# Portable solar panels [ Probably the best solar charger ]

#### User manual

Thank you for purchasing our products. For your safe use of this product, please read this manual carefully before use.

## **■**Usage method

1.The solar panel battery is placed facing the sun, the LED indicator of the output box is red, then the solar panel begins to work, the USB output output 5.2V DC voltage, the DC circular output output 18V direct charging voltage, (when there is a USB output with its own restart function)



2.It is not recommended to charge the mobile phone directly. You need to use the charging bank to charge the mobile phone, tablet computer and other electronic products.





3. If the output of the purchased product has a DC output voltage of 18V, it can be used in the next scenario. (Can be a total of mobile phone digital products and all kinds of storage power, battery recharge)



### ■Warm reminder

- Before use, please ensure that the positive and negative terminals of this product are connected with the corresponding positive and negative terminals of the load.
   If there is contact or collision will cause short-term heating or burning.
- If there is no professional and technical personnel, please do not try to change the circuit or use method of the product, and we will not be responsible for disassembling the product or changing the circuit without authorization.
- 3. This product is only suitable for outdoor use in the sun, the best working time: 9:00-16:00 (sunny weather is better).

## ■Matters needing attention

- 1. Please do not use sharp objects to scratch the surface of the solar panel.
- 2. When charging the charger with the solar panel, please place the solar panel facing upward in direct sunlight to ensure the best charging effect.
- 3. Please do not place the charger in rainy days to avoid short circuit. (The front of the solar panel is not afraid of rain, pay attention to the USB and DC interface is not waterproof.) Do not use corrosive liquid to wipe the product. Do not roll the product.

## ■Product description

This product is mainly used for mobile phones or USB charging electronic products, and 18V power supply of small power products. Applicable scope: RV, boat,sailboat, yacht, truck, car, coach, cabin, camper, tent, trailer, pet house.

## ■Warm reminder note

Do not worry if there are scratches or bubbles on the surface of the product. The surface of the product has a protective film to prevent scratches on the surface of the product. It can directly tear off the surface protective film, which is conducive to the absorption of solar light by the battery.

Please use according to the user manual. We will not be responsible for any problems caused by imporper use of the product. Thank you for your cooperation and understanding.

# Certificate of conformity

This product is approved for sale after strict inspection to meet the standards.

Implementation standards: GB12632-90
Inspector: QC08







# Flexible solar panel

Note:Please use solar panels outside and in the sun. The stronger the sunlight, the better, the better the performance.

#### There are several uses:

 Use 5V USB interface to directly charge 5V devices such as mobile phones, mobile devices and tablets.



2.Use 18V DC output port to dock batteries, cars, boats and other short-term emergency charging. (Supplementary 12V battery should be charged with 18V DC solar energy. Otherwise there is no way to charge the 12V battery)



In the process of charging the battery, the solar panel should face the solar energy at 45 to maxinize the power output of the solar panel.

Note:The surface of the solar panel should not have any shade or sunlight shadow, which will affect the conversion power of the solar panel. (such as glass/ Windows,etc.)The best direct sunlight on the surface of the solar panel is the best output power.

- 3.If you need to charge the device for a long time, it is recommended to buy a package with a charging controller to protect the battery.
- ① Conect the battery (purchased separately) to the controller Cut the DC part of the cable and strip the end of the cable Connect the battery and controller correctly according to the positive and positive terminals (There is a standard on the cable with a white bar for the positive pole/with a letter for the negativepole)





2 Connect the solar panel to the controller

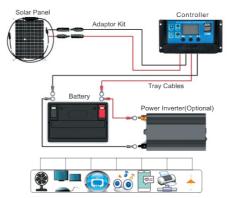




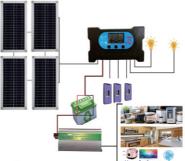
3 Connect the load to the controller



4.Connect the inverter(purchased separately without the inverter) for subsequent use, such as 110V/220V equipment.



5. Link diagram of the upgraded controller.



#### Frequently Asked Questions:

1.the product can not be used at night.

Answer: The product generates electricity by absorbing ultraviolet light, and uses solar cells to direcly convert solar light energy into electricity, It can not store electricity itself, and the product can generate electricity to charge the battery when working, or drive DC devices such as fans.

2.the product does not work after connecting.

Answer: Whether the outdoor sunlight is sufficient, or can not work in the case of sufficient light, unplug all the cables connected to the product, and then the silicon surface light is bright, If the light indicated that the product is normal, it is is the line fault and short circuit fault caused by short circuit protecion.

# Solar emergency fan

Note: Please use solar panels outside and in the sun. The stronger the sunlight, the better, the better the performance.

#### ■ Features:

When connected to the solar panel, the fan can run; And it can be used separately byplugging into the computer's USB port.

When connected to a solar panel, the operation of the fan depends on the sunlight. When the sunlight is strong, the fan works quickly. When the sun shines and generates hot air, the fan immediately rotates to dissipate heat in a timely manner. ventilate and ventilate, saving the trouble of pulling wires, making it safer and more convenient.

When the sunlight is not strong enough, the fan may work very low or even not work. There is no rechargeable battery in the fan; If you need a fan to work at night, you can use a power pack.



2. Direct USB link laptop output work





# Solar exhaust cooling fan

 Cooling: The dual fan solar panel kit can exhaust hot indoor air and effectivelyreduce indoor temperature.

Operation: When the sun shines on the solar panel, connect the interface and the fan can start. Up to 3, 200 RPM. When the sunlight is insufficient.

the fan works slowly or even stops working. Solar panel best working conversion Angle 45° facing the sun for maximum output.



Easy to use: Place the solar panel in a place that can receive sunlight, install a fanand connect it for use. Cabling free for more flexible use, battery free products, moregreen, environmentally friendly, and safe.



- 4. Epoxy resin surface coating, improve durability, fan brushless motor waterproof durable fast speed.
- 5. Widely used: With a wide range of applications, solar panel fan kits can be used inhomes, RVs, greenhouses, utility rooms, pet houses, and more.

## **Enhance Air Circulation**

This free power solar panel dual fan kit replace fresh  $\,$  air for chickencoops and pet rooms, ventilate and dry. )

