



# Portable Power Pack

## Operation Manual

### FPS500/FPS1000



Thanks for your selection of our portable power pack.  
Please read the manual carefully and save it for future  
reference to ensure that you could use this product properly  
and safely.

BUILDER SAS  
32, rue Aristide Bergès - ZI 31270 Cugnaux – France  
MADE IN PRC



# CONTENTS

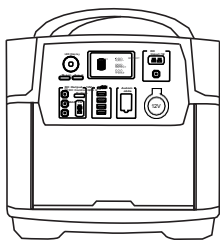
I	Safety Disclaimer.....	1
II	Main Parts and Accessories.....	1
III	Function Diagram.....	2
IV	Use Instructions.....	4
V	Operation Guide.....	4
VI	Parameters.....	8
VII	Use Environment.....	9
VIII	Precautions.....	9
IX	Warranty Description.....	10
X	Troubleshooting.....	11

This product is a safe, portable, stable and eco - friendly power storage system. Which can be used in camp, boat trip, rescue etc., and provide you a portable and sustainable green power solution. Also, multiple AC outlets are included which can charge fan, projector, refrigerator, computer etc., and 12V DC outlet for LED like usage. This unit can be charged by accessory AC charger or solar panel.

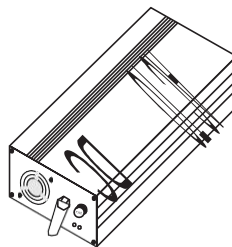
## I Safety Disclaimer

Users should read this manual carefully before using and maintaining. Improper installation or misuse may cause danger to the user or damage to this product.

