

# PBOX® P7

Solar Home System

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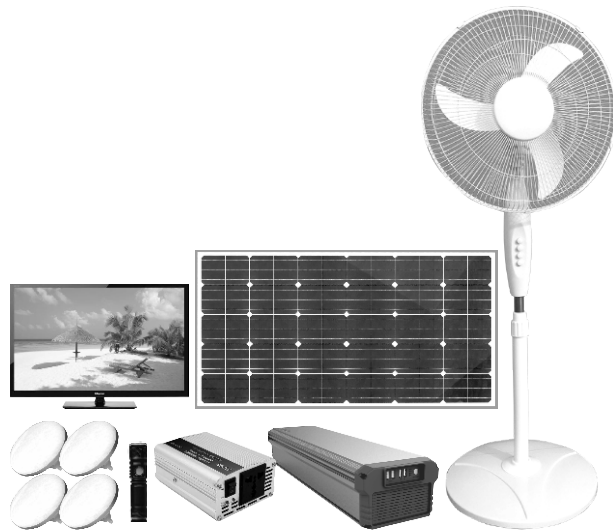
Made In China



# PBOX® P7

Solar Home System

User Manual



PP7.114-B

[www.pboxlighting.com](http://www.pboxlighting.com)

## CAUTIONS

Please carefully read the following directions when you use the PBOX Portable Solar Power System in order to avoid damage or malfunction.



- The control box should be installed in a fireproof, waterproof, moisture-proof, ventilated, easily-operated environment.



- Do not put this product into fire. There is a potential danger of explosion.
- For long-term storage, batteries need to be recharged every 6 month to maintain battery life.
- Make sure the solar panel is not blocked from the sunlight by buildings or trees, that will cause low efficiency and short working time.
- For high performance, regularly apply the neutral detergent with a damp cloth and gently clean the surface of the solar panel.
- The discharge temperature range of this product is -20 °C to 60 °C and charging temperature range is 0 °C to 55 °C. Please make sure the operating temperature does not exceed the above range.
- Store the products at a temperature between 0°C to 45°C.
- Do not access PV module or loads that exceed the rated power of device to prevent damage to the device.
- It is not on the term of warranty if client does modify & refit the light leading to non-proper working without authorization of Powerband.

## DISPOSAL

Our product is made of recyclable high-performance materials and components. Do not throw away the appliances with the normal household waste, but hand them in at an official collection point for recycling. By doing this, you help to preserve the environment.

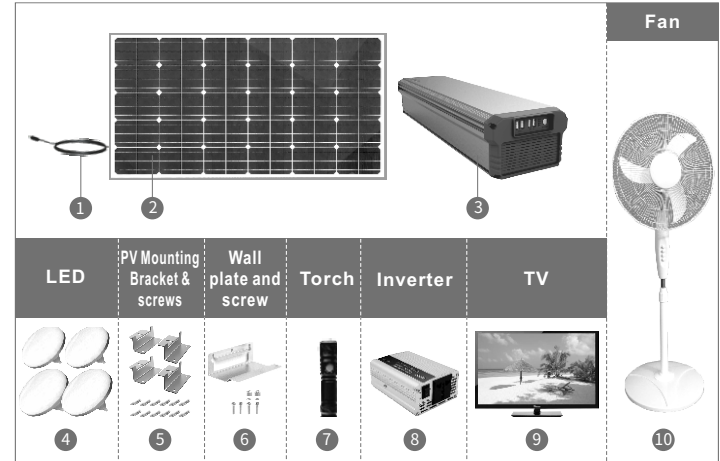
Please refer to local laws & regulations involved in classified collection of electrical products. Properly disposing of the waste can helpfully avoid potential negative influence to environment and human health.



