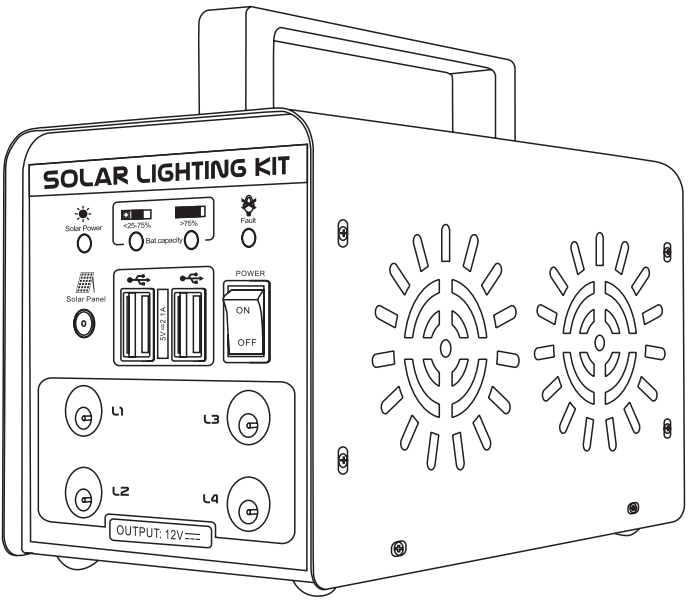
SOLAR LIGHTING SYSTEM

USER MANUNAL



Note: Please read the user manual carefully before using the product

1. INTRODUCTION

This system uses the microprocessor and special control algorithm to realize the intelligent control. It is designed especially for the users at remote and power shortage area, working at field, travel camping, also for the small DC power electricity supply.

2. PROTECTION FEATURES

It has low voltage, high voltage, over-charge, over-discharge, overload, unique electronic short circuit protection and protection against reverse polarity. All protections do not harm to any parts, do not burn fuse; it has TVS lightning protection, no jump line design to improve system reliability and durability.

The main circuit of this system makes the high performance, high precision 20degit AC monolithic, processor as major controller, with various functions such as over charged, over discharged protection; battery against flashing during the over discharged voltage rising up again; standby voltage of lower power consumption. USB output and overloaded protection; charge or discharge independently, and a key trigger.

USB output overload protection: the USB output would shutdown automatically as the maximum output current exceeds 2A when charging for mobiles, MP3/MP4, and digital camera etc.

3. MAIN CHARACTERISTICS

※ DC output system with multiple interfaces can satisfy various demands. DC output interfaces are including 4 or 6 pcs DC and 2 pcs DC5V USB port.

※ Charge circuit adopts double MOS tandem control circuit, reducing nearly half circuit voltage losses than diode circuit. PWM fuzzy control is applied in the charging, substantially increasing charge efficiency and using time.

※ Standby function under lower power consumption: after the startup in three minutes, if no detection on the output load, the system will automatically switch into lower power consumption standby mode.

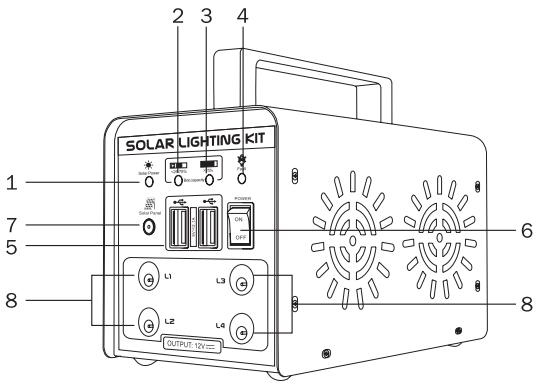
※ Charging and discharge independently: discharging could happen when charging; both of them are not interfered.

※ Charging display function: solar power light shall lit when solar panel start to charge for battery. There are two lights indicates the different battery capacity. The Fault light shall lit when lower voltage, over voltage, over load and short circuit happens.

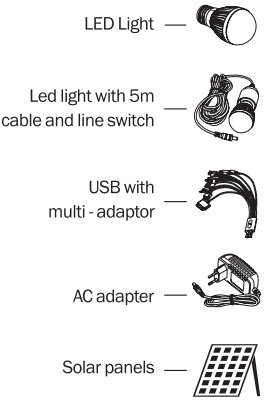
※ All controls adopt industrial chip and precision components, which can work normally in cold, high temperature, moisture condition.

※ This system can be charged by AC adaptor also. User can use solar panel charge for battery and also user can choose the AC adaptor.

4. MATERIALS INDICATION

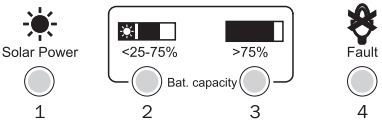


ACCESSORIES



1. Solar Power Indicator
2. Indicator for battery capacity ＜25~75%
3. Indicator for battery capacity ＞75%
4. Fault indicator
5. USB 5V 2.1A output
6. Power ON/OFF switch
7. Solar / AC Input
8. DC 12V output

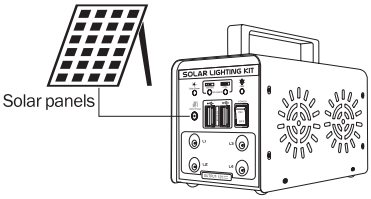
5. THE LED INDICATOR IN FRONT OF CABINET



No	Indicator	Color	Indication
1	Solar power indicator	Green	When charging for battery by solar power or AC adaptor, this indicator lights, when fully charged, it will be off.
2	Indicator for battery capacity＜25~75%	Yellow	When battery has been charged between 25% and 75%, then this yellow indicator lights.
3	Indicator for battery capacity＞75%	Yellow	When the battery has been charged up to 75% or more, then this indicator lights.
4	Fault indicator	Red	If the low voltage, over voltage, overload or short circuit happens, this indicator lights.

