ALLPOWERS AP-SS-007 Portable Solar Generator User Manual

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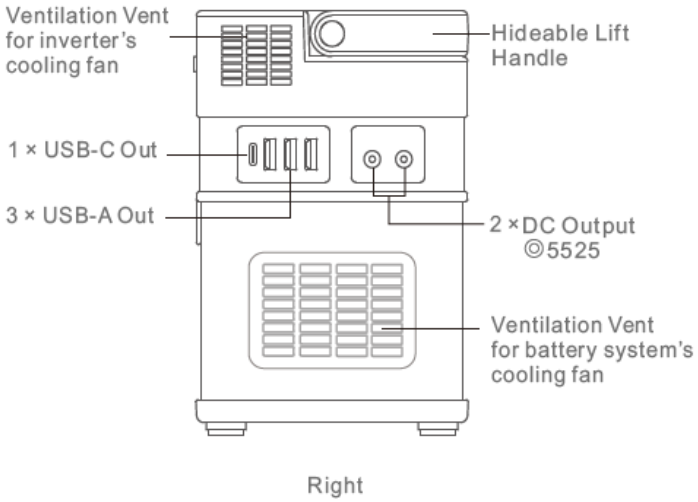
ALLPOWERS AP-SS-007 Portable Solar Generator

Congratulation on your solar generator purchase, a plug-and-play backup power integrates with solar regulating, storable energy system and cloud-based parental controls (Bluetooth app allows you to monitor solar charging at your figure-tips). With 606 watt-hours of power, you can keep your laptops, lights, AC/DC appliances running longer. Welcome to the solar life.

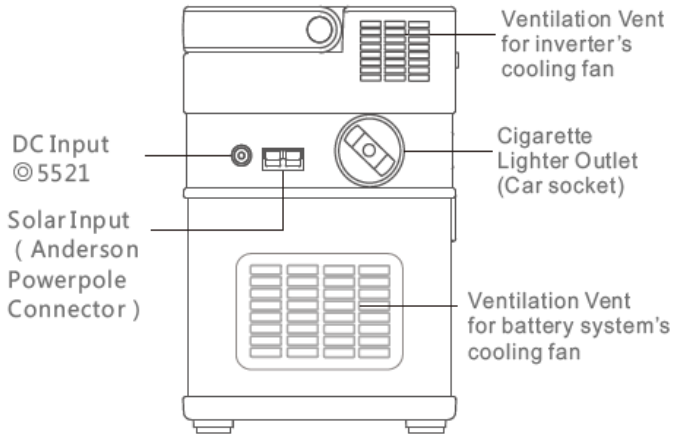
Precautions before operating

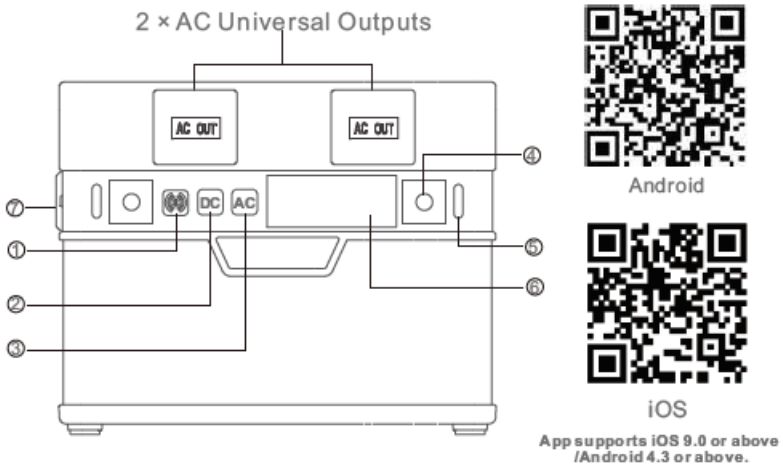
1. First, you need to ensure the power level of this generator is not too low before take it out. It is capable of charging and discharging at the same time, but solar charging is affected a lot by weather.
2. Lion-batteries cycle life can extend a lot with proper handling and usage. The most important note: You need to use it at room temperature: -10 ~ +40(℃)/14~104(℉) Do make sure to avoid damp environments and do not store outside.
3. Be sure the rated running power of your device ≤500W,and the peak power <1000W. In some cases, the instantaneous power of particular appliances are 3 times higher than their rated running power.
4. It is normal for this unit to become warmer during charging/discharging. Please use it in a cool and well-ventilated place. (Keep it clear from naked flames, sparks or conductive materials when charging the battery).
5. Voltage and frequency from AC source might vary from country to country (US/JP 110V 60Hz or EU/UK 220V 50Hz). Please follow the local regulations to chose the correct version before using.

