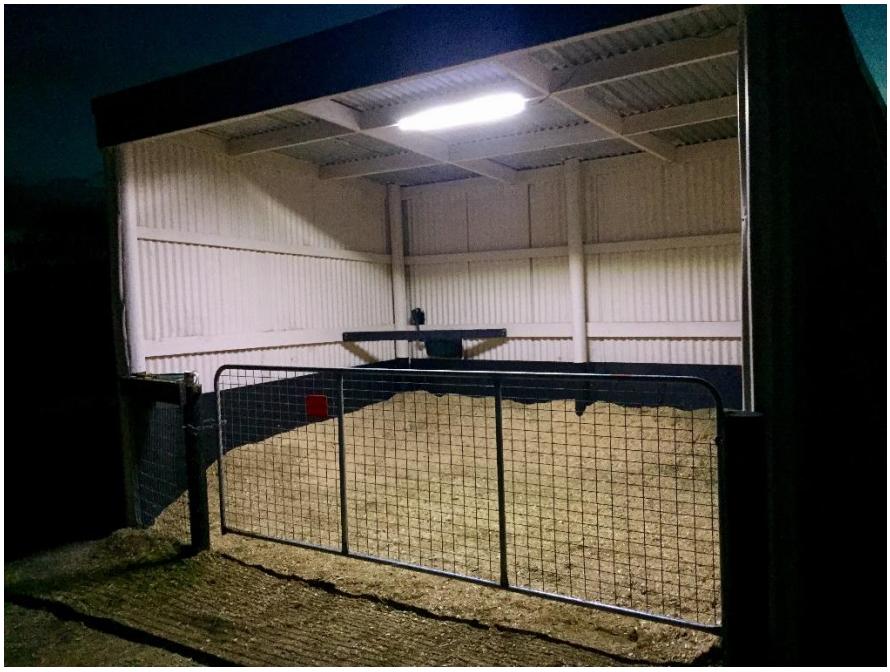
USER MANUAL

Loose Box Solar Lighting Kit



Loose Box Solar Kit Setup and Usage Instructions.

Before we start

The LEDs and components are designed to have an input voltage 12Vdc. DO NOT try and apply more than 12V as this will permanently damage the Battery and your LED strips.
Using a 12V battery with the solar panels you have purchased should provide enough voltage to give you the light you need.

Instructions.

Uneek LEDs Solar Setups for Loose Boxes use a 1m Long Rigid LED strip.
Each 1m long strip is able to easily light up a 4mx4m area.
To turn the lights on in the container the kit comes with a Waterproof on/off switch mounted to the front of the Waterproof Enclosure.
This is a DIY install. All components come ready to plug and play and Instructions are included.
As it is all low voltage no electrician is needed to install this setup.

Features.

- 12V 20W Solar Panel with mounting brackets. These Solar Panels have a Poly-carbonate coating to protect them from Hail and the Elements.
- Solar Panel Mounting Z Brackets
- Waterproof On/Off Switch
- 8Ah Lithium Ion Battery
- 1x 1m Long 8520 LED Strips with mounting clips
- 2m Solar Panel Cable
- Extension Cables to connect lights to Battery. Cables have waterproof twist lock connections.
    - 1x 5m
    - 1x 2.5m

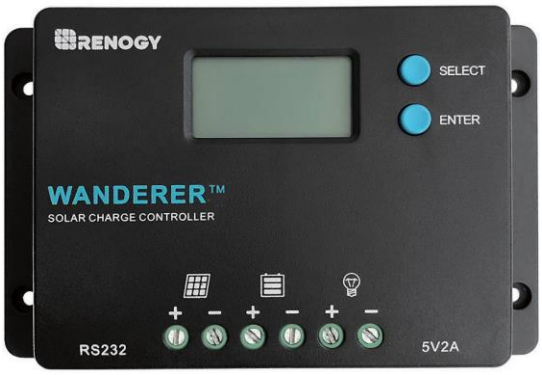
Lithium Ion Battery Pack

The battery pack contained in this kit is a 8Ah Lithium Ion battery.
It has built in overcharge and overdischarge protection.
The battery will charge with the power switch in both the on and off positions by using the included solar panel.

