB-A OVER LOAD	USB-A output overloaded	Remove the abnormal load. The icon will automatically resume to the normal state after the load becomes normal.
  TYPE-C OVER LOAD	USB-C output overloaded	Remove the abnormal load. The icon will automatically reset to normal after the load normalizes.
  12V DC OVER LOAD	12V DC output overloaded	Remove the abnormal load. The icon will automatically reset to normal after the load normalizes.
  AC CHARGER TEMP	Battery high temperature protection while charging	The icon will automatically resume to the normal state after the temperature of the battery lowers to the specified range.
  CAUTION TEMP	Battery high temperature protection while discharging	The icon will automatically reset to normal after the temperature of the battery lowers to the specified range.
 CAUTION	Device malfunction	Restart the device. *If the problem persists after restarting, contact after-sales service personnel for professional maintenance.

## 4. Product Specifications

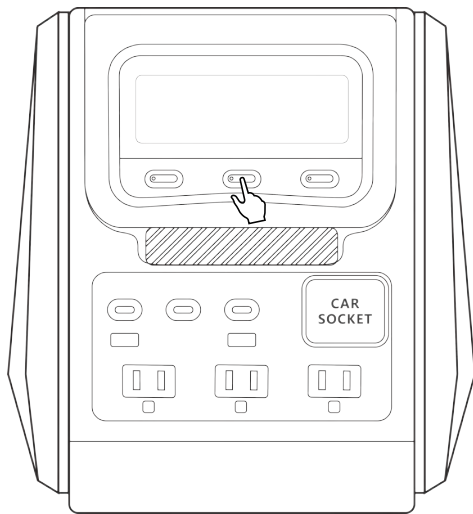
Basic Parameters			
Net weight	About 12 kg (26.4lbs)		
Dimensions	365 mm (L) × 228 mm (W) × 254 mm (H)		
Capacity	1221 Wh ( 22.2V/55Ah )		
Certification	FCC/UL/UN38.3/RoHS/PSE/CE/IEC/MIC		
Output Specifications			
DC output	USB-A port 1	22.5 W Max	USB-C port 1 and USB-A port share Max 21W at the same time
	USB-A port 2	22.5 W Max	
	USB-C port 1	100W Max	
	USB-C port 2	PD3.0 100 W Max, bidirectional 5 V-9 V-12 V-15 V/3 A, 20 V/5 A	
	USB-C port 3	PD3.0 100 W Max, bidirectional 5 V-9 V-12 V-15 V/3 A, 20 V/5 A	
	DC5521 output	12 V/10 A, 120 W Max	Sharing 10 A
	Car charger output	12 V/10 A, 120 W Max	
	Wireless charging	10 W Max	
AC output	Pure sine wave, 3 channels of 110 V/60 Hz, total output of 1500 W		



<b>Input Specifications</b>			
AC input	100 ~ 240V wide voltage input, maximum input power of 1200 W		
DC input	USB-C input	Maximum input power of 200 W (100W each for USB-C port 2 and USB-C port 3)	
	Solar input	10-30V/10A, Maximum input power of 200W	Share one XT60 port
	Car charger input		
<b>Environmental Characteristics</b>			
Operating ambient temperature	Charging: -4 °F/-20°C to 131 °F/55°C (optimal range: -22 °F/10°C to 131 °F/35°C)		
	Discharging: -22 °F/ -30°C to 131 °F/ 55°C (optimal range: 10°C to 35°C)		
Storage ambient temperature	-4 °F/-20°C to 95 °F/ 35°C		
Operating ambient humidity	65±20% RH		
Storage ambient humidity	65±20% RH		

## 5. How to Use the Product

### 5.1 Power On, Power Off, LCD Screen On



➤ **Power on:** Press and hold the main power switch for 3s, the LCD screen will light up. When you hear a beep, it indicates that the device has completed system self check and turned on, and then the device enters the power on state.

\* When there is no operation for 30s, the LCD screen will automatically turn off by default.

