

*Please give to the Customer*

**SOLAR KIT INSTALLATION  
AND USER MANUAL**

(version 20180911)



**WARNING:**

Solar panels generate electrical power when exposed to sunlight.  
Risk of short circuit and personal injury if used incorrectly.

**Thank you for choosing WattMobile**  
*Energy solutions for people on the go*

In this document you will find all the necessary information for the installation and use of your WattMobile solar charging system. If you need assistance with this product, please contact our customer service:

- by phone at 1-888-400-9863 or by email at [info@ecosolplanet.com](mailto:info@ecosolplanet.com)

**ITEMS INCLUDED:**

Item	Description	Quantity
Solar panel	Varies according to the kit selected	Varies according to the kit selected.
Charge controller	Varies according to the kit selected. Remote display	1 included with our deluxe kit
Wires	30 feet AWG #10	1 pair
Y Connectors	Pair of Y connectors MC4	None for 1 panel 1 per additional panel
<b>The following items are included in the <u>rigid RV kits only</u>.</b>		
Parts - Bag A	To attach brackets to the panel in step 6	1 bag per panel
Parts - Bag B	Screws and rubber well-nuts to attach the panel to the roof in step 6	1 bag per panel
Brackets	Stainless steel	4 per panel
<b>Optional Items:</b>		
Inverter	Several models available	-
Inverter installation kit	Not included with the inverter. Several models available	-
Transfer switch	30 or 50 amps	-

## ITEMS NOT INCLUDED:

- Fuses and sealant;
- Flexible kits: Glue, velcro and screws to attach flexible panel;
- Marine kits: Brackets and screws to support rigid panel.

## WARNING - BEFORE STARTING INSTALLATION:

- Disconnect all electrical power prior to installation;
- Recommended to wear safety goggles and protective clothing;
- Proceed with the installation away from places with flammable materials or gas;
- Cover the solar panel in order to prevent exposure to light during installation.

## WARNING - DURING INSTALLATION:

- Ensure that the polarity is correct during all electrical connections;
- Secure all connections before connecting the battery;
- Color code must be respected at all times:

Positive (+) Terminal	Negative (-) Terminal
Red	Black

## INSTALLATION STEPS:

- 1) Determine (without attaching) the placement of panels;
- 2) Determine (without attaching) the placement of the charge controller;
- 3) Pass the wires between the panels and the charge controller;
- 4) Attach the charge controller;
- 5) Connect and check that the solar installation is operating;
- 6) Attach the solar panels.

### STEP 1: DETERMINE THE PLACEMENT OF THE PANELS

Item required: Solar panel

Do not attach the panel. Wait until step 6.

- a) Choose a flat surface that is free from obstructions that could create shade;
- b) If possible, leave enough space around panels in order to circulate, which will facilitate installation and maintenance;
- c) RV: Ensure that the area of the roof that is used for installation is sufficiently rigid to support the panel and withstand wind pressure during travel;  
Marine: Ensure that the bracket is sufficiently rigid and well attached in order to support the panel and withstand wind pressure.
- d) Ideally, place the panel so that its narrowest faces forward to reduce the load exerted by the wind during travel;
- e) Place the panel in a safe place. Do not attach at this time.

## STEP 2: DETERMINE THE PLACEMENT OF THE CHARGE CONTROLLER

Item required: Charge Controller

The charge controller must be installed:

- a) Inside in a dry place, but not in the battery compartment;
- b) Less than 10 feet away from the batteries for optimal performance;
- c) Vertically or flat.

\*Certain models include a remote display. Choose its placement accordingly.

## STEP 3: PASS THE WIRES BETWEEN THE PANELS AND THE CHARGE CONTROLLER

Item required: Wires

**WARNING: Ensure that the wires are not connected to an electrical source (solar panel, battery, etc.)**

Your set of wires has connectors at one end, these must stay on the roof in order to connect the solar panels. The extra wire to the charge controller will be used to connect the charge controller to the batteries.

Various options are available to pass the wires:

RV:

- 1) By inserting the wires through the opening of the aeration lid of the refrigerator or by piercing the side.
- 2) By piercing the roof and inserting the wires. \*You can use an entry cover (offered in black or white) in order to hide the holes.

Marine:

- 3) By using a hose deck. (We also offer entry covers in white or black.)

## STEP 4: CONNECT AND ATTACH THE CHARGE CONTROLLER

Item required: Charge controller

**WARNING: Ensure that the wires are not connected to an electrical source (solar panel, battery, etc.)**

Drill mounting holes in the designated area. \*Install the charge controller vertically or flat.

Color code must be respected at all times:

Positive (+) Terminal	Negative (-) Terminal
Red	Black

- a) If your kit includes a remote display, drill the mounting holes;
- b) Connect the wires in the charge controller:
  - a. Positive and negative outputs towards the battery. \*You can use the extra wire from the solar panel to the charge controller;
  - b. Positive and negative input from solar panel;
- c) **Do not connect the controller's auxiliary outlet (LOAD) without first reading the user manual;**
- d) Connect the wires to the main battery;
- e) Check that the charge controller lights up. For the moment, do not set the parameters of the charge controller, this will be done later.