## II Main Parts and Accessories



Main Part 1:  
Product\*1PCS

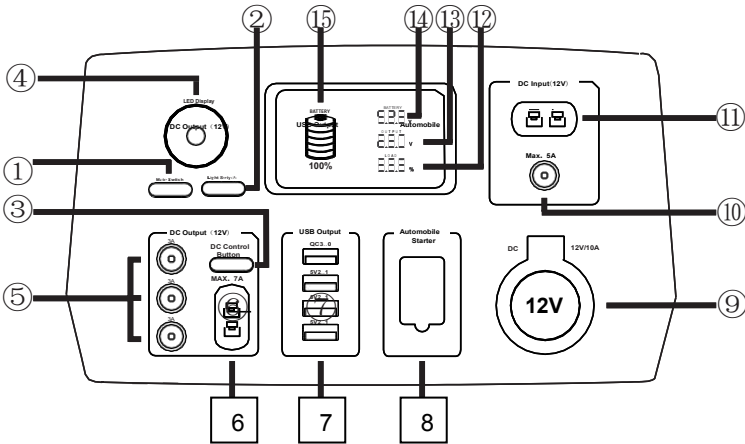


Accessory 1:  
AC Charger\*1PCS

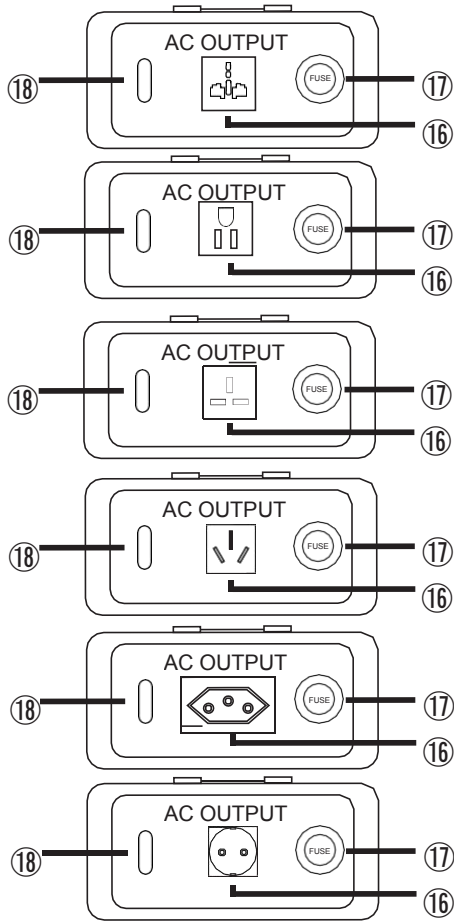


Accessory 2:  
AC Charging  
Line\*1PCS

### III Function Diagram



- 1) ① **Main Switch:** Controls the system to turn on or off all output functions of the system.
- 2) ② **Light Switch:** Control the LED light.
- 3) ③ **DC Switch:** Control DC 12V 3A and DC 7A output connections.
- 4) ④ **Light:** LED 3W high-beam Light.
- 5) ⑤ **DC Audio Outlet:** DC 12V 3A outlet \* 3pcs.
- 6) ⑥ **DC Anderson Outlet:** DC 12V 7A outlet \*1pcs.
- 7) ⑦ **USB Outlet:** 1pcs QC3.0 plus 3pcs USB2.1A terminal, apply for fast charging and can charge lpad and cell phone in the same time.
- 8) ⑧ **Automobile Starter:** For 12V small car starting.
- 9) ⑨ **12V DC Outlet Socket:**For 12V DC cigarette type connected load.
- 10) ⑩ **DC Charging Input Connection:** DC connection socket for this battery charging.
- 11) ⑪ **DC Anderson Input Charging Connection:** DC connection socket for this battery charging.
- 12) ⑫ **Output Load Voltage Percentage:** Displays percentage of output voltage, range is from 0% to 100%.
- 13) ⑬ **Output Voltage:** Display output voltage.
- 14) ⑭ **Battery Voltage:** Displays current battery voltage value.
- 15) ⑮ **Battery Capacity:** Displays battery capacity from 0% to 100%.



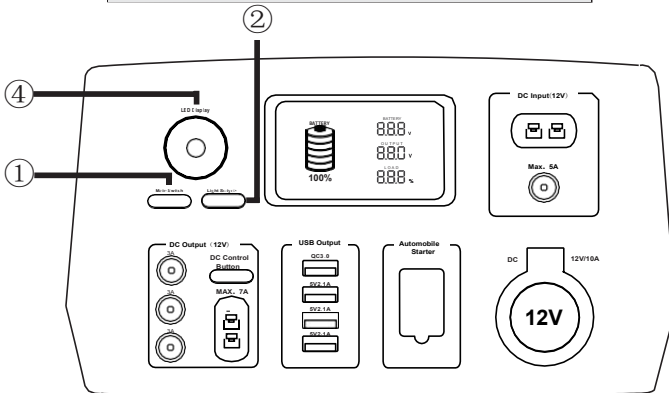
Note: Each country outlets` requirement is different, according to your own needs to select the corresponding socket diagram.

- 16) ⑩ **AC Output Socket:** Output is marketing value AC100V -120V or AC 220V-240V.
- 17) ⑪ **Fuse:** Fuse will be disconnected when the load power exceeds the capacity of the product.
- 18) ⑫ **AC Output Switch:** Control AC output function to on or off.

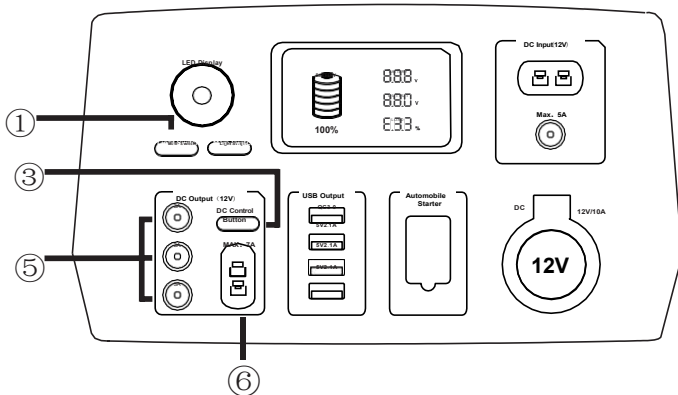
## IV Use Instructions

- 1) Theory of energy storage system: System converts energy from battery to electric energy for DC or AC use.
- 2) Theory of DC output: System converts the energy in the battery into electric energy for DC use.
- 3) Theory of AC output: System converts the energy in the battery into electric energy for AC use.
- 4) Theory of DC input: The energy storage system charges the battery with the energy from the solar charging panel or other output of DC charger.
- 5) The system uses lithium battery, for safety, in leaving the factory, the battery has 30% to 50% of capacity. Before first use, it is recommended filling up with power after full discharge.
- 6) When the battery capacity is shown to be 20%, the system is likely to be cut off. It is recommended to stop using and recharge before the battery reused.
- 7) When the battery is 20%, normally it takes 4-6 hours to fill the battery under normal charging conditions.
- 8) Non-manufacturer-equipped charging wires and chargers may cause battery failure or damage.