When the product has a load change or operation, the LCD screen will automatically turn on.

\* Short press the main power switch, AC output switch or DC output switch when the screen is off, the LCD will be lit up. Short press the main power switch in the bright screen state, the LCD will turn off.

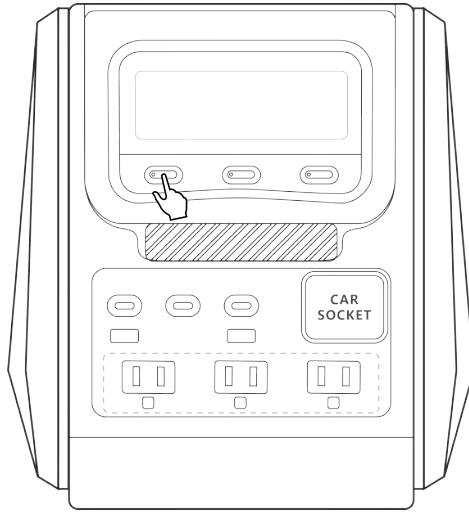
➤ **Power off:** Press and hold the main power switch for 3s. When you hear a beep, the device enters the power off state. At this time, the power output functions of each DC port and AC port are turned off.

\* The default standby time of this product is 1 hour. If the AC output and DC output switches do not turn on within 1 hour, and the product is not connected to any load or operated manually, it will automatically power off to save power.

\* In the off state, AC charging or DC charging of this product will turn on the device.

\* If this product is set up with the valley charging function, the device will automatically wake up for charging when the set time is reached.

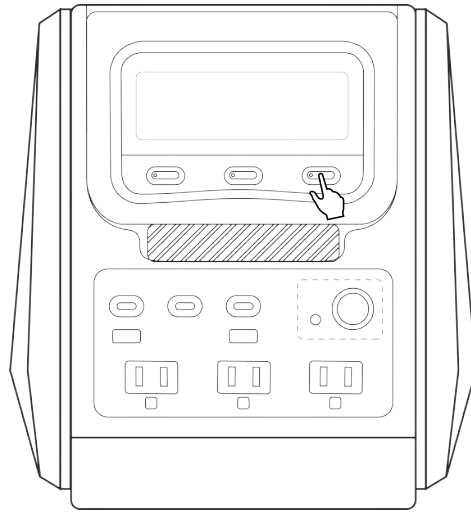
## 5.2 Use of AC Output



**When the main power switch is turned on, press the AC output switch to enable the AC output port. Press it again to disable the AC output port.**

- \* When the AC output is not in use, turn it off in a timely manner to avoid the loss of battery power due to the power consumption of the inverter.
- \* The default standby time of the AC output port is 3 hours. After 3 hours without any load connected to the AC output port of the product, the AC output power switch will automatically switch off.
- \* This product supports AC output switching control via the Acenew App, as well as individual control of each AC output port on and off.

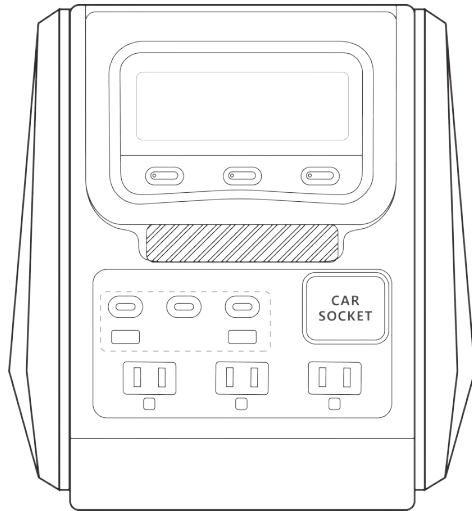
### 5.3 Use of DC Output



**When the main power switch is turned on, press the DC output switch to enable the DC5521 output port, Car charger output port, and wireless charging. Press it again to disable the DC output port.**

- \* When the DC output switch is switched on, the product will not automatically shut down.
- \* This product supports controlling the DC output switch via Acenew App, as well as viewing the output of the DC5521 output port and the car charger output port power.

