

Portable Lithium Solar Generator

Instruction Manual

CLEO



Packing List

- 1 Pcs Cleo Portable Solar Generator
- 1 Pcs AC Adaptor (including AC charging cable)
- 1 Pcs Cigarette Lighter Cable (cigarette port to DC7909 connector male)
- 1 Pcs MC4 Cable (MC4 connector to DC 7909 connector male)
- 1 Pcs User Manual
- 1 Pcs Warranty Card



Cleo



AC Adaptor



Solar Charging Cable (MC4)



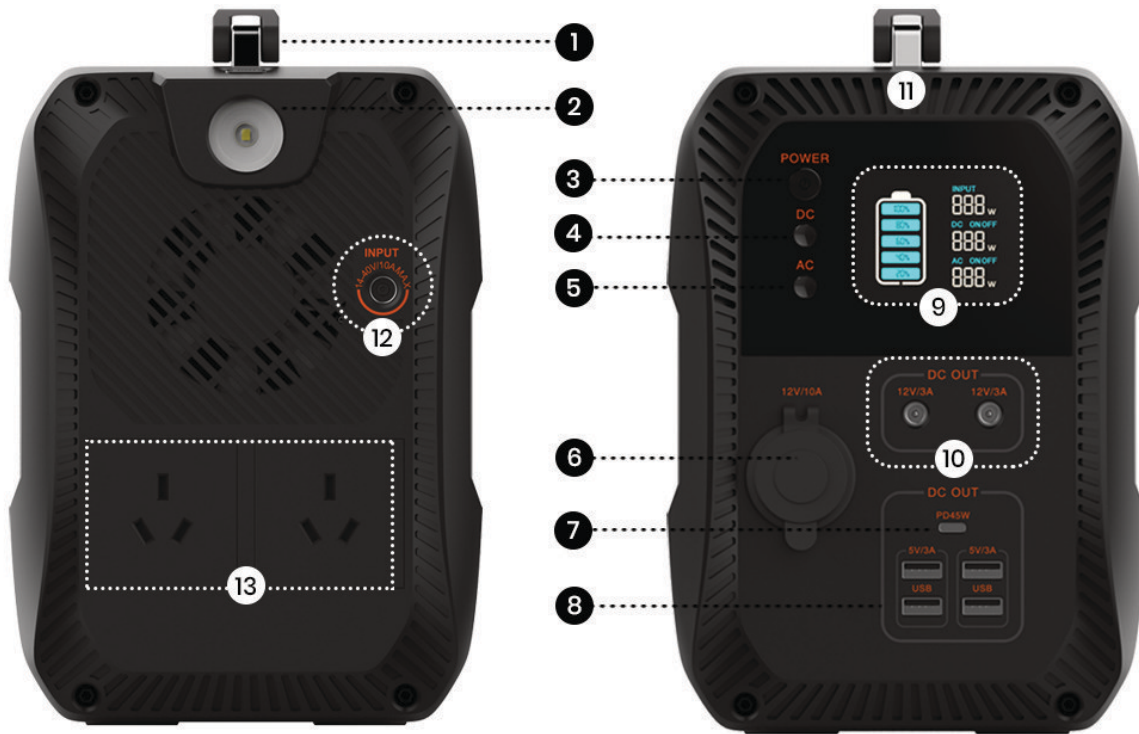
AC Charging Cable



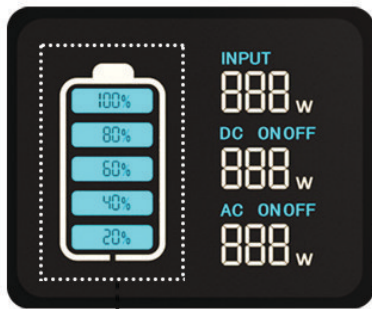
User Manual

Please visit our website www.srportables.com to register your product

Part Description



- | | | |
|----------------------|----------------------------------|-----------------------------|
| 1. Handle Bar | 5. AC Power Button | 9. LCD Screen |
| 2. LED Light | 6. DC12V Car ignitor output port | 10. DC 12V 5521 Output port |
| 3. Main Power Button | 7. Type-C PD Output port | 11. LED Light Button |
| 4. DC Power Button | 8. USB Output Port | 12. Charging Port |
| | | 13. AC Output Port |



- | |
|-------------------------------|
| 1. Charging Power |
| 2. DC ON/OFF |
| 3. DC Output Power |
| 4. AC ON/OFF |
| 5. AC Output Power |
| 6. Battery Capacity Indicator |

Safety and Precautions

Safety Warning

1. Please read all the safety warnings and labels before using the product.
2. Avoid exposing the product to rain or using the product in a humid environment.
3. Do not install the product near heat sources, such as electric furnaces and heaters.
4. Wipe the product clean with a dry cloth.
5. In case of fire, use dry powder fire extinguishers for this product. Do not use water fire extinguisher, which may cause electric shock.
6. Please do not alter or disassemble this product.