RoHS  
COMPLIANT

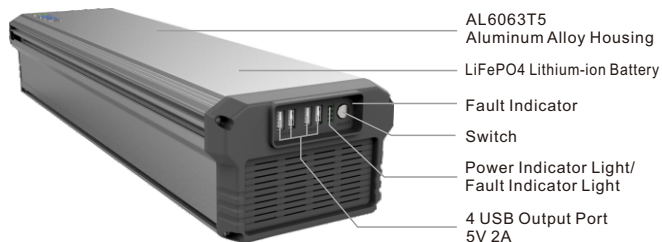


## Packing List & Description



No.	Item	Description
1	PV Output Cable	Connect solar panel to the host device
2	Monocrystalline silicon Solar Panel	Convert solar to electricity
3	Host Device	Battery charge & discharge management
4	LED (optional)	250lm or 500lm LED
5	PV Mounting Bracket & screws	Install the solar panel
6	Wall plate and screw	Install the host device
7	Torch (optional)	350lm, 4 lighting mode adjustable, aperture zoomable
8	Inverter (optional)	150W or 300W Inverter optional
9	TV (optional)	19" ,24" or 32" DC TV
10	Fan (optional)	16", 10W DC fan

## P7 Host Device



## Indicator Light

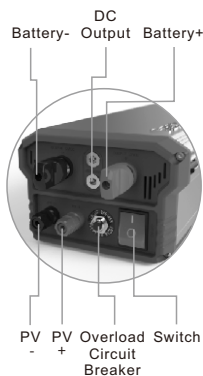
Indicators	Color of LED	LED Status	Type functioning
Charging indicator	Green LED		Charging. The flashing light indicates the level at which the battery is being charged at
Battery power indicator	Green LED		Battery capacity $\geq 75\%$
			Battery capacity between 50%~75%
			Battery capacity between 25%~50%
			Battery capacity < 25%
Fault Indicator	Red LED	Light on	Indicates failure such as a short circuit or overload
		Light off	Normal operation



## Interface description of small power host device

Name of Interface	Type	Application limits
PV Input	Terminal	Operating voltage: 18VDC -22VDC power of solar panels $\leq 360\text{Wp}$
*DC Output	DC5527	Output Voltage: 11V~14.5V Overload current: 5A
	Lighter	Output Voltage: 11V~14.5V Overload current: 10A
Overload Protector	Circuit Breaker	Rated current 15A, hand-reset

\*Attention , when use it during the day, the voltage of the output interface will instantly reach a maximum of 22V under abnormal conditions.



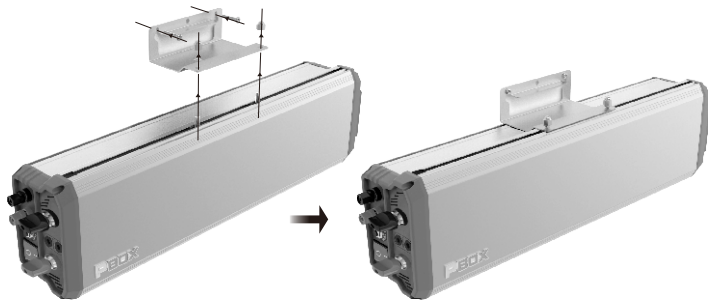
## Interface description of large power host device

Name of Interface	Type	Application limits
PV Input	Terminal	Operating voltage: 18VDC -22VDC power of solar panels $\leq 360\text{Wp}$
*DC Output	DC5521	Output Voltage: 11V~14.5V overload current: 5A
*Battery Output	Terminal	Output Voltage: 11V~14.5V overload current: 25A
Overload Protector	Circuit Breaker	Rated current 30A, hand-reset

\*Attention , when use it during the day, the voltage of the output interface will instantly reach a maximum of 22V under abnormal conditions.

## Install the host device

The host device can be placed on the desk or mounted to the wall.

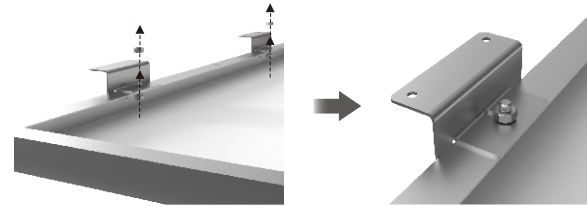


Mounting method as shown

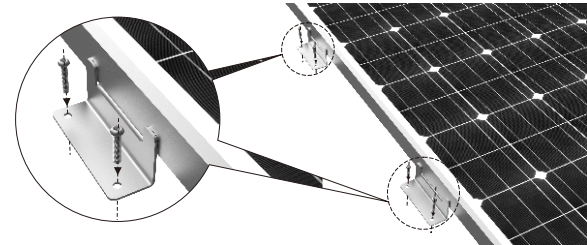
As shown in the figure above, use the T-blot to fix the wall mount on the host device, then use the wall mount to install the host to the wall.