## 5.4 Use of USB Ports

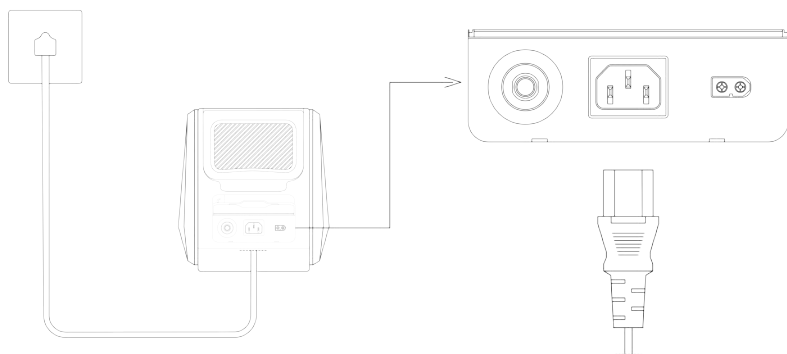


The USB ports can be used directly after the main power switch is turned on. USB-C port 1 supports up to 100W output power, USB-C port 2 and USB-C port 3 support PD bidirectional fast charging, each port supports up to 100W output power. Two USB-A ports, each supporting up to 22.5W of output power.

\* When USB-C port 1 (first from left) and USB-A port are used together, they share a maximum output of 21 W.

\* This product supports viewing the output power of each USB port via the Acenew App.

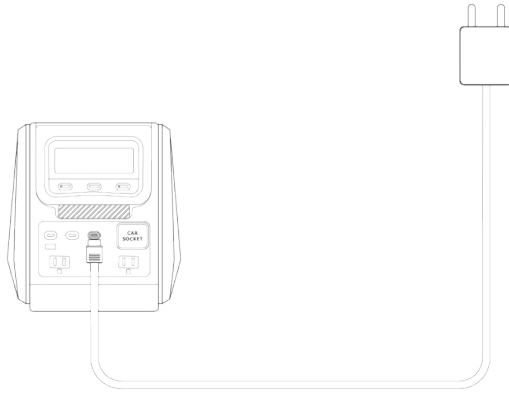
## 5.5 AC Charging



**Neutron 1200 uses intelligent bi-directional inverter technology. To protect the battery life, this product will be real-time dynamic adjustment of charging power, AC charging 1 hour, the battery power can be charged from 0% to 80%, more than 80% of the power will gradually reduce the charging power, which is normal.**

- \* When using AC power for charging, please use acenew's official standard AC charging cable. The plug of the AC charging cable must be directly connected to a socket that supports a current of more than 10 A.
- \* This product supports viewing AC charging power via the Acenew App.

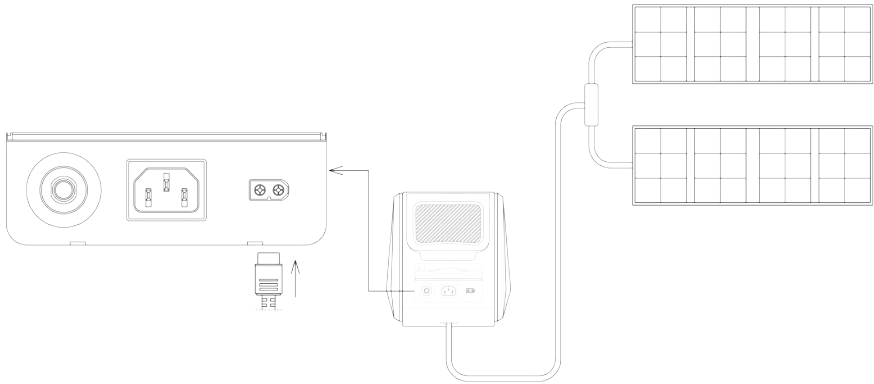
## 5.6 USB-C Charging



This product's USB-C port 2 and USB-C port 3 support PD bi-directional fast charging protocol. In addition to its role as a DC output, it can also be used as an additional charging port. Use the USB-C charging cable to connect the phone charger or other device charger and the USB-C port 2 or USB-C port 3 of this product to achieve USB-C charging. USB-C port 2 and USB-C port 3 each support a maximum of 100W charging power.