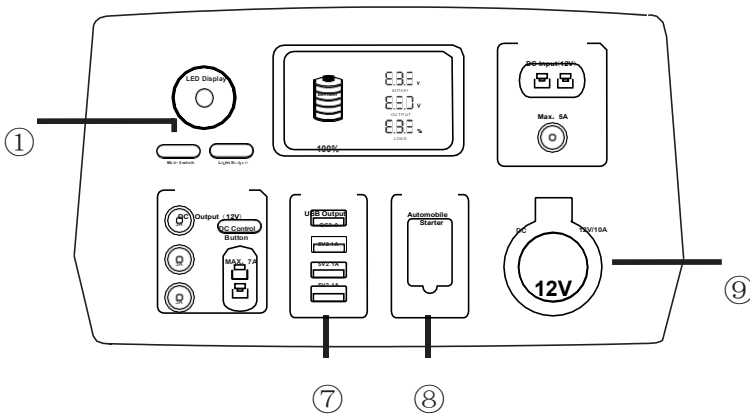
## V Operation Guide



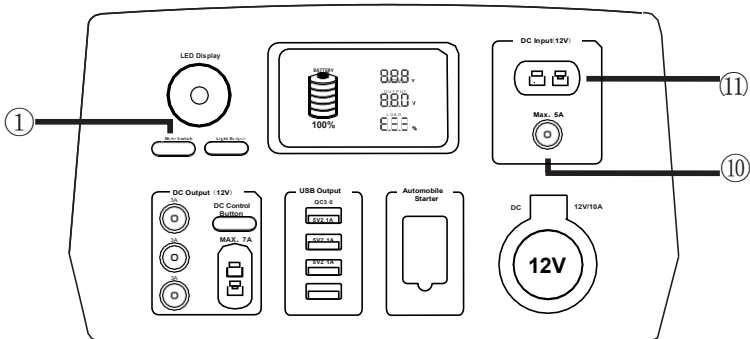
When need to start function ④ light, should press function ① main switch in turn, then press function ② light switch. When function ① main switch needs to be kept on, the function ④ light can be controlled separately by function ② light switch.



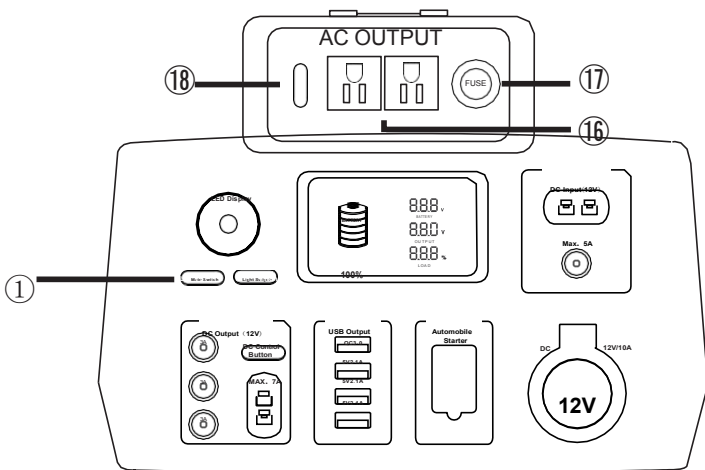
When need to start function ⑤ and ⑥ DC outlets, should press ① main switch in turn, then press ③ DC switch. If function ① main switch needs to be kept on, The ⑤ and ⑥ DC outlet can be controlled separately by function ③ DC switch. Function ⑤ and ⑥ DC outlet have over-load protection, which means there is no output when the load is overloaded.



When need to start function ⑦, ⑧ and ⑨ DC outlets, should press ① main switch in turn. Function ⑨ has over-load protection, which means there is no output when the load is overloaded.



When need to start function ⑪ and ⑩ input, press ① main switch in turn then plug the device directly into the battery for charging.

