SINOLTECH®
USER MANUAL
Portable Solar Generator(20W)

Thank you for purchasing Portable Solar Generator by SINOLTECH ENERGY. Please read the information carefully and follow all instructions thoroughly before using this product.

Feature

The system is a small AC & DC Power Supply System which is designed for the Villages, Districts, Health Centers, farmers, herdsmen, outdoor camping, tourism, military, etc. Easy to operate, convenient to carry. It can power most appliances found in the home, office, shed or workplace; such as TV's, stereos, games, lights, fans, laptops, phones, and power tools. Solar panel, solar controller, inverter and battery all are put in one box.

Specifications

Item	Parameter
Solar panel (Monocrystalline)	20W 18V
Inverter (Pure Sine Wave)	150W AC100V~240V
Battery (Lithium Polymer)	12V 16Ah
Controller	12V 8A
LED	3W Lighting with SOS feature
Interface (Output)	AC100V~240V: 1pcs DC12V: 2pcs Car socket: 1pcs 5V USB: 1pcs
Interface (Input)	DC12-23V input(solar) AC input.
Product size	397*316*106mm

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Packaging size	435*375*135mm
Net weight	5.8kg
Gross weight	6.5kg

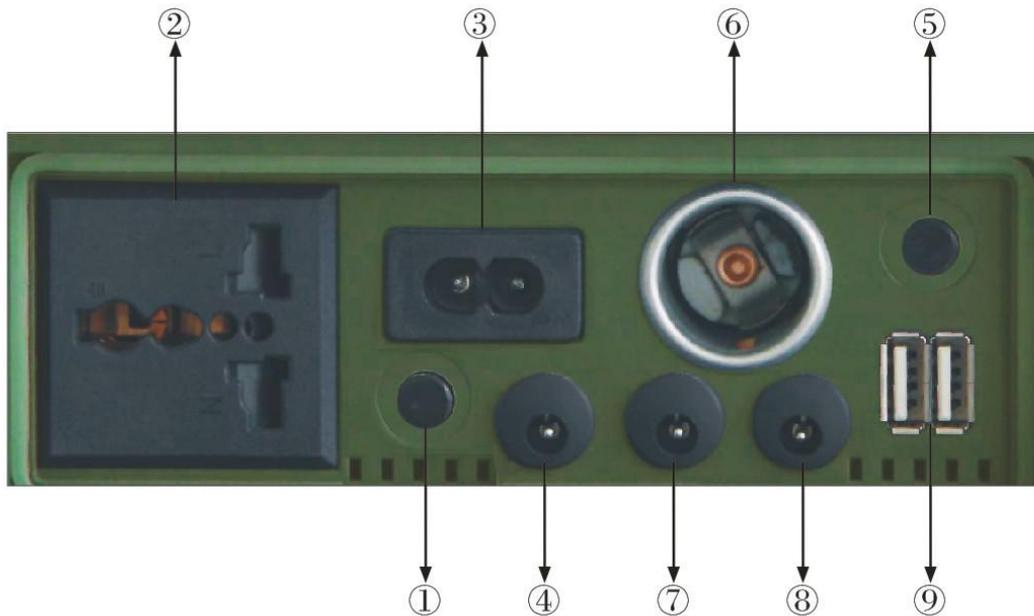# Product Structure

1. General Structure Description

①Solar panel
②3W LED bulb
③3W LED bulb button
④LCD screen
⑤Handle
⑥Master switch
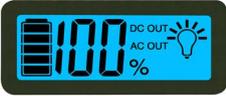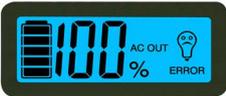⑦Charging & Discharging interface
⑧Waterproof safety door

2. Charging & Discharging Interface

①AC ON/OFF
②100~240V AC OUTPUT
③100~240V AC INPUT
④12V~23V DC INPUT
⑤DC ON/OFF
⑥12V CAR SOCKET
⑦12V DC OUTPUT(5.5*2.5mm)
⑧12V DC OUTPUT(5.5*2.5mm)
⑨5V USB

3. LCD Screen Indicator Description

Item No.	LCD Display	Working state
1		**POWER OFF**
2		**POWER ON**
3		**AC OUTPUT ON**

4		DC OUTPUT ON
5		AC&DC OUTPUT ON
6		AC ERROR
7		DC ERROR
8		AC&DC ERROR

Charging Solar Box

How to Charge the Box from Sunlight

There are 2 ways to charge Box by sunlight

1)Open the box and put it under directly sunlight, then it is charging(the battery capacity display is going up). Make sure the solar panel can get as much sunlight as possible;

2)Use an extra solar panel(Max.50W) to connect with the 12V~23V DC INPUT connector and put the solar panel under directly sunlight, then it is charging the power system.