Get To Know Your Gear



Right





1. Power Button: short press to power it ON/OFF and check the remaining battery. When it is ON, press 3 second until you see “ ” icon on LCD, you will enter/exit Bluetooth Mode, scan OR code to download our APP and do the registration, you can communicate it with your Phone via Bluetooth from now on.
2. Master for DC Outputs (USB, Type-C, 12V-DC5525) Click on DC button to turn on/off the DC output and you will see both USB and DC icons light up on LCD.
3. Master for AC OutputsTo turn on/off the AC outlets, we need to press and hold the pressing for 3-5 seconds until you find the AC icon appears. This button is designed to be more difficult to operate to prevent unintended

operation. (When AC mode is switched on, a cooling fan will run for a second in response to the self-testing ahead of the AC mode. For some countries, you may need to switch between 50/60Hz on APP after the AC

4. Based-camp LED x 2
5. Switch for LED Lamps (Right and Left)
6. Real-Time LCD Display (see LCD Display section for more)
7. 12V Car Outlet: it is always alive, no master button

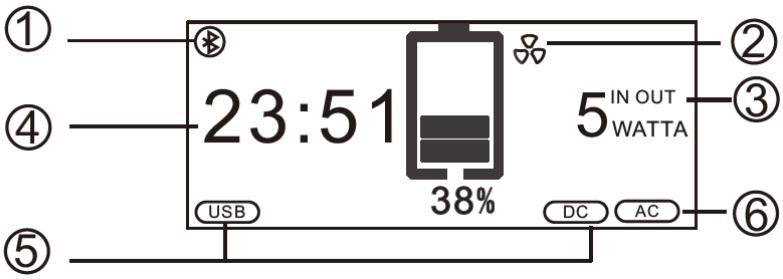
APP

It turns green when Bluetooth is successfully connected.

- Turn on Buletooth on your phone and make sure Location Services is on.
- Short press to light up the LCD then press&hold the pressing to enter Bluetooth mode.
- Click on Top-right Phone icon from APP and select “ALLPOWERS S500” from the pairing list.

There are battery tests before batteries come off the product line, each individual battery will be charged and discharged at certain C-Rates for 3-5 times, so you may find it has gone through several cycles on its arrival. Besides, our battery still can hold 80% of its original capacity after 500 cycles.

Real-time LCD Displays

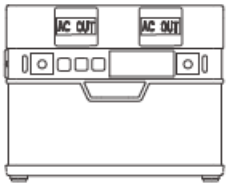


1. Bluetooth Icon: in normal use, the effective range for Bluetooth is 5-10M, but the surroundings indoors can vary

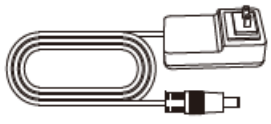
a lot as obstacles like a concrete wall will attenuate the signal and the effective range may be drastically reduced. We suggest to try it outdoor, in an open field.

2. Cooling fan: it'll start when the temperature of system go high and turn off once the system cool down.
3. In/Out Power Balance
4. Time to empty(full) battery: 23:51=23 hours 51 minutes, the calculation is based on the current in/out power balance.
5. USB/DC12V output Icon: USB and DC icons are active once DC output is switched on and if DC output is overloaded, the DC icon will be flashing as warning.
6. AC Output Icon: AC icon shows up on LCD when AC mode is on. If overloaded, the AC icon will begin to blink for warning.

