



Pecron Outdoor Portable Power Station  
Model: S1000/S1500



**Thanks for choosing Pecron outdoor portable power station**

**Please read the manual carefully before using.**

<https://www.pecron.com>

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## 1. Introduction :

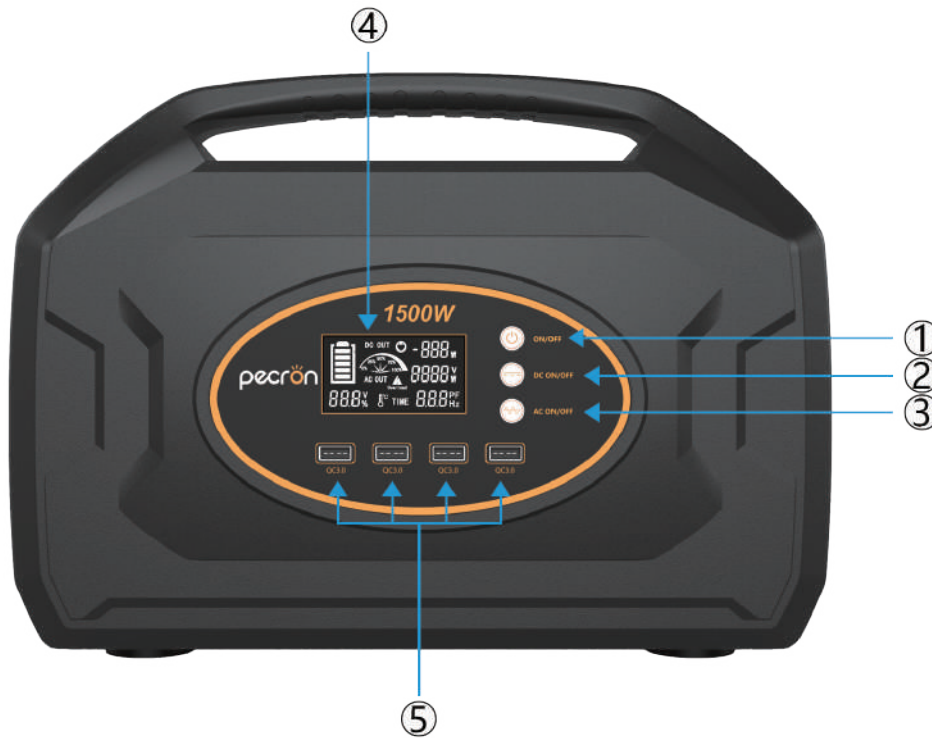
Pecron S1000/S1500 is a multi-use outdoor portable power station, it adopted three-dimensional spinel based lithium-ion battery made up of first-class EVE automotive-grade power cell guarantees it's great stability and longevity.

- ◆ Pure Sine Wave output
- ◆ DC output 12V10A、 USB\*4 (QC3.0)
- ◆ LCD Smart Display
- ◆ Super Fast Charging
- ◆ Support Three Ways Charging(AC charging, Car charging and Solar charging)

With 1,461.6Wh(1,028Wh) lithium-ion battery pack at its core and a built-in pure sine wave inverter, S1500(S1000) is capable of providing 1,500(1,000) watts power to run a wide range of appliances, such as mobile phones, refrigerator, juicer, projector, electric saw, or even your Tesla; It can be widely used in the area of mobile working, outdoor recreation, camping, rescuing, environment protection, emergency communication, power outage backup and so on.

Please read the user manual carefully before using, and keep the purchase receipt as a proof of purchase for any warranty claim.

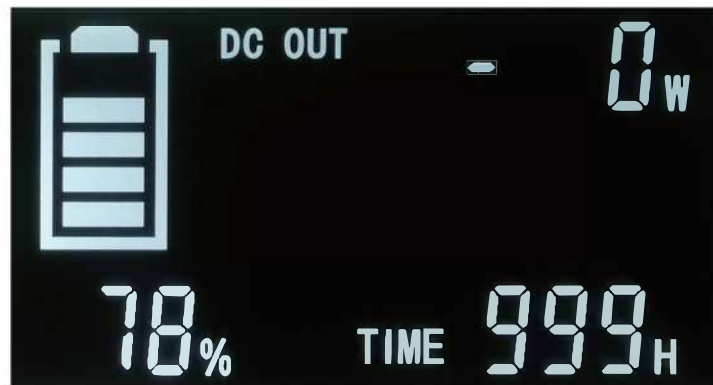
## 2. Function Instruction:



① Power Switch: Press the power switch to start the unit, the general information of the power station will be displayed within 2 seconds at 100% brightness; press the button one more time to decrease the brightness to 50%; Press and hold the button for 1 second to turn the unit off.

