

# Specification of Solar Power System

## I . Properties of product

1. This system is equipped with intelligent control system of microprocessor and special control algorithm, which is small DC power system designed for power supplying of outwork, home use, camping in remote area and power shortage region , and so on.
2. The circuit uses a high-performance, high-precision 10-bit ADC MCU as the master, with battery overcharge, over discharge, overload and short circuit protection with unique electronic anti-reverse protection, low-power standby, USB output, light output overload protection, charging, discharging separate functions.
3. This system is pure DC output system, radio, LED lighting function, two USB 5V output port, six DC 12V output port.

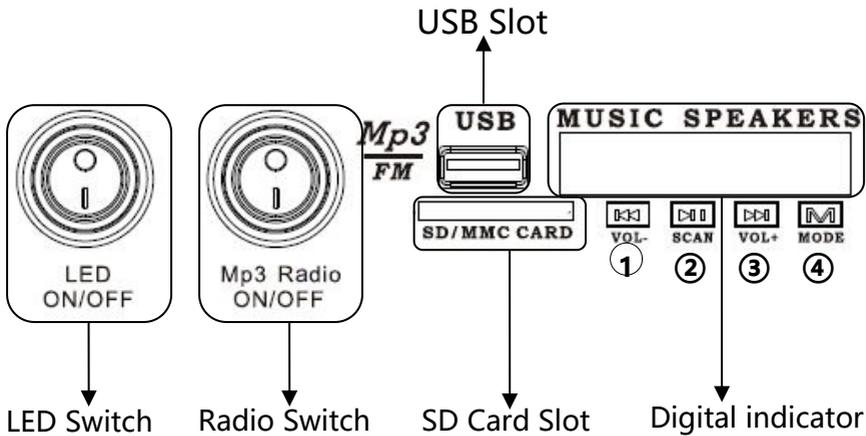
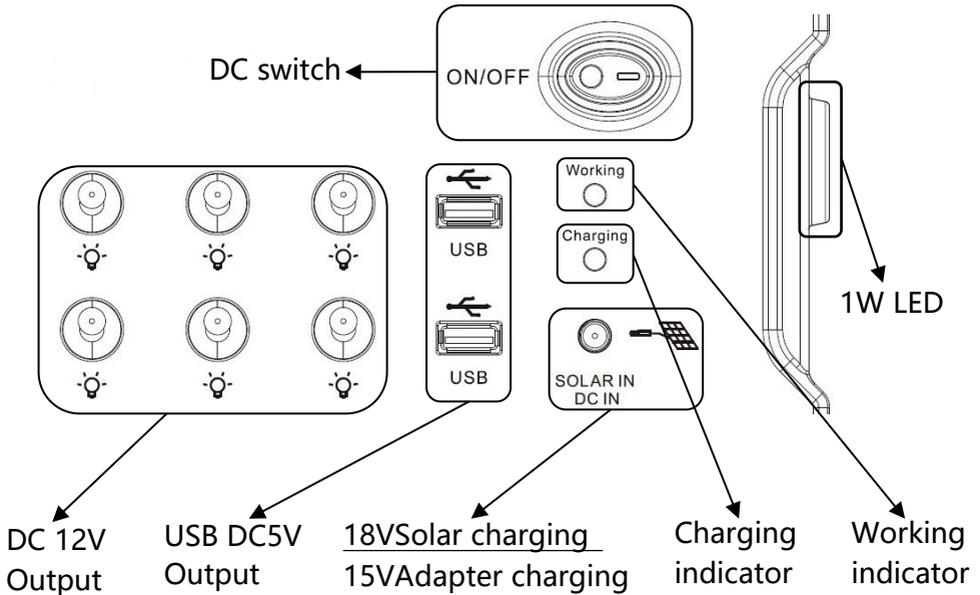
## II. Function Characteristics

1. Using SCM as the master, to achieve a battery charge and discharge of the intelligent control, overcharge, over-discharge protection, short circuit protection, when the load is overloaded, the system will automatically shut down, automatically return to normal after a few seconds, effectively extending the battery life, battery over-discharge voltage rise control.
2. Ultra-low power standby function: When ON / OFF switch is in the OFF state, the product enters a low power state.
3. USB Output: When charging mobile phone/MP3/MP4/digital camera, the output current reach above 5V500mA.
4. DC12V Output : When DC12V output current exceeds 3A, overload protection start, output will automatically shut down.
5. Charge and discharge independent function: charging, discharging without disturbing each other, can realized discharged while charging.
6. Charge and discharge indicator: monitoring system at any time charge and discharge status. When charging, the charging indicator red light, green light when full; when discharging, work instructions green light, low-voltage protection, work instructions red.
7. Radio: hidden software antenna, according to switch control, simple operation, automatic income units feature adjustable volume, you can also insert an SD card, U disk music player; FM radio function, FM radio frequency range: 87.6 ~ 108MHz.
8. When this unit solar charger or adapter to charge, turn off the ON / OFF switch, don' t turn on any load in order to reduce the charging time.