\* This product supports viewing USB-C charging power via the Acenew App.

## 5.7 Solar Charging

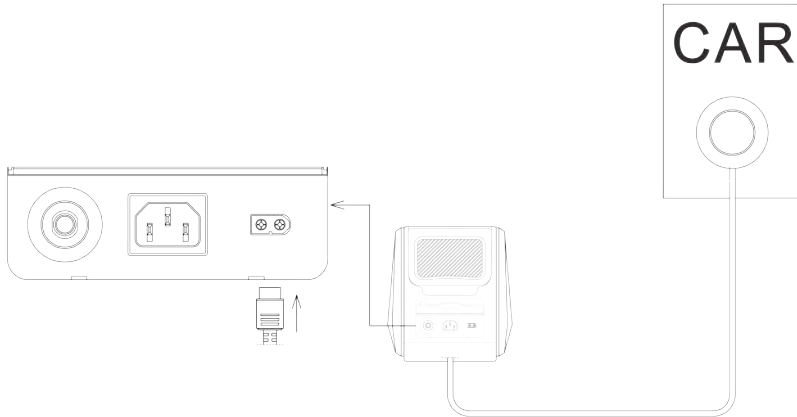


**Use the solar charging cable to connect the XT60 charging port of this product and the output port of the solar panel for solar charging. This product supports solar panels with an output voltage of 10-30V and a maximum output current of 10A. The maximum power of solar charging is 200W.**

- \* The USB-C port 2 and USB-C port 3 of this product support bi-directional input and output. Using Acenew solar panel or solar panel with similar function to connect the USB-C port 2 and USB-C port 3 can support additional 200W solar charging.
- \* When using the solar panel to charge this product, please follow the user manual specifications for connection. Before connecting the solar panel, please make sure that the output voltage specification of the solar panel is within the input specification of the product to avoid damage to the product.
- \* This product supports checking the solar charging power through Acenew App.



## 5.8 Car Charging

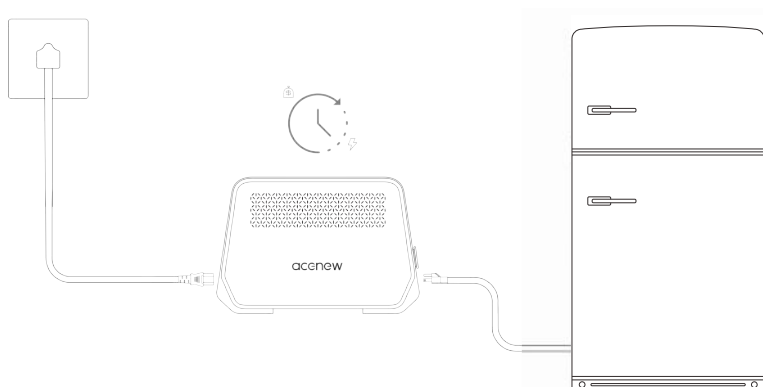


**Use the car charging cable to connect the car cigarette lighter port on the car and the XT60 charging port of this product, the device can be charged by the car charger. This product supports the maximum 200W car charging power.**

Note: In order to avoid causing the car battery to lose power and the car can not start, you should use the car charging after the car ignition is started.

\* This product supports Acenew App to check the input power of the car charging.