②DC Switch: Press and hold the DC switch for 1 second, the USB and 12V DC output ports will be activated, at the same time, the LCD screen shows the battery level, estimated discharging time(H), discharge(load) wattages, "DC OUT" symbol (shown as Picture1); Press the DC switch one more time to show the discharging voltage;

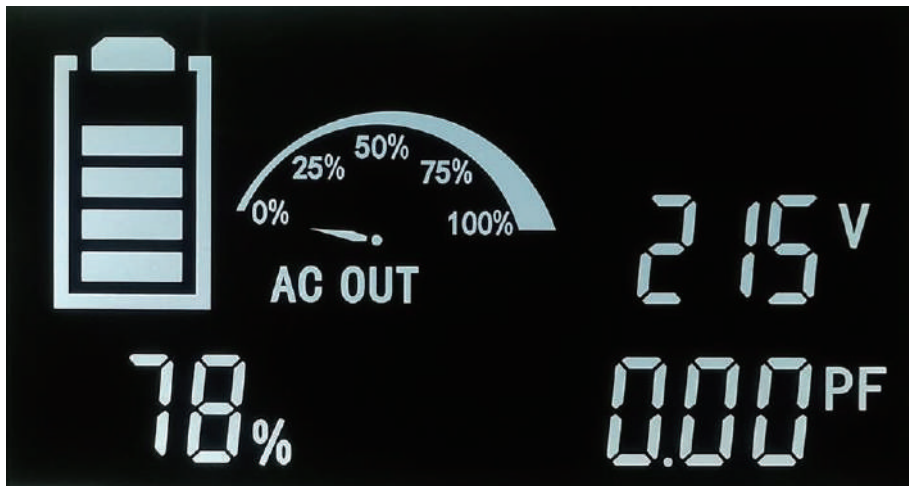
Press and hold the DC switch for 1 second to deactivate the USB and DC output.