9. The product has over-charging and short circuit protection function, when over-discharging and undervoltage, indicator light turns red.

### III. Operational approach

#### 1、Function indication



#### 2. Charging operation

( 1 ) The solar panel (18V) is connected to the input port of the solar charging system, charging indicator lights red, indicating that the state of charge is connected, when full, charging indicator light green.

( 2 ) Adapter (15V) input connector into the charging port, red charging indicator indicates the charge status of the connection is normal, when full, charging indicator light green .

### 3. Mobile phones and digital products charging operation

Phone or digital products charging USB line access to the USB connector on the system box, mobile phone or digital products to enter the state of charge, USB interface Output voltage DC 5V, the output current reach above 5V500mA.

### 4. Output with load

To bring DC12V LED lamp load, insert the load can be inserted into the DC range 12V OUTPUT port, when the load current exceeds 3A, the system will automatically shut down all output

### 5.LED light function

Turn on LED switch, LED will light.

### 6.FM/MP3 Operation

( 1 ) Turn the FM / MP3 switch to "ON" to open the FM / MP3 function, "OFF" to close.

( 2 ) As shown in FIG :

- ① "Previous" , Long press the volume decrease to "0" ;
- ② "Play/pause" ;
- ③ "Next" , Long press the volume increase to "50" ;
- ④ "M" is Radio channel Switcher.

## IV. Specification Parameter

Poly solar panel	18V/10W~30W range		
Output Voltage	DC Output amount : 6 x DC 12V , 2 x USB 5V		
Built-in battery	12V/7AH~12AH range ( lead-acid battery )		
Charging time	determined according to the method of charging		
Discharging time	determined based on the load required to power		
Rated charge current	3A	Rated discharge current	2A
System voltage	12V	Empty load loss	< 12mA
Overpressure protection	14.4V	Enhance the charging voltage	15V
Brown-voltage	11.6V	Over-discharge voltage	10.5V
Control method	Charge; PWM pulse width modulation		
Operating	-10°C+55°C		

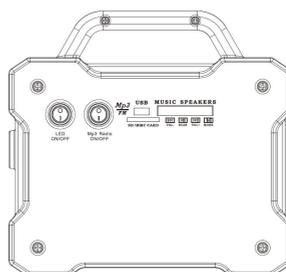
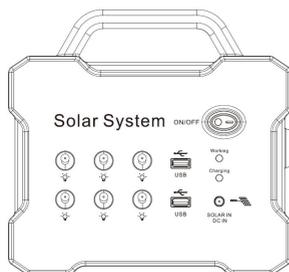
temperature	
Protection circuit	Overcharge, overload and short circuit protection

**NOTE : specifically configured to prevail in kind.**

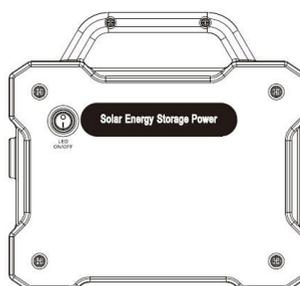
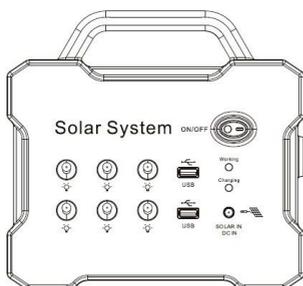
## V. TIPS

1. Before using the product, please read the product manual carefully
2. Do not meet the product specification shall use parts or appliances.
3. Non-professionals can not be allowed to open the machine for maintenance, to avoid damage to the product.
4. Note waterproof storage box must be stored in a dry ventilated place.
5. When using this system, do not use near fire or under high temperature conditions.
6. Before first use of the system, connect the battery after filling before use, built-in overcharge protection charge bad problems do not worry, you can charge a long time.
7. Rain or rainy season please save electricity, turn off the switch when not in use.
- 8 . **If not used for long time, charge and discharge the system at least once within a month , otherwise Product life will be affected.**

### PS.1 with radio function



### PS.2 without radio function



**Note: system without radio, point 7 in “ Function Characteristics” and point 6 in” Operational approach” is not applicative, “function indication” subject to real system faceplate function.**