Safety and Precautions

Storage and Maintenance

1. Operating and storage environment may influence product life and the reliability of performance. Remember to:
 - (i) Place the product in a dry and well-ventilated area with mild temperature (suitable temperature: 0°C -45°C, suitable relative humidity 10% ~ 90%)
 - (ii) Place the product in a safe area where it will not fall or shake.
 - (iii) Keep the product away from corrosive and combustible material.
2. The product will turn itself off when the battery voltage is very low. If this happens, you need to charge the battery within 2-3 months.
3. If you are not going to use it for a long time, please charge it fully before storage and then charge it at least once every month. Store the product in a dry environment.

How to Charge this Product?

Solar Panel to Charge the Product

1. Choose a suitable solar panel (Recommended SR Portables 100W Foldable Solar Panel)
2. Keep the solar panel under direct sunlight and facing the sun.
3. Connect the solar panel to the product at the AC port (Part 12 in the Part Description) using the MC4 cable.
4. Please charge the product under Operational Temperature: Charge 0°C ~ 45°C, Discharge -20°C ~ 60°C (powering appliances)
5. When the product is fully charged by the sun, it will stop charging automatically. (The charging time is different under different sunlight intensity)
6. All products can be charged and used simultaneously
7. During charging, it is normal for the product to get a little hot.
8. Please make sure the cable connections are secure and stable, or it might result in overheating and short circuits.



AC Charger to Charge the Product

1. Always use the standard AC charger that comes with the product.
2. Insert one end of the adapter into the wall outlet and insert the other end into the input port (Part 12 in the Part Description) of the product.
3. Please unplug the charger after charging is completed. (It takes about 5-6hrs to fully recharge the product if using a 90W AC adapter charger).
4. During charging, it is normal for the product to get a little hot.
5. Make sure that the wiring is connected properly, otherwise the contact terminals may melt or ignite at high temperatures.

Car Charger to Charge the Product

1. Connect the product to the cigarette lighter socket (Part 12 in the Part Description) in the car with the cigarette lighter cable provided in the package.
2. The product will be fully charged with a 24V car battery, but only partially charged with a 12V car battery.
3. Charge the product after starting the car.
4. Make sure that the wiring is connected properly, otherwise the contact terminals may melt or ignite at high temperatures.

Turn ON/OFF the Product

1. Turn on the product: Press and hold the master power button about 2 seconds to turn on the product. The LED indicator light and the display screen will light up.
2. Turn off the product: Press and hold the master power button about 2 seconds to turn off the product. The display screen and the LED indicator light would turn off.

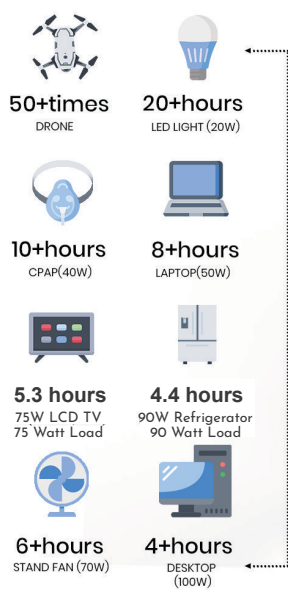
AC/DC Output

1. Turn on AC/DC output: Press and hold the AC/DC power button to turn on the product. The corresponding LED indicator light would light up and the display screen would show "AC ON/DC ON".
2. Turn off AC/DC output: Press and hold the AC/DC power button to turn off the product. The LED indicator light would turn off and the display screen would show "AC OFF/ DC OFF".

Note: Check to make sure the product is turned on. Otherwise, you cannot turn on the AC/ DC output.

Output

AC Port Output



AC Output Port

DC Port Output



Technical Specifications

Output			
	Rated voltage	100 - 120 Vac	220 - 240 Vac
AC output	Rated power	300 W	
	Peak power	450W	
	Overload Capability	300W \leq load $<$ 450W@120S; 450W \leq load@1s;	
	Frequency	50/60Hz(adjustable)	
DC12V Output (cigarette lighter)	Rated voltage	12Vdc (12 14V workable)	
	Rated current	10A ①	
DC12V Output (5521)	Rated voltage	9.6 - 12.6Vdc ②	
	Rated current	3A	
USB output	QC	BC1.2,Apple,Samsung	
	Rated voltage	5V	
	Rated current	3A	
Type C Output	QC	PD2.0 (45W)	
	Rated output	5V3A, 9V3A, 12V3A, 15V3A, 20V2.25A	
LED Torch	While the power button is on, press the LED light button repeatedly. The order of LED light will be: full brightness-half brightness-SOS- Off		
Solar PV Input ③			
	Input voltage	14 - 40 Vdc	
	Input power	120W MAX	
Battery			
	Rated capacity	416Wh	
	Rated voltage	11.1 Vdc	
	Battery cell type	Lithium ion battery, 4000+ cycles to 80%	
	Voltage range	9.6 - 12.6Vdc	
General			
	Protection level	IP21	
Working environment condition		Relative humidity: 10% - 90%	
		Temperature: 0°C - 45°C	
	Size	300*159*219mm	
	Net weight	6.2 kg	