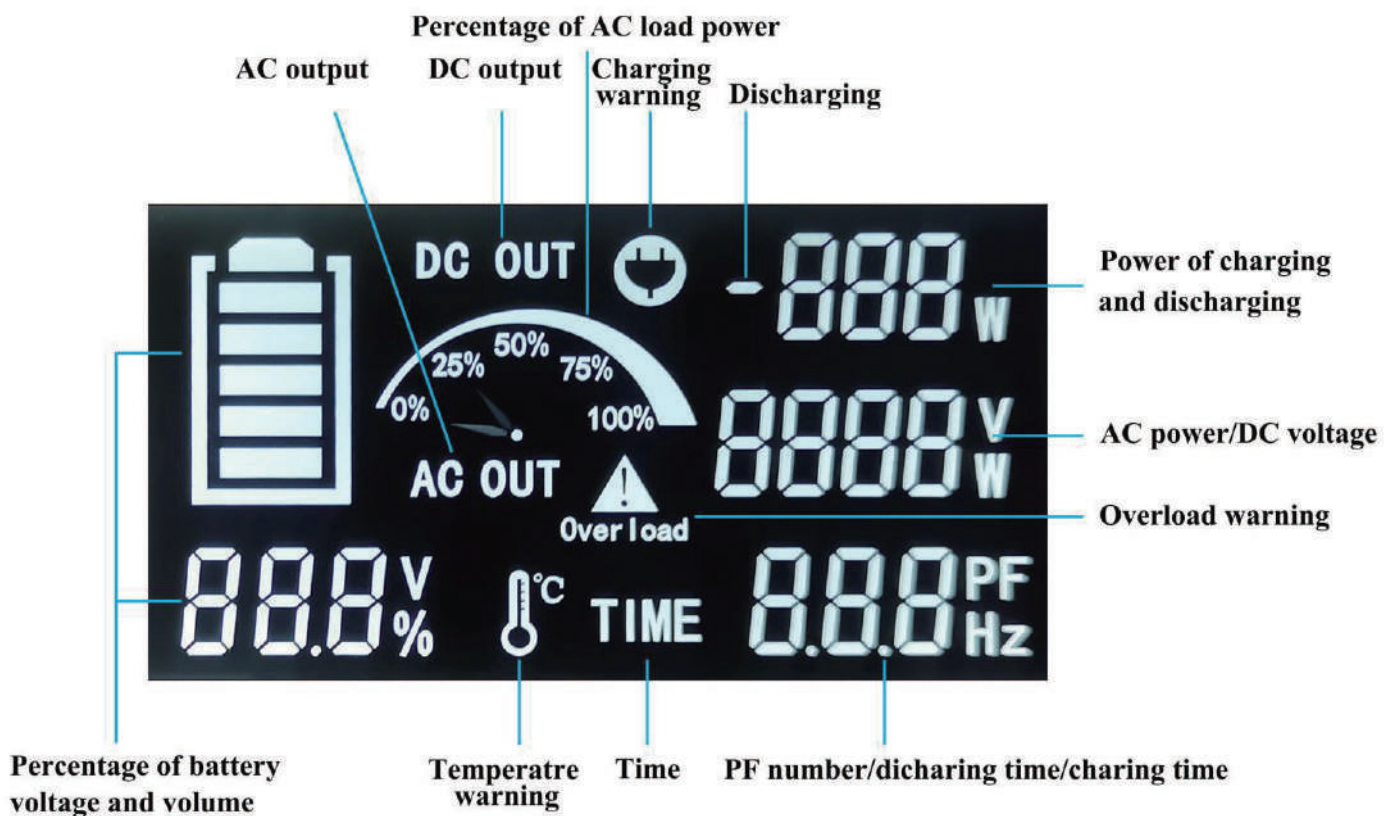
Picture 1

③AC Switch: Press and hold the AC switch for 1 second, the AC output will be activated, at the same time, the LCD screen shows battery level, AC discharge time(H), AC discharge(load) wattages, load percentage, "AC OUT" symbol; Press the AC switch once more time to show AC discharge voltage + PF value (shown as Picture 2).

Press and hold the AC switch for 1 second to turn off the the AC output function.