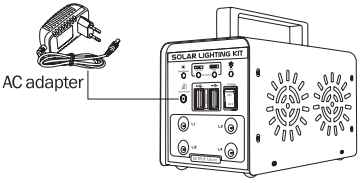
6. CHARGING OPERATION

1. Connecting the output plug of solar panel to charging input interface on cabinet (solar panel), the solar power indicator lights.



Note: the overcharging protection affects only when the cabinet switches on, we advise that when you use the solar panel up to 30W, please switch on the cabinet when charge for battery!

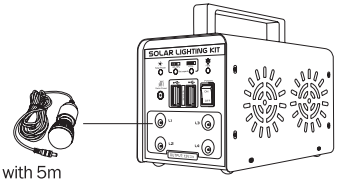
2. Connecting the output plug of the AC charging adaptor to charging input interface on cabinet (solar panel), the solar power indicator lights.



Note: Place the panel towards the sunlight at right angle, avoiding any shadow.

7. LIGHTING OPERATION

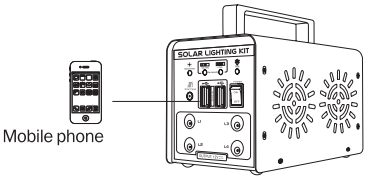
Firstly screwing the LED bulb into the holder, then plug the LED into the 12V dc output connector and switch on the system, the lamp shall light.



Led light with 5m
cable and line switch

8. CHARGING FOR CELL PHONE AND OTHER DIGITAL PRODUCT

Connecting the cell phone or digital product to the USB port on the cabinet, it will work. USB interface is for DC5V, the maximum output fluid is not permitted exceeding 2.1A. you can charge for your iphone or ipad.



Note: the USB output interface for all kinds of output voltage is suitable for DC5V charging products.

9. TROUBLE SHOOTING

Phenomena	Problem and methods
Solar power indicator does not light when there is sunshine	Check whether the connection is correct and contact is reliable
DC output LED does not light	Check whether the LED lights plug is loosen. Check DC voltage. Check whether the switch of LED is "ON". Check whether the line connection is right. If the entire above are normal, the light still can't be lighted, replace the LED bulb.
DC output fails while the Fault indicator lights	The system is in the low voltage protection or over voltage or short circuit protection.
The system is fully charged in short time after long-term use, and powers the loads in short time	Replace the battery for its damage.
The indicator lights green with red flashing, and no DC output.	Over loads, output recovers back after reducing loads used and triggering power switch twice.

10. CAUTIONS

※ Place the panel towards to the sunlight at right angle, to avoid any shadow occurring.
※ Do not disassemble power control cabinet unless you are professional. It will damage the product. If any questions or doubts occur, please contact professor or our service center.
※ Do not place the power system around flammable, explosive materials, which may cause fire and property damage.
※ Make sure built-in battery is fully charged before first time using.
※ Do not put it into water.
※ The battery should be charged fully at least once every month when the products is not in use for a long time.
※ Keep the solar panel clean to get the best charging effect, solar panels under natural conditions in service life is 25years.
※ Do not press or knock hard to solar panel.
※ The rainy day or rainy season please save electricity, shut off the main switch when not in use, solar panel can be connected.

11. DISPOSAL INSTRUCTIONS

Home electronic equipment: If you no longer wish to use this appliance, please take it to the applicable collection point or deliver it to a public recycling location for old electronic equipment. Electronic equipment shall under no circumstances be disposed of in the same manner as normal household waste (see the crossed-out garbage can symbol above). Further disposal instructions: Hand over the appliance in a condition that will allow for safe recycling and disposal. Remove all batteries from the appliance in advance and prevent any liquid containers from being damaged. Electronic equipment may contain harmful substances. Improper use or malfunction caused by damage may adversely affect human health and harm the environment during recycling.

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12. SPECIFICATION SHEET

SOLAR LIGHTING SYSTEM

Model		SL1007	SL1012	SL1507	SL1512	SL2007	SL2012	SL2017	SL2026	SL3017	SL3026	SL5017	SL5026
System voltage		12V DC											
Solar lighting kit	Max.solar charge current	3A or 5A											
	Rated discharge current	3A or 5A											
	Open circuit loss	< 5mA											
	Over voltage protection	17V											
	Lift charge voltage	14.6V											
	lower voltage protection	11.8V											
	Over discharge voltage	11V											
	Double USB port	5V 2.1A											
	LED indicators	Fault, battery capacity < 25 ~ 75% and > 75%, solar power											
		Solar/AC input port											
	Temperature compensation	-4.0mv/0℃/2V											
	DC12V output plug	2pcs or 4pcs						4pcs or 6pcs					
	Charge control mode	PWM control											
	Protection circuit	Over charge, over discharge, overload, short circuit protection, solar panel and battery reverse polarity protection											
Solar Panel	18V with 6m cable	10W		15W		20W		20W		30W		50W	
Storage Battery	12V lead acid battery	7Ah	12Ah	7Ah	12Ah	7Ah	12Ah	17Ah	26Ah	17Ah	26Ah	17Ah	26Ah
AC charging adaptor	Input: AC100-240V, 14.5V2A	Optional											
USB charger adapter	10 different connectors	Optional											
Lighting source	LED 3W	2pcs or 3pcs or 4pcs or 6pcs											
Lighting cable	5m	2pcs or 3pcs or 4pcs or 6pcs											
Operating Temperature		-35℃ ~ 65℃											
Unit size		190*107.2*118mm						220*134.2*197mm					

Note: Specifications is subject to change with out notices.

Tips: The picture and function description just forreference,and we reserve the right to change it and have no notice.