Operating Conditions

1. Operational Environment: Indoor and Outdoor (non waterproof)
2. Operational Temperature: Charge 0°C ~ 45°C, Discharge -20°C ~ 60°C (powering appliances)
3. Storage: -20°C ~ 45°C

Troubleshooting

If the product cannot charge or power appliances, please check the following:

1. Make sure the power button is turned on.
2. Make sure the AC and DC power buttons are on, viz. the LED on the right of the button is green.
3. Check the battery capacity - if it's lower than 10%, please recharge the product as soon as possible.
4. Make sure the load power connected is not exceeding the load limit of this product. Each port has a limit for the connected power load.

If the product still does not work, then please contact our after sale service center.

Error code	Cause	Protection Condition	Recovery condition
E01	Over Temperature Protection	Heat sink Temp \geq 75°C	Auto Recover when the temp \leq 70°C
E02	Low temperature protection	< -8°C	> -2°C, self-recovery
E04	Battery Over temperature	>68°C	<58°C, self-recovery
E05	Battery low temperature	< -8°C	>-2 °C, self-recovery
E06	Battery charge over temperature	>48°C	<38°C, self-recovery
E07	Battery charge low temperature	<0°C	>5°C, self-recovery
E09	Total voltage too low	<9.6V	>10.5°C recover charging.
E18	PV input over voltage	>45V	<40V self-recovery
E25	DC 12V output over voltage	Battery voltage >13V	Recover by pressing any button
E26	DC12V-1 output over loaded	Load power >140W	
E27	DC12V-1 output over current	output current >11A or short-circuit	
E28	DC12V-1 input over current	Current >-1A	
E29	DC12V-2 output over loaded	Load power >75W	
E30	DC12V-2 output over current	Output current >6A or short-circuit	
E31	DC12V-2 input over current	Current >-1A	
E34	System overloaded, DC output stop	Total power >380W at 3mins	Recover by pressing any button
E36	Inverter output overloaded	Power >300W at 2mins or power >450W	
E37	Inverter output overcurrent	AC output short-circuit	
E38	System overloaded, AC output stop	Total power >380W at 3mins	

Frequently Asked Questions

1. How to check the state of charge?

The battery icon display on the LCD display shows the battery level and charge status.

2. How to use the product to charge other electronic devices?

Check the user manual or search for information online to learn about the charging parameters of the electronic devices you wish to connect.

Check the power of each output port. For example, the maximum rated output power of the AC output port is 300W. This means that if the power of the connected electronic device exceeds 300W for a long time, the inverter will turn off the output.

3. What is the depth of discharge (DOD)?

To prolong the battery life, the product has a DOD setting to 90%, which means that only 90% of the battery capacity can be discharged, and retain 10% to avoid damage to the battery due to excessive discharge.

4. Can it charge and discharge simultaneously?

Yes, but it is not recommended to charge and discharge at the same time in order to protect the battery life.

5. Can it be charged by using 2 solar panels in series?

Yes, just make sure the total open circuit voltage (VOC) of the solar panels are less than 40V. Otherwise it may trigger the charging over-voltage protection or cause damage.

6. How to extend the using time of CPAP?

Recommend to turn off its humidifier, heater, and set a lower pressure.

50Hz/60Hz frequency switching (factory setting: 60 Hz).

Step 1: Press the power button to turn the product on, then press the DC and AC buttons at the same time.

The LCD will illuminate and display the current frequency (50Hz or 60Hz). Release the button and continue to the next step.

Step 2: Press and hold the DC button or AC button to select 50Hz and 60Hz. The frequency displayed on the LCD will change accordingly.

Step 3: After selecting the desired frequency, press the DC button and AC button at the same time to complete the setting. Step 1 can be repeated to check the current frequency.

Step 4: Reboot to use with new frequency.

7. Can the AC output power a refrigerator or air conditioner?

Workable for low power refrigerators. The starting power of refrigerators and air conditioners are generally 5~7 times more than the rated power, which easily triggers AC overload.

8. Can two power stations be used in parallel?

No.