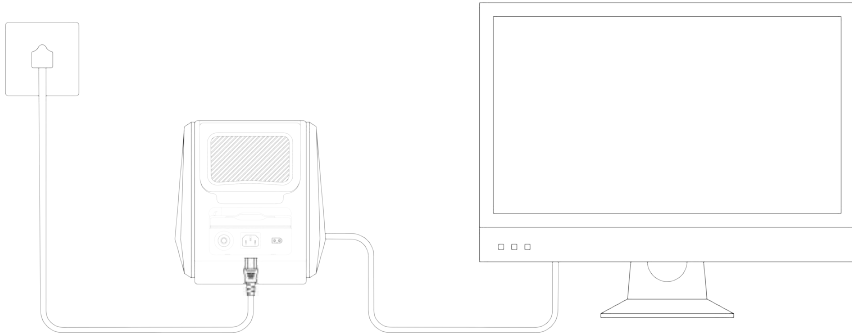
## 5.9 Use of Economic Mode



This product supports economic mode function, you can connect the grid and the AC input port of this product through the AC charging cable, and connect the appliances to the AC output port of this product, turn on the AC output switch, and then use the charge/discharge setting function in acenew App to choose to turn on economic mode. When the grid is in the trough time period, the product charges the battery and supplies power to the appliance through the bypass (at this time the AC power comes from the grid, not the battery). When the grid is in peak hours and the battery is fully charged, the product automatically switches to battery power mode (at this time the AC power comes from the battery, not the grid).

- \* This product has the economic mode function turned off by default, you can use Acenew App to turn this function on or off.
- \* When the economic mode of this product is enabled, the default is to intelligently preset the grid trough time period and grid peak time period according to the local electricity price curve, and users can customize the grid trough time period and grid peak time period.
- \* This product will automatically switch to bypass power mode when the economic mode is enabled and the battery level is low.

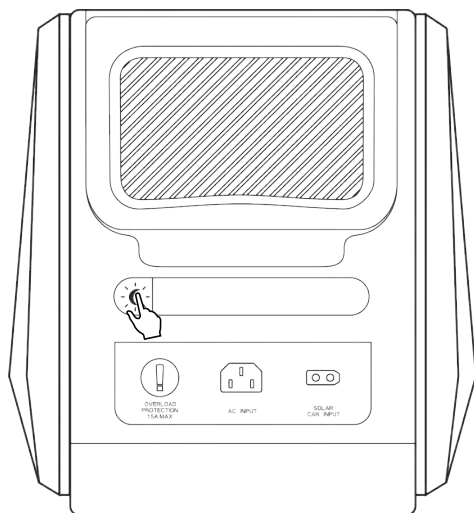
## 5.10 EPS Function



**This product supports the EPS (Emergency Power Supply), as shown in the figure above. Connect the power grid and the AC input port of this product using the AC charging cable, and connect the AC output port to the target electrical appliance (power is supplied in bypass mode, and the AC power comes from the power grid instead of the battery). When the power grid is suddenly disconnected, the Neutron 1200 can automatically switch to battery mode within 20 ms.**

- \* This product does not support 0 ms seamless switching. Please do not use it on devices with high power supply requirements.
- \* It is recommended to use it on only one device to avoid using multiple devices at the same time to trigger the overload protection of this product. If the device fails to operate normally or data is lost due to failure to follow the instructions, the company will not be responsible for the corresponding responsibility.

## 5.11 Use of the LED Light



**Press the LED light switch once: Turn on the LED light (50% brightness).**

**Press the LED light switch twice: Increase the brightness of the LED light (100% brightness).**

**Press the LED light switch three times: turn off the LED light.**

**In any mode, press and hold the LED light switch for 3 seconds, the LED light will enter "SOS" mode.**

\* This product supports adjusting the brightness and mode of the LED light through Acenew App control.

## 5.12 Acenew App



iOS App



Android App

**You can scan the QR code to download the Acenew App and connect to this product through the app to check device operation status, control the device, and perform personalized settings.**

\* When using the App for the first time to connect to a device, you can quickly connect by scanning the Mac QR code on the product label at the bottom of the machine's body.

## 6. FAQs

### Q1: What appliances can the AC output port of this product support?

The AC output port of this product is rated to support a maximum output of 1500W for most household appliances. We recommend confirming the working power of the appliance before use to ensure that the total power of all load appliances is less than the rated output power of the product.