What's included

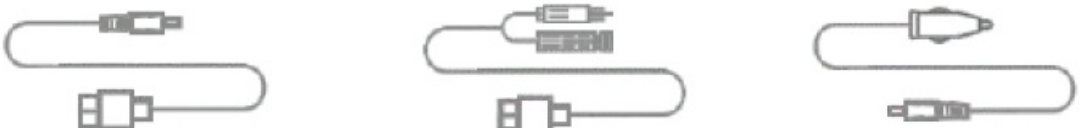


Generator



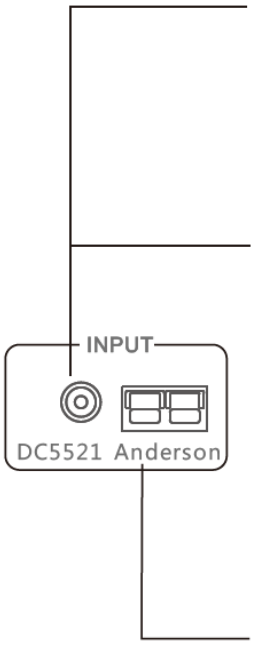
AC Charge Cord

Optional



They can be purchased from our authorized online stores or email us for help.

Charging your Solar Generator



Charging from Wall Socket:
Do use the included AC wall adapter, another extra one might shorten its service life.Or charging with a PD charger from USB-C port on the other side,it supports 2-Way PD charging,up to 60W at maximum.

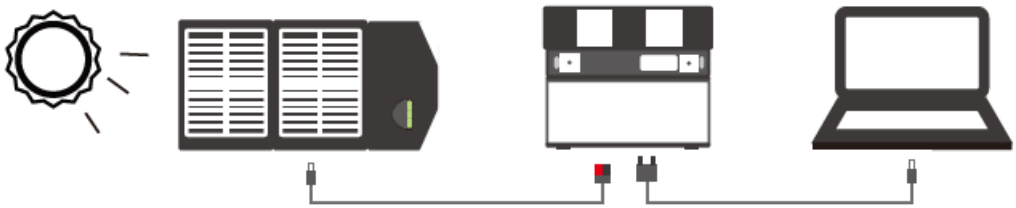
Charging from your Car is possible :
In case of a battery drain that leads to a starting problem, we suggest only use this charging method when driving, 12V/24V batteries are suitable for charging. This is not meant for vehicles that sit a lot without daily driving as batteries may easily drop below 12V, make sure your battery goes above 12.7V at least before charging. (Car charging cable not included.)

Charging from Solar(MPPT Regulating)
Charging from ALLPOWERS's fold-able solar charger/ regular 18V solar modules 100W, use MC4/DC5525 to Anderson cable.Different solar panels require different adapter to built connection, solar charging cable is not included.

Fully Charged Reference Time
(Only for information, take practicality as standard

Charging Ways	Estimated Charging Time
AC Wall Charger(100W IN)	About 5-6 hours
Car Port (30W-50W IN)	About 10-15 hours
100W Solar Panel Pack	About 8 hours
200W Solar Panel Pack	About 8 hours

Common variables that affect the performance of solar charging:



Trip: You can shorten the charging time by turning off the laptop.

The ideal time of day
Panels operate with high efficiency when the sun is most direct-typically around mid-day.

Sunlight and its angle
The brighter the sun is shining, and the clearer the day is, the better the panels will work.
A south facing panel angle at 30-60 degrees from a flat surface will harvest the solar energy that is most possible.

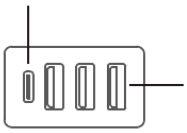
Avoid any possible shelter
Make sure your panels are free of shade, even minor or partial shading reduces yields. Additionally, any dirt accumulated might decrease the wattage over time, so periodically cleaning the panel is recommended.

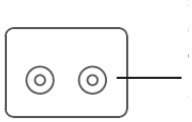
Time of year

The amount of daylight changes from season to season. But for temporary solar charging, it is essential to know that cold weather will not negatively affect the performance of the panel's as they run on light, not heat.

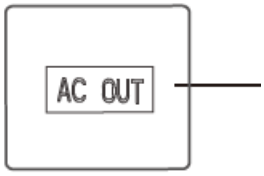
Using Your Solar Generator to Power Devices
1 x USB-C: for smartphones, mini laptops equipped with PD fast charging standard, two way PD in/out up to 60W

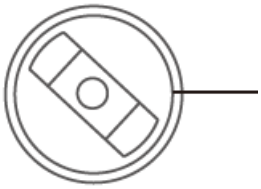
per hours.