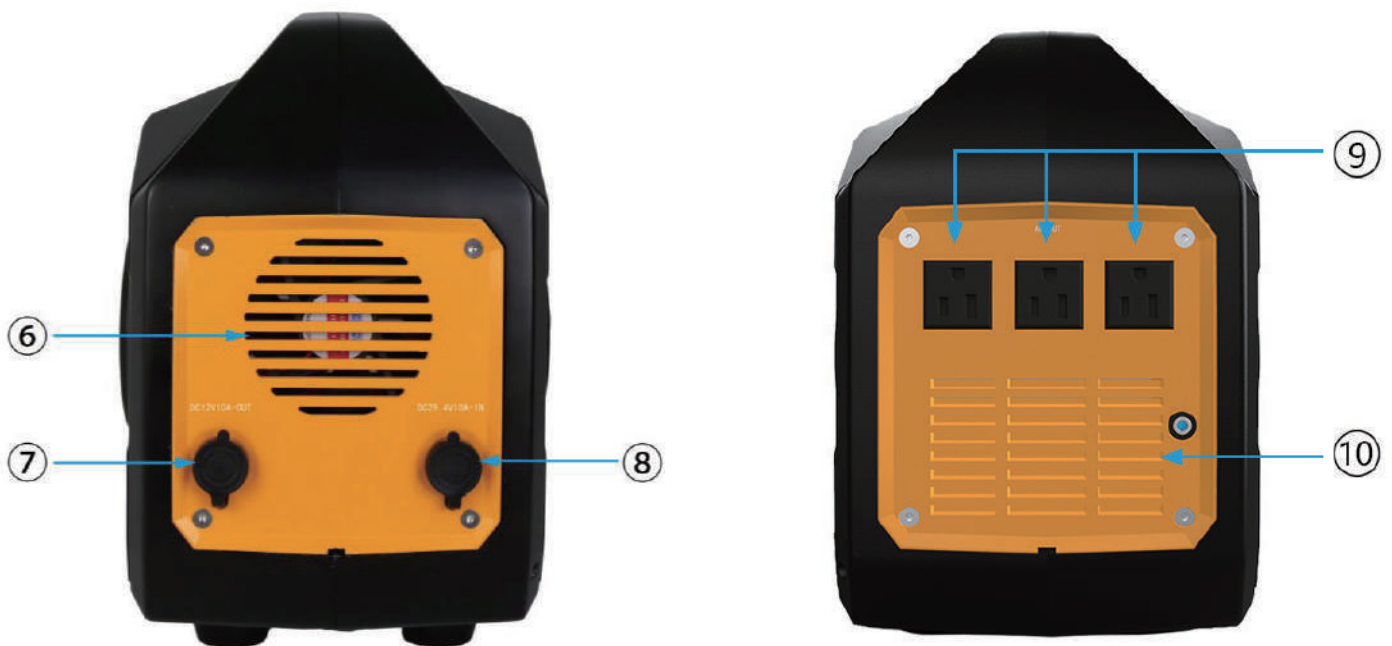
Picture 2



Picture 3

④ LCD smart display screen

⑤ USB QC3.0: Turn on the DC Switch to use the USB function



⑥ Air Vent

⑦ DC Output Port: 16MF two-prong aviation plug(1 is positive, 2 is negative), it can supply (12V 10A) power to it's connected devices when DC switch is turned on.

⑧ DC Input Port: 16MF four-prong aviation plug(1&2 are positive, 3&4 are negative), charging the through this port when the battery is running now(29.4V 10A)

⑨ AC Output Socket\*2: When AC switch turned on, it can produce up to 1500(1000) wattages power to run your appliances.

⑩ Air Vent

### 3. Product Information

NO.	Model	S1000		S1500
1	Rate Power	1000W		1500W
2	Peak Power	2000W		3000W
3	AC Output	220V/50Hz (Version)	AC110V60Hz (Version)	AC100V50Hz (Version)
4	Output Waveform	Pure sine wave		
5	DC Output	DC 12V10A USB*4 (QC3.0)		
5	Cell Type	18650-20P7S( 3.6V2.9Ah)		
6	Battery Capacity	1028Wh(25.2V40.8Ah)	1461.6Wh(25.2V58Ah)	
7	Battery Type	Lithium-ion		
9	Charging Time	5~6H(2~3H for pro version)	7~8H (3~4H for pro version)	
10	Charging Voltage And Current	DC29.4V9A Solar Panel 36V 20A( MAX )		
11	Protection Function	Over-voltage, low-voltage, over-temperature, overload, AC short circuit protection		
12	Working Temperature	0°C~45°C (Charge) -20°C~60°C (Discharge)		
13	Product Dimension	L352*W187*H260( mm )		
14	Shell Material	UL94-V0 PC+ABS		
16	Net Weight	22.4lbs(10.2kg)	25lbs(11.6kg)	



## 4. Working Conditions

NO.	Test Project	Specification	Unit	Remark
1	Working Temperature	0 ~ 45	°C	
2	Storage Temperature	-20 ~ 60	°C	
3	Humidity	45% ~ 85%	RH	
4	Cooling type	Air-cooled		Cooling $\geq$ 45°C
5	Altitude	<3000	m	
6	Battery Life	$\geq$ 5000	H	

## 5. Technical Specifications:

### 5.1-5.4 Specifications

NO .	Attributes	Specification			Unit	Remark
<b>5.1</b>	<b>AC Input-Charging</b>					
5.1.1	Rated Voltage	100 / 240			Volt	
5.1.2	Rated Frequency	50/60			Hz	
5.1.3	Input Voltage	29.4			Volt	
5.1.4	Input Current	≤10			A	
<b>5.2</b>	<b>Solar Charging</b>					
5.2.1	Load Voltage	29.4-40V			Volt	Open Circuit Voltage < 44V
5.2.2	Current	≤20			A	
<b>5.3</b>	<b>AC Output-Discharging</b>					
5.3.1	Rated Voltage	220±5% (Version)	110±5% (Version)	100±5% (Version )	Volt	
5.3.2	Rated Frequency	50±1%	60±1%	50±1%	Hz	
5.3.3	Rated Power	1000/1500			W	
5.3.4	Harmonic	< 3%				
5.3.5	Conversion	≥85%				
<b>5.4</b>	<b>DC Output</b>					
5.4.1	USB Voltage	5±5%			Volt	
5.4.2	USB Current	2.0±10%			A	
5.4.3	Aviation Connector Output Voltage	12±5%			Volt	
5.4.4	Aviation Connector Output Current	10±10%			A	