## Install the solar panel

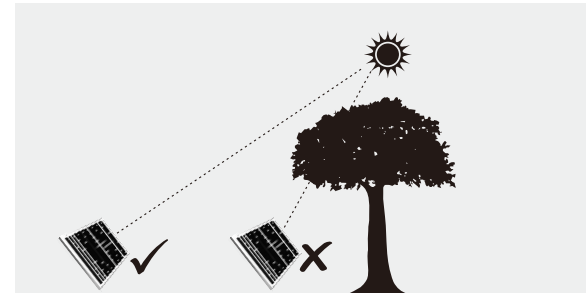
1. Fix the solar mounting bracket to the solar panel frame with nuts and bolts.



2. Fix the solar panel to the roof with screws.



3. Avoid any blocking on the solar panel

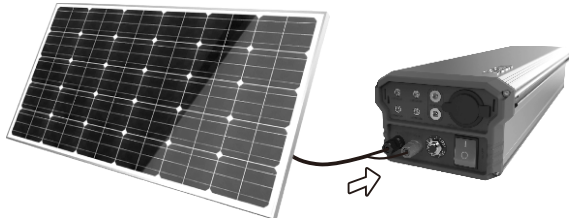


**Warning:** If the solar panel is to be placed in somewhere where it is at risk of being struck by lightning e.g. on top of tall roof tops or high mountains, then connect a ground wire from the metal structure of the panel to a ground rod.

## How to Use the Solar Home System?

### Turn ON the system

1. The system will be activated automatically when the solar panel connected to the host device in daytime.



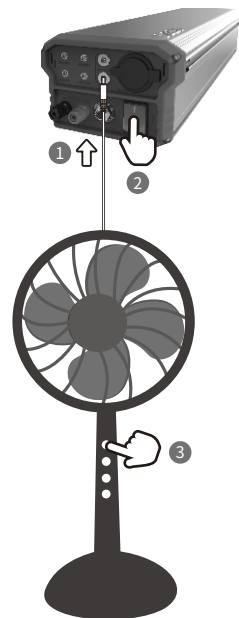
2. Or press the Switch button for 5s to turn ON the system anytime.

Method	Function	Description
Press for 5s	Turn on	LED all light on, after 1s the red indicator light will off
	Turn off	Indicator light flashes 3 times



## How to power the load?

- 1 Connect the Output interface to the device (i.e. LED light, DC TV, inverter, fan, etc)
- 2 Switch on the DC output button
- 3 Turn on the load devices for use



## Troubleshooting

No.	Symptoms	Troubleshooting Steps	Process
1	No charge	Check if the solar panel is blocked from the sunlight by buildings or trees.	Change the installation position.
		Check if the solar panel and the host device are well connected.	Re-connection.
2	Can't turn on lamps	Switch on the Output, if the three indicator light flashes or light off, then the battery is lack of power	Need to charge
		If the battery indicator light on, check the lamp switch if it's on	Multiple switch on/off the lamp
		If the battery level indicator is on, switch on the lamp but there is no bright, check the bulb and cables whether the connection is normal.	Re-connection.
3	USB ports failed to charge the phone or other devices	Switch on the Output, if the battery indicator light flashes or light off, then the battery is lack of power	Charging the battery.
		If the battery indicator light on, check the USB cable's connection	Re-connect USB cable or replace it with a new one.
		Check if the device normal	Change other device, connect to the host device and try to charge the load.
4	DC port failed to connect the device	Check if it's the support interface	Change the support interface
		Check the battery indicator light, if light off possible reason could be the battery lack of power	Charging the battery.

If you need information or if you have a problem, please visit the PBOX website at [www.pboxlighting.com](http://www.pboxlighting.com) or contact your local distributor/dealer.

## LED Troubleshooting

Fault Condition	LED	Fault Indicator	Fault analysis	Solution
Short circuit	Red	Red LED on.	Output interface or device short circuit	Remove the load, restart the system, if red LED off means the short circuit come from the device, if not then the output/input interface, please contact local dealer.
Overload	Red	Light on 10s then off. The system will restart in 5 seconds. The LED will be repeatedly on if the failure have not been solved.	The system will enter the automatic protection mode if the load power too large.	Reduce the load device