- 3 x USB-A: for smart phones, portable banks,small USB fans, other USB-Powered devices.
- 2 x DC: for LED lamps, or any other devices required no more than 12V working voltage. (DC 5.5×2.5 mm socket, single port supply no more than 12V5A.)





- 2 x AC universal out: for AC appliances, laptops (Be sure your device’s rated running power ≤ 500W, and the initial starting wattage <1000W).
- AC sockets are built with short-circuit protection, but they also should always be protected to avoid moisture of any kind.
- Car Socket: Car On-board Firdges, 12V appliances, etc.
- Car socket is built with short-circuit protection, but they should be protected with the rubber plug when not in use.

Check compatibility

Before the operating, please check the voltage, including the starting & running wattage of your load devices. If overloaded, it will disable AC outputting other than DC ports, by the advanced built-in system control circuit module. (Please re-plug in another lower AC device and restart it at 60-second intervals.)

Make sure master is switched on.

For safety reasons, all USB, AC ports and wireless charging are activated accordingly by a master power button. You can see the total output watts measurement on the LCD. (Note: the 12V DC car port is always alive, no master button needed).

Turn off master again to stop outing

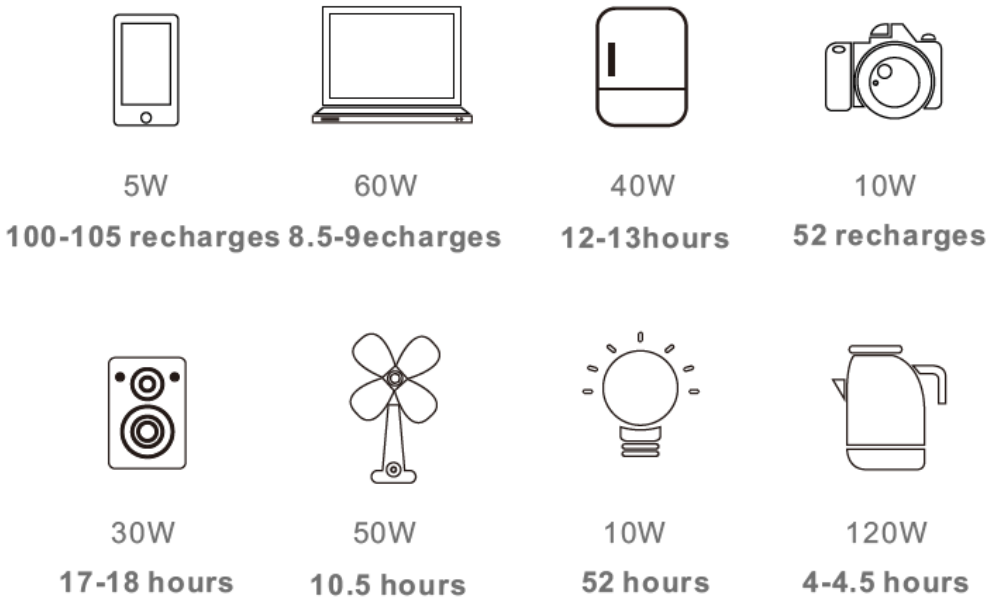
To prevent energy loss, each time when outputting is finished, press on master button again to turn off outing , and disconnect the load from the unit.(especially for AC modes,press and hold for 3 seconds to exit outing.)

IMPORTANT

- To enable AC outputs, you need to ensure battery never drop below 10%, no lower than 5% for DC outputs. This is designed purposefully to help prolong the battery life, then your generator is ready for use when you need it.
- When Power Off, the microelectronics control circuit runs into a standby mode,the battery will drop a little if it is not in use for half year. To ensure your generator's power is available when you need it, please do exit all modes and turn off the LCD after every use.

Reference Running Time for common appliances
Different devices require different working wattage, you may have also noticed this.
If you plug in devices that drain a high wattage(a refrigerator), then the charging level of this unit can drop very quickly, and you may not get precisely 666 Wh energy. On the flipside, if you're recharging devices that draw wattage more slowly (a small TV), you will get closer to 666Wh from this unit.

