

# Solar Energy Hub

Solar powered lighting system and mobile phone charger

Model: EH4



User Guide / Instruction Manual

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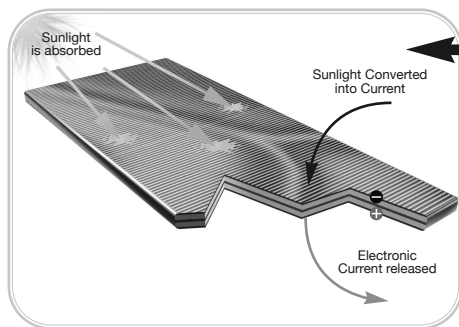
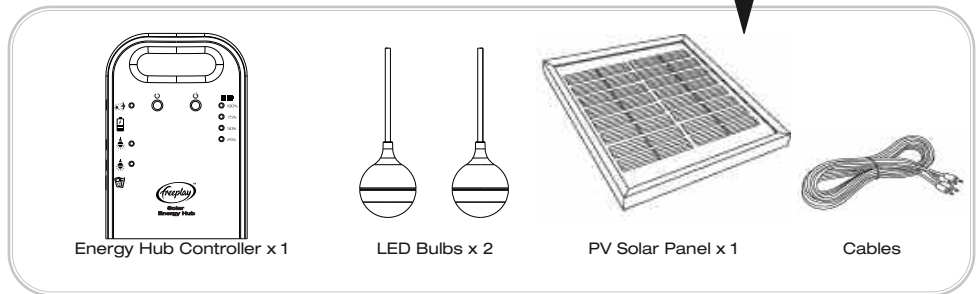
## 1. GENERAL SAFETY

Before using your Energy Hub please read this manual carefully. Do not discard this manual, it contains instructions for installing and maintaining your system.

**Follow the installation instructions carefully.**

## 2. ENERGY HUB CONTENTS

Your system should include all the illustrated components below. In the unlikely event that there is anything missing, please contact the local distributor you purchased the product from.



## 3. OVERVIEW - HOW IT WORKS

The solar panel absorbs sunlight and turns it into electricity. The battery in the Energy Hub then stores the energy for later use.

The Controller in the Energy Hub protects against:

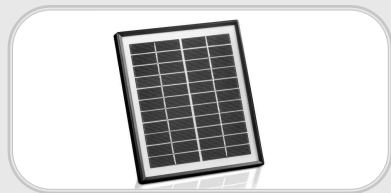
- Over charging
- Under charging
- Short circuit and overload

The Energy Hub contains a built-in, state of the art Li-ion battery which is rechargeable and can be replaced if necessary. The battery level LED indicators give battery state of charge. They illuminate for a short period after the LED bulbs have been switched on. The Energy Hub also has a USB port to charge external devices like mobile phones. Energizing the USB port is triggered by activation of any the switches, either ON or ON/OFF.

The Energy Hub is also rechargeable via the micro USB port.



## 4. INSTALLATION & USING YOUR ENERGY HUB



### (A) Solar Panel

- Place the solar panel in a position directly facing the sun where it can receive the strongest possible sunlight.
- The solar panel should be installed in a well ventilated location – good ventilation will help to generate more energy and extend the life of the product.
- The solar panel will perform best when set up at 90° to direct sunlight.

**WARNING:** The solar panel is water resistant NOT waterproof.  
**Do not submerge in water or expose the panel to a continual flow of water.**



### (B) Energy Hub Controller

- Place the Energy Hub Controller on a stable flat surface in an area that is safe from the unit being knocked or caused to fall. The controller should be placed in a dry, shady place.



### (C) Electrical Connections

- Connect the cable of the first LED bulb to the socket marked with a picture of a light bulb.
- Connect the cable of the second LED bulb to the remaining socket marked with a picture of a light bulb.
- To recharge from the sun, connect the cable from the solar panel to the socket marked with a picture of the sun.
- To recharge from a USB source, connect to the Micro USB port.

### (D) Using your Energy Hub

- Place the solar panel in the sun as instructed in 4A above. The charging LED will illuminate.
- The battery level LED indicators give battery state of charge. They illuminate for a short period after the LED bulbs have been switched on.
- There are two ON/OFF switches, each of these switches a bulb. The bulbs have two settings, “endurance” and “full”. The full setting delivers 100 lumens of light per bulb. The endurance setting delivers 60 lumens of light per bulb, and increases the shine-time of the bulb. The switch sequence is: OFF / ENDURANCE / FULL / OFF.
- The LED bulbs are water resistant and can be used outside but do not submerge them in water or expose them to a continual flow of water.
- To charge a phone, connect a standard USB cable, (or a multi-tip cable if supplied), to the charging port marked with a picture of a mobile phone. The USB port is switched on by the activation of any of the ON/OFF switches. It is not necessary to have a bulb ON in order to charge a phone. Any activation of the switches energizes the USB port. If a light is not required during phone charging, the bulb may be switched OFF again and the port will remain energized.

## 5. RECHARGING YOUR ENERGY HUB

### From the Sun

- Plug the solar panel connector into the socket marked with an image of the sun. Follow steps A above. When charging, the LED next to the socket will illuminate.

### From a USB Source

- To recharge from a USB source, connect a USB cable into the Micro USB port.

**RECOMMENDATION:** Please charge the Energy Hub for a full day before first use.

## MAINTENANCE

To make sure that the battery remains in good condition the Energy Hub should be fully charged at least once a month.

Solar Module - clean the glass surface of the module as necessary. Use water and a cloth- a mild detergent can be used. Protect the cables from stress by placing them where they will not be trodden on.

If the controller is to be used outside, please place the unit in a protective housing keeping it free from dust and water.

The Energy Hub is a maintenance free design and there are no user serviceable parts. The battery is replaceable and is accessible by removing the screws on the rear panel of the Energy Hub.

If you have any problems please follow the steps in this manual or contact the distributor you purchased the kit from.

## SPECIFICATIONS

SOLAR ENERGY HUB EH4	
Solar Panel Power, Size & Cable	4W 22.5*19.5cm; 5 Metres
Internal Battery	Li-ion 5200mAh
Light Output (2 x 1W bulbs on high setting)	2 x 100 lumens = 200 lumens
USB Output	5V, 500mA
Battery Charging Time	7 to 8 hrs in full sunlight conditions or via USB Port
Daily solar runtime (2 bulbs on high setting)	6 Hours*
Full Battery Runtime High Setting	9 Hours*
Life span	
Solar module	No less than 15 Years
LED Light	50,000 hours
Battery	More than 1,000 cycles

\*Mobile phone charging can reduce daily solar runtime of lights.

## WARRANTY

Freeplay Energy Ltd, undertakes that, if within 2 (two) years of purchase, this product or any part thereof is proved to be defective by reason of faulty workmanship or materials, we will, at our option repair or replace the same free of charge for labor or materials on condition that:

The original invoice or sales receipt (indicating the date of purchase, product type and dealer's name) is presented together with the defective unit.

The complete unit is returned to the manufacturer or country distributor, postage paid.

The unit has not been serviced, maintained, repaired, taken apart or tampered with by any person not authorised by the manufacturer.

This warranty is in addition to your statutory rights.

## FCC Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

See our entire product range: [www.freeplayenergy.com](http://www.freeplayenergy.com)