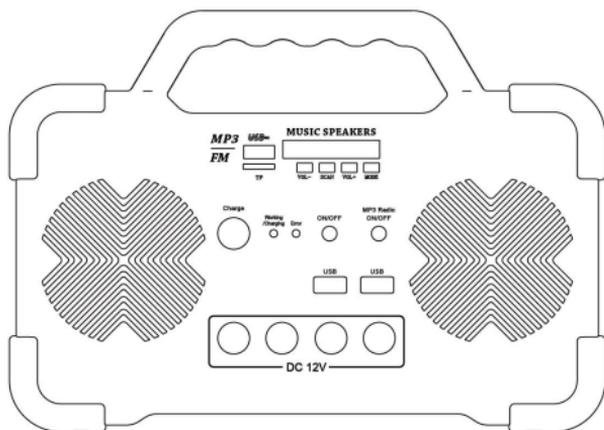

System manual



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, MP3/Radio function, two USB 5V output port, four 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 5V2.1A.

4. DC12V Output: When DC12V output current exceeds 5A, overload protection start, output will automatically shut down.

5. Charge and discharge independent function: charging, discharging won't be interfered 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 green light flashing, stable green light when full; when discharging, work instructions green light, low-voltage protection, work instructions red.

7. Radio: hidden software antenna, press button 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.

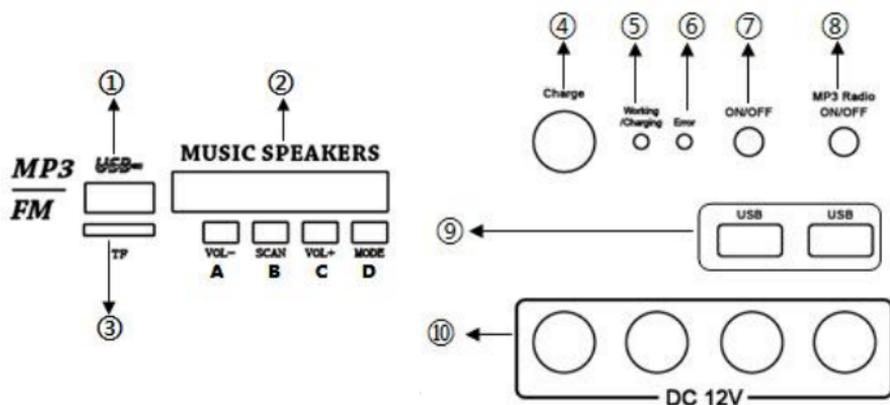
8. When this unit solar charger or adapter to charge, turn off the ON / OFF switch, don't turn on any load in order to reduce the charging time.

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

- | | |
|------------------------------|------------------------------------|
| (1) USB Port | (2) Digital Display |
| (3) TF Port | (4) 18V solar/ 15V adapter input |
| (5) Working/Charging state | (6) Error |
| (7) DC Switch | (8) FM/MP3 Switch |
| (9) USB 5V Output | (10) DC 12V Output |



2. Charging operation

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

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

3. Mobile phones and digital products charging operation

Switch on the system, then 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 5V2.1A.

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 5A, the system will automatically shut down all output

5.FM/MP3 Function

(1)Switch FM/MP3 on

(2)As shown in Figure.

A. "Last", long press the volume decrease "0";

B. "Play / Pause / Auto Search" button;

C. for the "next song", long press the volume increase "30";

D. "M" is the mode switch key.

IV、 Specification

Poly solar panel	Range 18V/10W~30W		
Output Voltage :	DC 12V output 4pcs , USB 5V port 2pcs.		
Build-in battery :	12V/7AH or 12V/9AH (Lead-Acid type)		
Charging time :	determined according to the method of charging		
Discharging time :	determined based on the load required to power		
Rated charge	3A	Rated discharge	5A

current :		current :	
System Voltage :	12V	Empty load loss :	< 12mA
Exceed voltage protection :	14.4V	Enhance the charging voltage :	15V
Brown voltage :	11.6V	Over-discharge voltage :	10.5V
Control method :	Charge; PWM pulse width modulation		
Working temperature :	-10°C to 55°C		
Circuit protection :	Overcharge, overload and short circuit protection		

Note: The specific configuration of the system shall prevail in kind.

V. the matters needing attention

- 1. Before using the product, please read this product manual carefully.**
- 2. Do not use parts or appliances that do not conform to product specifications.**
- 3. Non-professionals can not open the machine for maintenance, to avoid product damage.**
- 4. Storage box attention to waterproof, must be placed in dry and ventilated place.**
- 5. When using this system, do not use near fire or under high temperature.**
- 6. The first time before using the system, please use the battery before filling, built-in overcharge protection do not have to worry about long-term charge, the system charge bad problem.**

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7. Rain or rainy season, please save electricity, turn off the switch when not in use.
 8. If the product is not used for a long time, at least one month to do a charge and discharge cycle maintenance, otherwise it may affect the normal use of the product.

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