Application Reference Time



Storage and Downtime Maintenance

1. Suggest to fully charge it at least once every 90 days for maintaining the best performance, reliability, and longevity.
2. If outputting is done, please remember to turn off the master to save the loss of energy.
3. Due to the chemical characteristics of the battery, the available capacity of the battery may somewhat vary from environment to environment such as cold weather or overheating (you may hear a cooling fan). So please always use it in room temperature (-10°C- 40°C)also it is not recommended for outside storage or in damp environments.
4. If you are living off-grid in sub-zero conditions, we recommend you keep your unit in an insulated cooler and

connect to a power source(solar panels). The natural heat generated will keep battery capacity at its highest.

5. The battery packs inside are non-removable, non-disassemble, the life-cycle for charge and discharge is over 500 times, but eventually, it will wear out.
6. Continuously discharging the battery below 5-10% and then storing it with low battery may reduce its serviceable life. It is recommended to always leave at least 20% capacity unused.

Specifications

Batteries capacity	164000mAh 3.7V (606Wh)
Size/Weight	26.3×14×18cm/10.4×5.5× 7.1 inch Net Weight:5.4 kg Gross Weight:7.15kg
In(cigar lighter not included)	Voltage 12.7-24V Current 5.0A (at Max.)
In(Solar, MPPT)	Voltage 16.6-24V Current 5.0A (at Max.)
In(AC)	Voltage 100-240V to 20V Current 5.0A (at Max.) Please do use the adapter included with this unit, never use an extra or differ ent one.
Out(AC)	2 × US 110V / JP 100V 500W or EU/UK 220V 500W Surge power 1000W
Out(DC)	DC 12V Output: 12V5A(5.5×2.5mm)×2 12V Car Port: 12-13.6V10A USB1: 5V3A/9V2A/12V1.5A(QC2.0/3.0) USB2: 5V3A/9V2A/12V1.5A(QC2.0/3.0) USB3: 5V3A USB-C: 5V3A/9V3A/12V3A/15V3A/20V3A (PD 2-Way, 60W)

Temperature	Working temperature: -10~ +40(℃)/14~104(℉) Temperature over-charging protection: 55℃ 65(℃)/131~149(℉) Temperature over-discharging protection: 65℃ 75(℃)/149~167(℉) Cold temperature protection: -20℃ -10(℃)/-4~14(℉) Storage temperature: Within 1 month: -20~60(℃)/-4~140(℉) Within 3 months -20~45(℃)/-4~113(℉) Within 12 months: -20~25(℃)/-4~77(℉) For long-term storage, please do avoid storing outside, or in humid environments.
Pure Sine Wave	Inside there is a built-in pure-sine wave inverter, which means it generates an output that is exactly the same as plugging in with an AC wall socket or plug in your home. However, it can not replace the normal wall charger for
Protections	Over-current /Under-voltage /Over-voltage /Over-load /Short-circuit /Over-heating protection

FAQ

1. **Can I use the generator while it is recharging?**
   Yes, it is capable of outputting power while charging.
2. **How often to recharge the generator when it is not in use?**
   We suggest to recharge it via wall outlet at least once every 3 months. Or, a lower battery might aggravate self-discharging problems, and the battery cycle life will be worn out sooner.
3. **What size of solar panel in watts will be the best panel to charge this unit?**
   A 100watts solar panel can charge it well (approximately 8 hours), keep in mind that solar energy results can be significantly affected with variables. (Please refer to the solar charging section).
4. **Can I boarding with this generator when traveling?**
   No, this product can only be shipped by freight or can be shipped by trucking to your destination, can not be shipped by civil flight.
5. **How do I know if my multiple devices will work with this unit or not?**
   Will it damage my devices if overloaded? First, you should check the total power of all your appliances, make sure the total running wattage does not exceed the 500±15 W limits. Even if overloaded, it will disable AC outputting other than the DC ports, by the advanced built-in system control circuit module. (Please re-plug by

using another lower power AC device and restart it after 1 min.)

Contact Us

If you have any concern regarding our products or services, please email us to **support@allpowers.net**, we will feedback with our assistance within 1 working day.Please also advise us by providing a statement of how the failure occurred and the details of the issue. Website: **www.iallpowers.com**

Documents / Resources

	**ALLPOWERS AP-SS-007 Portable Solar Generator** [pdf] User Manual AP-SS-007 Portable Solar Generator, Portable Solar Generator, Solar Generator, Generator

References

- **ALLPOWERS: Portable Power Station & Solar Panels Manufacturer**