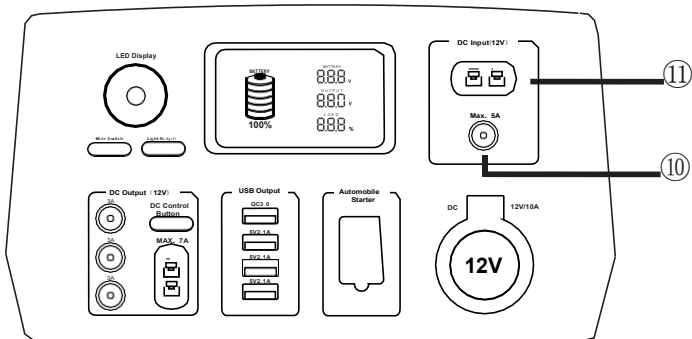


When need to start function ⑬ AC output socket, press ① main switch in turn, then press switch ⑱ to start AC output.

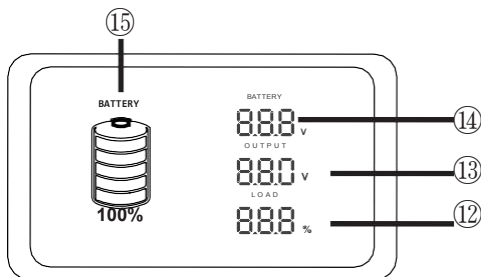
When function ① main switch needs to be kept on, the function ⑬ AC output can be controlled separately by function ⑱ switch.

When function ⑬ load exceed the system capacity, function ⑱ fuses will be disconnected. And need turn the fuse open to replace.





When the power of the battery is low and need to be charged, should be connected ⑪ and ⑩ input. This battery is equipped with charger and charging line to ⑪ connection (see Accessory 1 and Accessory 2 for details). When the battery is completely power off, the charging time is 4-6 hours.



When battery is using for output, function ⑮ will display the battery capacity is decreasing as percentage.

When the battery is charging, function ⑮ will display the battery capacity is increasing as percentage.

When using for AC load, function ⑫ will be changed with load power value.

When using for AC load, function ⑬ will be changed with load power and display output voltage.

When the system is started, function ⑭ will be changed as battery's voltage.

The digital display has deviation, for this battery system, output voltage is  $\pm 5\%$ , load power is  $\pm 10\%$  and the battery voltage is  $\pm 0.2V$ .

## VI Parameters

Model	FPS500	FPS1000
Parameter	Rated Power: 500W	Rated Power: 1000W
	Peak Power: 1000W	Peak Power: 2000W
	Output Voltage: AC230±10V	Output Voltage: AC230±10V
	Output Frequency : 50Hz	Output Frequency : 50Hz
	THD<3%, Pure Sine Wave	THD<3%, Pure Sine Wave
	AC Energy Conversion Efficiency> 85%	AC Energy Conversion Efficiency> 85%
	Dc output : 5-12V/1-10A	Dc output : 5-12V/1-10A
	Battery Capacity:490W h/4 Series 13 Parallels.: 490Wh/4	Battery Capacity:980W h/4 Series 26 Parallels.: 980Wh/4
	Operate Temp.: -10°C-55°C	Operate Temp.: -10°C-55°C
	Product Size: 280mm*175mm *290mm	Product Size: 320mm*200mm *325mm
	Weight: 7.kg	Weight: 13.0kg

## VII Use Environment

For safe use, better performance, and longer use life of the system, it is recommended that the battery to be operated in the following environments:

- 1) the temperature is at 0°C to 60°C. It is not recommended for long-term exposure in high temperature.
- 2) The system is clean and well ventilated. Keep away from other objects at least 10 cm, do not place in the airtight zone for use.
- 3) The system uses IP65 protection. Please make sure it is away from the water
- 4) It is strictly prohibited to operate at temperatures above 70°C, which may cause product failure or damage.
- 5) Avoid contacting with children.