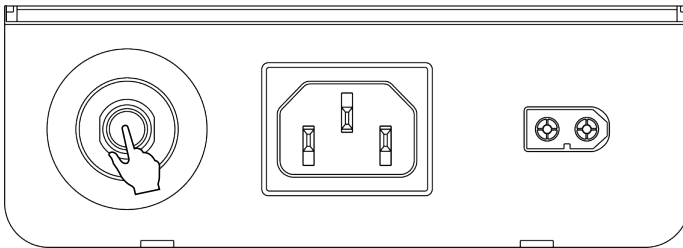
### Q2: How to restore to normal after AC output overload protection is triggered?

Since the maximum output power supported by this product is 1500 W, when the AC output port detects that the total working power of the load exceeds 1500 W, the overload protection function will be triggered (an alarm will be sent, the screen will flash with the overload icon, and the output function of the AC output port will be temporarily disabled). At this time, it is necessary to unplug the overloaded electrical appliance from the AC output port of the product, turn off the AC output switch, and then turn on the AC output switch after standing still for 10s to return to the normal state.

\* Electrical appliances must be used within the rated output power range of this product.

### Q3: What to Do If the product Cannot Be Charged?

When AC charging is unavailable, please check whether the overload protection switch is switched on. If so, press this switch to reset the function, and then charging will return to normal.



**Q4: Why does the battery run out even if it is not connected to any device?**

When the AC output switch or DC output switch is turned on, there will be some no-load power consumption even if the product is not used to charge any device. This is normal. To avoid this situation, turn off the AC output and DC output switches in a timely manner when the product is not in use. (Tips: If the indicator on the corresponding switch is off, the output has been disabled).

**Q5: Can this product be taken on an airplane?**

No, it cannot.

## 7. Important Safety Instructions

When using this product, you must take basic precautions, including:

### **Read all instructions carefully before using this product.**

- (1) To reduce the risk of injury, close monitoring is required when using this product around children.
- (2) Do not put your fingers or hands into the product.
- (3) Do not expose to rain or snow.
- (4) Using a power supply or charger not recommended or sold by the product manufacturer can result in a risk of fire or personal injury.
- (5) Do not exceed the rated output power when using this product. Overloaded output beyond the rated value will cause product damage and even a risk of fire and personal injury.
- (6) Do not use a damaged or altered product. Damaged or modified batteries may behave in unexpected ways that could result in a risk of fire, explosion, or personal injury.
- (7) Please do not use a damaged power cable or plug.
- (8) Do not disassemble this product. If you need any service or repair for this product, please contact the manufacturer for after-sales services or repair personnel with professional certification. Incorrect reassembly of the product may result in a risk of fire or electric shock.
- (9) Do not expose the product to fire or high temperature.
- (10) Solar charge times depend on weather conditions, place your solar panel where it will get as much direct sunlight as possible.
- (11) Only charge the Nuetron 1200 within a ambient temperature  $-20\sim 55^{\circ}\text{C}$  ( $-4\sim 131^{\circ}\text{F}$ ), discharge temperature is  $-30\sim 55^{\circ}\text{C}$  ( $-22\sim 131^{\circ}\text{F}$ ) and Storage temperature is  $-20\sim 35^{\circ}\text{C}$  ( $-4\sim 95^{\circ}\text{F}$ ).
- (12) The product may become hot when charging other devices. This is normal. Place the device in a well-ventilated place for charging or use, and ensure that the ventilation holes are not be covered.



## 8. Instructions Pertaining to Risk of Fire, Electric Shock, or Injury to Persons

WARNING—When using this product, basic precautions should always be followed, including the following:

- a) Read all the instructions before using the product.
- b) To reduce the risk of injury, close supervision is necessary when the product is used near children.
- c) Do not put fingers or hands into the product.
- d) Use of an attachment not recommended or sold by manufacturer may result in a risk of fire, electric shock, or injury to persons.
- e) To reduce risk of damage to the electric plug and cord, pull the plug rather than the cord when disconnecting the power station.
- f) Do not use a battery pack or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
- g) Do not operate the power station with a damaged cord or plug, or a damaged output cable.
- h) Do not disassemble the power station, take it to a qualified service person when service or repair is required. Incorrect reassembly may result in a risk of fire or electric shock.
- i) To reduce the risk of electric shock, unplug the power station from the outlet before attempting any instructed servicing.