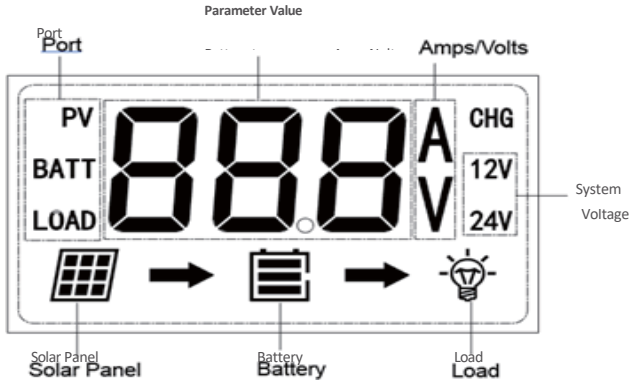
We recommend the Power switch on the Battery is left in the on position all the time during normal use. The lights can be switched on/off using the waterproof switch.
The battery has heavy duty velcro on its back to mount it in place.
To mount it in place simply remove the backing from the velcro and hold in place for 30sec before letting go.

Renogy Wanderer Solar Charger

The Renogy Wanderer is pre-wired and configured in our workshop before being sent.
Do not change charge settings without first consulting Uneek LEDs first.
The Battery Type selected on the Charge must be kept as Lithium (LI).



LCD Indicators



	Steady on	Charging Battery
	3 Bars Flashing	Battery Voltage (16.1V+)
	3 Bars	Battery Voltage (12.9V-16.0V)
	2 Bars	Battery Voltage (12.5-12.BV)
	1 Bar	Battery Voltage (11.6-12.4V)
	No Bars	Battery Voltage (11.SV and below)
	No Bars Flashing	Battery Voltage (10.9V and below)

	Steady on	Load is On

PV Array **Short Circuit**	When PV short circuit occurs, the controller will **stop charging. Clear it to resume normal operation**
PV Over **current**	The controller will limit the battery charging **current to the maximum battery current rating. Therefore, an over-sized solar array will not** operate at peak power.
Load Overload	**If the current exceeds the maximum load current** rating 1.05 times, the controller will disconnect the load. Overloading must be cleared up by reducing the load and restarting the controller.
Load Short **Circuit**	Fully protected against the load wiring short-circuit. Once the load short (more than quadruple rate current), the load short protection will start automatically. After 5 automatic load reconnect attempts, the faults must be cleared by restarting the controller.
PV **Reverse** Polarity	The controller will not operate if the PV wires are **switched. Wire them correctly to resume normal controller operation.**
Battery **Reverse** Polarity	**The controller will not operate if the battery wires are switched. Wire them correctly to resume normal controller operation.**

List of Errors shown on LCD Display

E0	No error
E01	Battery over-discharged
E02	**Battery over-voltage**
E04	Load short circuit
EDS	Load overloaded
E06	**Controller over-temperature**
E08	**PV input over-current**
E10	**PV over-voltage**
E13	PV reverse polarity
E14	Battery reverse polarity

Mounting the Solar Panel

To get the most from your Solar Panel it should be mounted facing North and on a 30deg angle. Before Screwing it to the roof, temporarily put it in place to find the best position.

Once its in place run the Solar Panel cables down to the Solar Batter Charger.
Plug it into the Battery and if it during the day the blue LED on the battery should light to indicate it is charging.
The battery can be charged while it's switch is in both the on and off position.

Mounting the Switch and LED Strips

Both the Enclosure and LED strips have brackets to make mounting them easy.
Simply place the Switch and LED strips where you need them screw in place using the included screws.
The Cables coming from the enclosure are labelled to make connection easy.

Thanks for buying from Uneek LED's.
If you have any questions or problems you need help with please either call or email us on the details below.