## VIII Precautions

- 1) Do not use, if there is any deformation or damage of the product.
- 2) Do not expose the unit to high-corrosive, high-dust, high-temperature or high-humidity environment.
- 3) No professional electrical personnel should not disassemble this unit, because built-in battery is electrocuted.
- 4) If the system is not in use, charging the system at least once per month to ensure the use life.
- 5) Do not remove the parts of unit, which may cause failure or damage to the product.
- 6) Protects unit from strong vibrations, falls, and collisions. Do not invert the unit.
- 7) Any unauthorized changes to the system may result in an incident.
- 8) Use a CO<sub>2</sub> or dust fire extinguisher and cut off power when the system generates an open fire.
- 9) Do not connect function ⑩ and ⑪ to any unauthorized DC input devices, which may cause damage to the product.
- 10) The product has possibility of damage when is dropped, should be placed in the horizontal seat and not easy to fall.
- 11) Do not touch outlet socket inside metal parts or short the circuit intentionally.
- 12) This product could generate spark when plug and unplug in input status. Please do not use in the environment containing flammable and explosive gases.

- 13) The product should be away from environment which is above 70°C or has open fire, otherwise there is a possibility of damage.
- 14) The system could produce high temperature when used and should be away from materials that may be affected by high temperature.
- 13) When start-up the unit, it should be away from flammable and explosive items.
- 14) This equipment is not suitable for use in locations where children are likely to be present.

## IX Warranty

We guarantee this product for 2 full years.  
 The warranty period for this item starts on the day of purchase. You can prove the date of purchase by sending us the original receipt.  
 We insure over the entire warranty period:

- Free repair of possible malfunctions.
- Free replacement of damaged parts.
- Including the free service of our specialized personnel (i.e. free assembly by our technicians)

Provided that the damage is not due to improper use of the device.


To help you with your product, we invite you to use this link or call us on +33 (0)9 70 75 30 30:

<https://services.swap-europe.com/contact>

You must create a "ticket" via their platform:

- Register or create your account
- Indicate the reference of the tool
- Choose the subject of your request
- Explain your problem
- Attach these files: Invoice or receipt, identification plate photo (serial number), photo of the part you need (eg broken transformer plug pins).

## X Troubleshooting

 Caution, do not repair the system by yourself, wrong repair will cause electric shock or fire.

Fault	Analysis
Digital screen has no display, and outlets have no output.	Please confirm if the battery has no power and charging the battery by connecting to charger.

Fault	Analysis
Battery capacity is enough but there are 5 alarm noises when loaded.	This product has overheat protection once the temperature is above 85° C, please check the ambient temperature or if any blocked in vent.
Battery is still has capacity, but there are 3 alarm noises and has no output when loaded.	This product has low voltage protection, the battery has no enough capacity to load this device. Please change device or charging this product.
LED light is keeping winking.	This product is in overheat protection because of ambient temperature. Please shut this product off and restart after 10 minutes.
Battery is still has capacity, but there are keeping noises and has no output when loaded.	This product has overload protection, the loaded power is too high, please change other product which has higher rated power.
Battery is still has capacity, but there are 2 alarm noises when the device is running.	This product has low voltage protection, the battery will has no enough capacity to load this device. Please charging this product immediately.

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No.	Fault	Cause	Description	Solution
1	Can not turn the product on	Low voltage protection	Run out of power	Charging
		Load malfunction	Load short circuit	Disconnect the load
		Damage of the product	/	Contact the service
2	Can not charging	Over charging current protection	Charger does not match	Choose correct charger
		Can not run properly	Connection wire abnormal	Change charger wire
			Power supply abnormal	Confirm the stability of voltage
Damage of the charger	/	Replace the charger		
3	Has no DC output	Low voltage protection	Run out power	Charging
		Over current protection	High device power	Reduce load
		Over heat protection	High temperature	Change the use environment and check vents
		Bad load quality	Bad wire harness quality cause voltage low	Change wire harness with better quality
		Damage of the product	/	Replace outlet connection or contact service
4	Has no AC output	Low voltage protection	Run out power	Charging
		Over current protection	High device power	Reduce or change load
		Over heat protection	High temperature	Change the use environment and check vents
		Short circuit protection	Load malfunction	Change load
		Damage of the product	/	Contact service

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In the following cases, please contact the manufacturer's maintenance center directly:

- 1) A harsh sound is heard in the operation.
- 2) A foul smell in operation.
- 3) Switches fail to function or control the system.
- 4) AC outlets have no output.

This product can charge or load below device, please choose corresponding product model for load power.



LED Light



Cell Phone



Drone



Laptop Computer



Camera



Refrigerator



TV Set



Tablet PC



Electric Fan



Electric Drill



Game player



Desktop Computer