### 5.5-5.7 Protection Instructions

NO .	Attributes	Specification	Unit	Remark
<b>5.5</b>	<b>Inverter</b>			
5.5.1	Over Temperature	Inverter cooling $\geq 65^{\circ}\text{C}$	$^{\circ}\text{C}$	AC function deactivated until the inverter cool down
5.5.2	Over Load	> 1500 (1000 for S1000)	W	AC function deactivated until the total load falls to <1500W, and the unit restarted
5.5.3	AC Output Short Circuit	—	W	The unit locked until the failure appliance disconnected
NOTE	Once 5.5.2 ,5.5.3 self-protection is active, you need to restart the AC output function to use the AC ports.			
<b>5.6</b>	<b>Controller</b>			
5.6.1	USB Over Current	3	A	Output shut down
5.6.2	DC12V Output Over Current Protection	15	A	Output shut down
5.6.3	Solar charging protection	$>29.45\pm 0.25$	V	Stop charging when voltage over this range
<b>5.7</b>	<b>Battery Cell</b>			
5.7.1	Single-cell overcharge (voltage) protection	4.2 V	V	Stop charging and keep discharging
5.7.2	Single-cell over-discharge (voltage) protection	2.8V	V	Stop discharging
5.7.3	Battery pack over-temperature protection	$\geq 65$	$^{\circ}\text{C}$	Shut down input and output
5.7.4	Short circuit protection	Yes		Shut down output

5.7.5	Battery pack over current protection	120-180	A	Shut down output
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## 6. Operating Instructions And Precautions:

To ensure safety during the transportation, the power station is in low battery capacity status when you receive it, please charge the unit to full before using.

Please use Pecron original charger for, or 36V 200~300W solar panel for faster charging experience. Please disconnect the charger after the unit is fully charged.

Using third-party charger or adapter could result in product damage or even safety hazards.

### 6.1 Prior To Using

Precautions:

- (1) Please make sure the input voltage and frequency fits into the unit
- (2) Please make sure the appliance consumption power is below its rated power. It is suggested not to run devices at or over its 80% loading capacity for prolonged time

\* Fail to take the precautions could result in product failure.

\* You can get larger capacity and wattages power stations from [www.pecron.com](http://www.pecron.com) if S series does not meet your needs.

**Remark:** Some appliances require extra power to start up; In general, the starting power for inductive load equipments (e.g. motor, compressor, fluorescent lamps) is 3~8 times higher than its rated power. The BMS will activate the over-load protection and shut down all outputs if the total output exceeds its loading capacity.

- (3) The BMS will be activated and shut down the outputs when the following situations happen

- ① When the total loading power exceeds the power station rated power.
- ② Short circuit in AC output
- ③ The temperature of the battery pack is too high
- ④ The voltage of the battery pack is too low

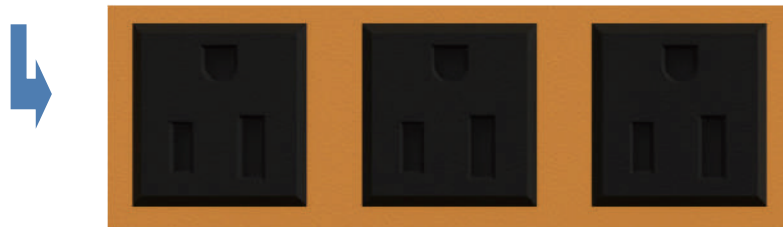
## 6.2 How To Use AC:

Step 1: Press "ON/OFF" to start the power station; Press and hold "AC ON/OFF" for 1 second to activate AC output function



Step 2: Check your device working wattage and make sure it does not exceed the rated power of the unit(1500W).

Step 3: Plug your device into the AC outlets before turn it on.



Step 4: Press the "ON/OFF" button to shut down the unit after finishing using.

Step 5: Please charge the power station on time when the battery is running low.

### 6.3 How To Charge:

You can charge your Pecron through the following methods:

(1) Use Pecron official charger to charge your Pecron from a standard wall outlet.



(2) Use 29.4-40V solar panel to charge: S1000/S1500 is universally compatible with third party (MC4) solar panels. For any 18V panels, you will need to get two of them in series connection( $18V * 2 = 36V$ ) to charge S1500, this including Pecron Aurora100

(3) Use car adapter to charge: You can use the 4 in 1 adapter to charge your Pecron from your vehicle cigarette port. Make sure to start your vehicle before charging.

#### Notes:

① S series standard power adapter can be used for Pecron S series only, please don't use it to charge other device.

② When charging your Pecron through PV input(solar or vehicle), make sure to connect the outlet with correct positive and negative pins.

③ Please make sure to charge your Pecron at least once for every six months if it is left unused for a prolonged time.

## 6.4 How To Use 12V DC and USB ports:



=> Two-prong aviation DC outlet: Press and hold the DC switch for 1 second to activate/deactivate the DC output function, this outlet can produce up to 12V, 10A(120W) power to run your DC devices



=> 4 x USB QC3.0: Activate the USB function by pressing and holding the DC switch for 1 second(Same as the DC outlet).