### j) PERSONAL PRECAUTIONS

- 1) Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes.
  - 2) Wear complete eye protection and clothing protection. Avoid touching eyes while working near battery.
  - 3) If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with running cold water for at least 10 minutes and get medical attention immediately.
  - 4) NEVER smoke or allow a spark or flame in vicinity of battery or engine.
  - 5) Be extra cautious to reduce risk of dropping a metal tool onto battery. It might spark or short-circuit battery or other electrical part that may cause explosion.
- k) When charging the internal battery, work in a well ventilated area and do not restrict ventilation in any way.
  - l) Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
  - m) Do not expose a power pack to fire or excessive temperature. Exposure to fire or temperature above 130°C may cause explosion. The temperature of 130°C can be replaced by the temperature of 265°F.
  - n) Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.

## 9. Instructions for Storage and Servicing

Use and store the unit only in a clean and dry environment. DO NOT use and store in dusty and wet environment.

- It is recommended to use or store the product at 20°C-35°C, and avoid using in rain or humid environments.
- For long-term storage, discharge the battery to 30%, and then charge and discharge the battery every 3 months (that is, discharge the battery to 30%, and then recharge it to 60%).
- If the battery level is lower than 1% after use, charge it to 60% before storage. If the product is left idle for a long time when the battery is seriously insufficient, it will cause irreversible damage to the battery cell and shorten the service life of the product.
- For safety reasons, do not store the product in an environment above 45°C or below -10°C for a long time.
- Check the unit prior to every use. DO NOT use the unit if it is damaged, broken.
- If rust, peculiar odors, overheating or other abnormal circumstances are observed, stop using the unit immediately and contact the dealer or our customer service center.
- Make sure that the unit is properly secured when transporting it in a motor vehicle.
- Switch the unit off immediately if it has accidentally fallen, was dropped or was exposed to vibrations.
- DO NOT use the unit if the power cord is damaged or broken.
- Keep the unit away from children. DO NOT let children use the power supply unit. Keep this product away from pets.
- DO NOT use the unit in an area or environment with high temperature.
- Should fluid from inside of the unit come in contact with your skin or clothing, wash the affected areas with tap water.
- In a storm, unplug the power cord from the socket.
- DO NOT place the unit on its side or upside down while in use or storage.
- DO NOT use accessories for other usage.
- DO NOT move the unit if it is recharging or in use.
- DO NOT dispose the unit together with household waste.
- DO NOT place the unit close to or in a fire or expose it to heat. Keep out of direct sunlight.
- DO NOT store the unit in a bathroom or in an area exposed to rain or moisture.
- DO NOT disassemble the power station, take it to a qualified service person when service or repair is required. Incorrect reassembly may result in a risk of fire or electric shock.
- Make sure that the device you are connecting is switched off before you connect it.
- DO NOT expose a power station to fire or excessive temperature. Exposure to fire or temperature above 130°C may cause explosion.
- DO NOT place the power station on the floor, or at a height less than 457 mm (18 inches) above the floor, during use in a repair facility.

**Warning:** Do not remove the battery pack without permission, If you need to repair the battery pack, contact your local manufacturer as soon as possible.

**DANGER:** Use this product indoors in rain, snow, or other extreme weather. Do not expose the device to rain, snow or wet conditions.

# Warranty Card

Name:	Telephone:
Address:	
Purchase date:	Year    Month    Day
Purchase channel:	
Serial number:	

Date	Maintenance records

<b>QUALITY CERTIFICATE</b>	
Inspectors:	
Inspection date:	
Acenew Technology (Shenzhen) Co., Ltd.	

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