## **STEP 5: CONNECT THE BATTERY AND THE SOLAR PANELS**

Items required: Solar panel + Y connectors (if more than one panel)

- a) Connect the solar panels and expose them to the sun (if possible);
- b) Check the information on the charge controller.

## **STEP 6: ATTACH THE SOLAR PANELS**

Item required: Solar panel

For rigid RV solar kit: Add parts Bag A + Bag B.

For other types of installations: You must purchase the items necessary for attachment. Ensure to firmly install the panel so that the wind will not tear the panel from its mount. If you are installing a flexible panel and you wish to walk on it, it is important to install it on a hard flat surface.

- a) Attach the brackets to the panel with the items in Bag A. Use the hole in the center of the bracket (keep the large slot to attach the panel to the roof, for easy adjustment if necessary);
- b) Place the panel on the roof and drill the mounting holes. Be sure to choose a location that is solid enough to support the panel and withstand wind pressure during travel;
- c) Attach the brackets to the roof with the items in Bag B.

## **MAINTENANCE:**

Occasionally clean the solar panels with a jet of water, a wet cloth or with window cleaner. \*Do not use products or materials that could scratch the panel.

## **CHARGE CONTROLLER CONFIGURATION**

In order to configure your charge controller, we recommend that you refer to the user's manual included.

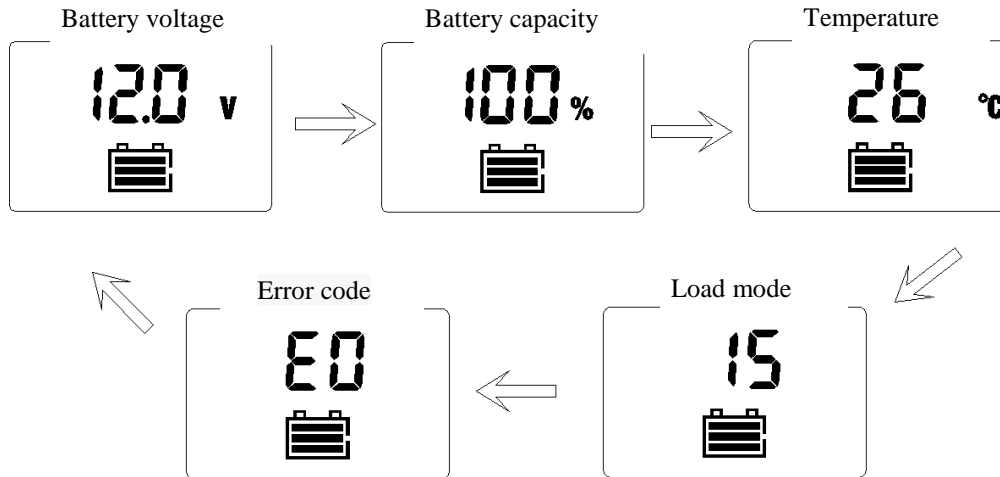
### **AUXILIARY OUTPUT:**

**Do not connect anything to the auxiliary load output as this is only a 2-amp power output.  
You can leave the default value.**

### **BATTERY TYPE:**

- SLD : Sealed lead-acid battery (the most common)
- GEL : AGM – Gel lead-acid battery
- FLD : Open lead-acid battery
- LI : Lithium battery
- USE : Self-customized

## DISPLAY:



## BATTERY CAPACITY:

Approximate usable energy left in your battery based on a 50% cycle to avoid damaging your battery bank.  
(13.8V = 100% / 12.1V = 50% / 11.0V = 0%)

## ERROR CODE:

Code	Erreur
E0	No error – Working Mode
E1	Battery voltage too low
E2	Battery voltage too high
E4	Load short circuit
E5	Overload
E6	Controller temperature is high
E8	Solar panel overloaded
E10	Solar panel over-voltage
E13	Solar panel polarity reversely connected

## INSTALLATION OF AN INVERTER

**Refer to the manual supplied with the product.** For the connection you will need wires and a fuse. It is also important to respect the distance from the battery that is recommended in the manual. **The installation of an inverter is complex, we recommend you contact a professional.**

Three (3) common methods of installation:

- Connect your appliances directly to the inverter;
- Permanently power one section of your vehicle with the inverter (like the television, the microwave and a plug);
- Install a transfer switch that will make the transfer between different power sources.

## **INSTALLATION OF AN AUTOMATIC TRANSFER SWITCH**

**Refer to the manual supplied with the product.** Position 1 (shore power) is the default value but when Position 2 (Generator) is on, the switch goes automatically to position. If you do a lot of off-grid sites, we recommend to put the position 1 to the inverter and position 2 to the grid or the generator. **The installation of an automatic transfer switch is complex, we recommend you contact a professional.**

## **ASSISTANCE**

If you need assistance with the installation or product use, do not hesitate to contact our customer service:

- By phone at 1-888-400-9863 or by email at [info@ecosolplanet.com](mailto:info@ecosolplanet.com)

**ESPWATTMOBILE.COM**

**1-888-400-9863**