Regards,

Uneek LED's
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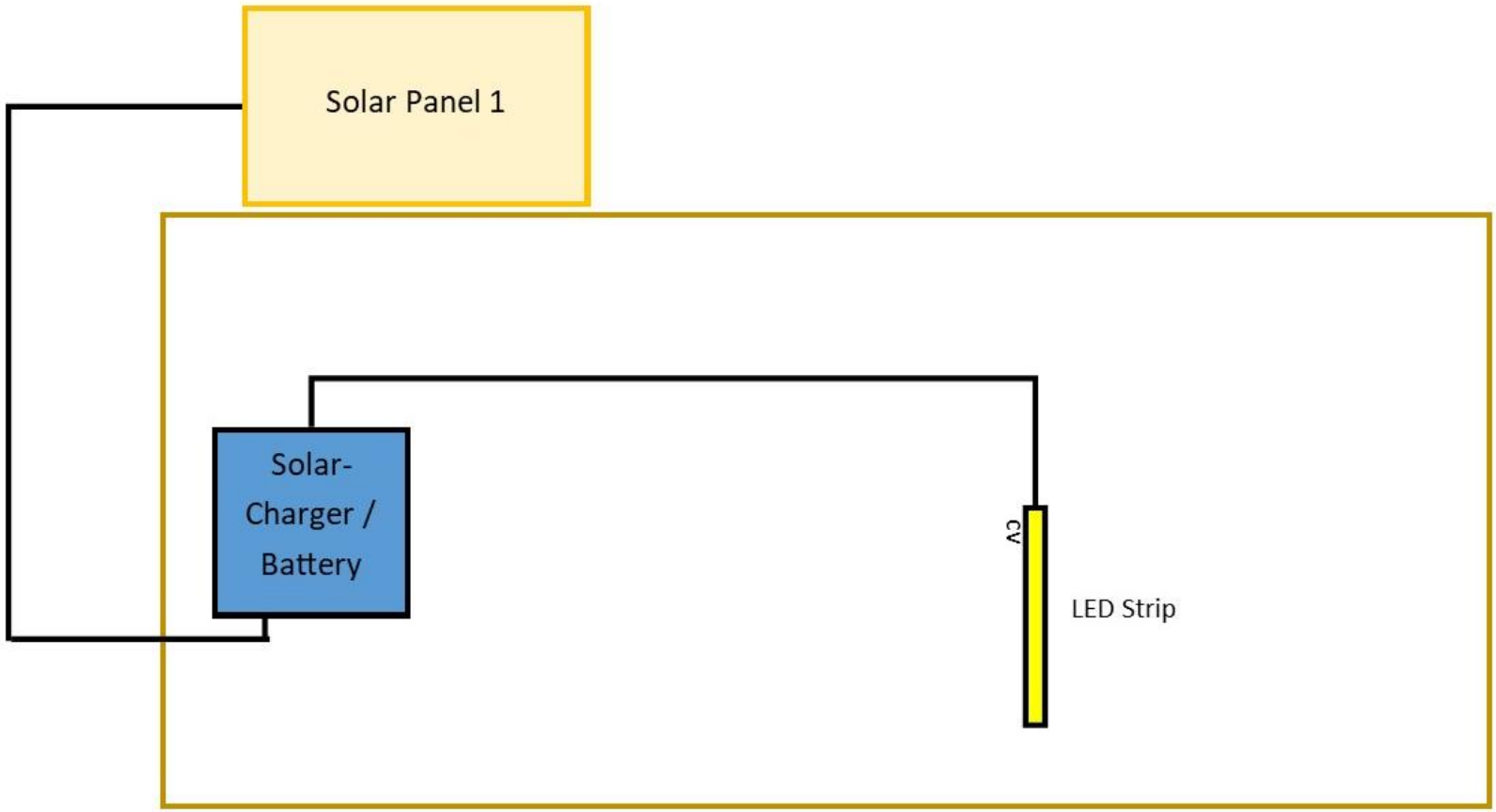
Phone: 1300 771 457

Lighting Council AUSTRALIA MEMBER


Solar Panel 1
Solar-
Charger /
Battery
CV
LED Strip