## 7. Product Testing:

### 7.1 Conditional Testing:

No.	Test Project	Test Conditions	Check Item
1	High-altitude Test	1. Pressure $\leq$ 11.6Kpa, Temp. =20 $\pm$ 5 $^{\circ}$ C	1.Overall performance 2.Battery
2	Temperature Test	1. Temperature between 40 $\pm$ 2 and 75 $\pm$ 2 $^{\circ}$ C	1.Overall performance 2.Battery

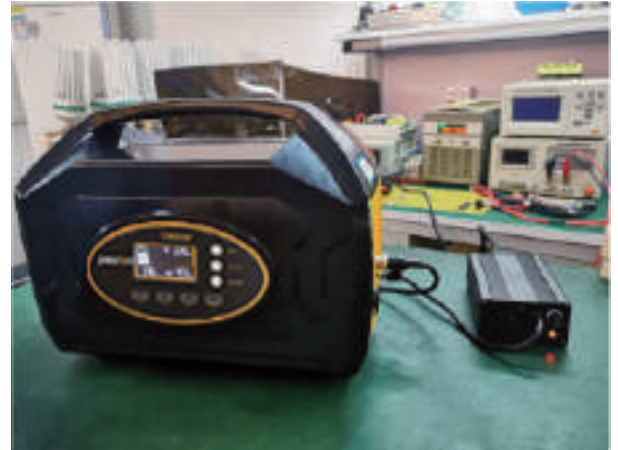
<p>3</p>	<p>Vibration Test</p>	<p><b>Amplitude: 1.52mm</b></p> <p>Frequency range: 5Hz ~ 10Hz</p> <p>Speed: About 10 m<sup>2</sup>/ S3,</p> <p>Frequency range: 0Hz ~ 200Hz</p> <p>Speed: About 3 m<sup>2</sup>/ S3,</p> <p>Frequency range: 200Hz ~ 500Hz</p> <p>Speed: About 1 m<sup>2</sup>/ S3,</p> <p>The duration of each vibration test is 20 minutes. It vibrates from the directions of the random X, Y and Z axes.</p> <p>LCD reads correctly; No loosen components or abnormal noise detected; No damage to either the inside or outside of the unit;</p>	<p>1.Overall performance 2.Battery 3.LCD display</p>
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## 7.2 Functional Testing



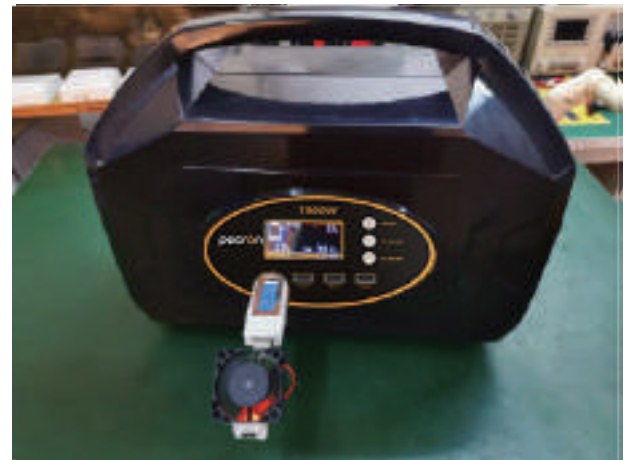
7.2.1 Discharging test with load



7.2.3 Charging test



7.2.3 12V DC output test



7.2.4 USB output test

## 8. Trouble Shooting

Issues	Potential Causes	Solutions
LCD display is unresponsive when pressing any switches	Interior battery self-protection	Charge the unit
No AC output even AC function is activated	Over heat	Disconnect the load and wait until it cooling down
	Over load	Reduce the load
	Low voltage	Charge the unit
USB ports not functional	DC output function is inactive	Press and hold the DC switch for 1 second
The battery drains too fast	AC switch is on when using DC ports	Turn off AC switch when there is no AC load
Can't be (fully) charged through solar panel	1. Incompatible solar panel 2. Insufficient Sunlight	Choose other solar panels Ensure that the charging voltage is between 29.4-40V.

## 9. Package List

NO .	Package Content	Quantity
1	S1500 Power Station	1
2	Power Adapter	1
3	Power Cord	1
4	DC Output 4 in 1 Cable	1
5	Solar Cable + accessory bag	1
6	Car charger (optional)	1
7	User Manual And Warranty Card	1