After the LCD screen shows the battery is 100% full, please close the box or take the extra solar panel away from sunlight to protect the battery.

How to Charge the Box from Utility Grid

There are 2 steps to charge Box by utility grid:

1)Connect the charging cable with the 100~240V AC INPUT connector;

2)Connect another side of the charging cable with utility grid, then it is charging.

Remove the charging cable after the battery is 100% full.

How to Charge the Box by Car Socket

There are 2 steps to charge Box by Car:

1)Connect one side of the car charging cable(not included in the power unit) with the 12V~23V DC INPUT connector;

2)Connect another side with car socket and start the car, then it is charging.

Remove the charging cable after the battery is 100% full.

Charging Time

Charging time Battery capacity Charging method	12V 16Ah
AC Charge	3 hours
20W solar charge	16 hours

Using Solar Box

How to Use the Box to Supply AC Power

1)Turn on the master switch;

2)Press the AC ON/OFF button;

3)Connect AC 100~240V device to 100~240V AC OUTPUT socket, make sure the load power not more than 150W;
4)Disconnect the load from the box when finish using, press the AC ON/OFF button to turn off AC power.

How to Use the Box to Supply DC Power

1)Turn on the master switch;

2)Press the DC ON/OFF button;

3)Connect DC 12V or USB 5V device to the corresponding DC sockets, make sure the 12V load power not more than 60W;
4)Disconnect the load from the box when finish using, press the DC ON/OFF button to turn off AC power.

You can use AC & DC power at the same time, but please make sure the load power does not exceed the limit.

How to Use the 3W LED Bulb

1)Turn on the master switch;

2)Press the LED bulb button, then it is the lighting function;

3)Press the button again, the bulb is twinkling, it is the SOS function;

4)Turn off the LED bulb if press the button third time.

Typical Use Case

Appliances	Load Power	Quantity	Daily Working Hours	Daily Power Consumption	Continued Working days
Fluorescent lamp	40W	2	2	160Wh	1 Day
LED bulb	3W	4	4	48Wh	3.3 Days
TV(21 inch)	60W	1	2	120Wh	1.3 Days
Laptop	30W	1	2	60Wh	2.7 Days
Inkjet printer	30W	1	0.5	15Wh	10.7 Days
Inkjet fax	150W	1	0.5	75Wh	2 Days
Fan	50W	1	2	100Wh	1.6 Days
FM Radio	3W	1	6	18Wh	9 Days
Cell phone	2.5W	2	8	40Wh	4 Days
Intercom	7.5W	1	6	45Wh	3.5 Days
Satellite Phone	12W	1	2	24Wh	6.7 Days
GPS	4W	1	4	16Wh	10 Days

Safety Precautions

This product has been designed and manufactured to ensure personal safety. Please read the following carefully before using the product. Incorrect operation or incompatibility with your device may result in reduced battery performance or damage to your device.

● Check the voltage of your device for correct compatibility with the product;

● Do not use any devices above 150W on Solar Box for risk of damaging the inverter;

● Do not attempt to disassemble the product, warranty is void if the device is opened by unauthorized personnel;

● Store and operate between -5° to 45°. Keep the product away from any heat sources. Temperatures over 60° may cause damage;

● Do not operate the product if it has been subjected to shock or damage;

● Recharge the product every 6 months when not in use. Use a soft cloth to clean the exterior and solar panel. Do not use harsh chemicals or strong cleaning solvents;

● The device is capable of generating high voltages, always keep the product out of

the reach of babies and small children, in order to prevent any dangerous situations.

Warranty

Solar Box comes with a 1 year warranty (full replacement)

Exclusions & limitations

This warranty does not apply:

1)to consumable parts, such as protective coatings designed to diminish over time unless failure has occurred due to a defect in materials or workmanship;

2)to cosmetic damage, including but not limited to scratches, dents, and broken plastic on ports;

3)to damage caused by accident, abuse, misuse, liquid contact, fire, earthquake or other external causes;

4)to damage caused by operating the product outside the permitted or intended uses described by SINOLTECH;

5)to a product or part that has been modified to alter functionality or capability without the written permission of SINOLTECH;

6)to defects caused by normal wear and tear or otherwise due to the normal aging of the product.