Kit

READ this manual BEFORE and DURING the use of this product.

ITEMS INCLUDED:

1. Four 15 Watt Solar Panels (SOME KITS SOLD WITHOUT PANEL)
2. 7amp Charge Controller
3. 12' Extension Cable
4. Connector to Male CLA
5. Connector to Female CLA
6. Female Socket to Battery Clamps
7. Connector to Battery Clamps
8. Connector to Regulator
9. 175W Inverter
10. 4 in 1 junction box
11. PVC Mounting Frame
12. Screws and Nuts for Mounting Frame
13. 4 in one connector box allowing all 4 solar panels to be connected together

INSTALATION STEPS:

1. Pick location of setup
2. Setup PVC support frame
3. Place panels
4. Connect panels to 4 in1 junction box
5. Connect extension to 4 in 1 juntion box
6. Connect to charge controller
7. Connect charge controller to battery
8. Connect either 12V female socket to battery to use 12V items or included 175W inverter to use 110V items.
9. Generate Power!

1. Pick Location
Choose Location with greatest sunlight throughout the day

2. Setup PVC support Frame.
Refer to Image #11 - place all parts together and secure with included screws. Double check that all screws are tight and solid.

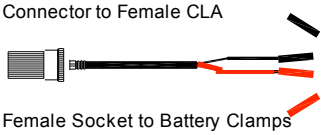
3. Place Panels
Place panels one by one with wire hanging from top part of frame. Use

3 12' extension cable

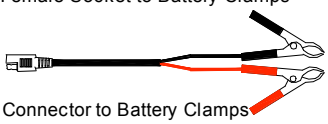
4 Connector to Male CLA

5 Connector to Female CLA

6 Female Socket to Battery Clamps

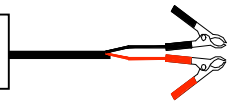


7 Connector to Battery Clamps



8 Connector to Tinned Regulator Wires

9 Inverter

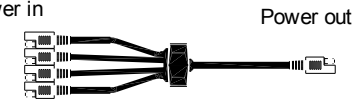


Inverter to Battery Clamps

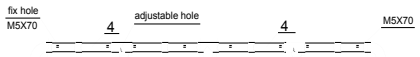
Power in

Power out

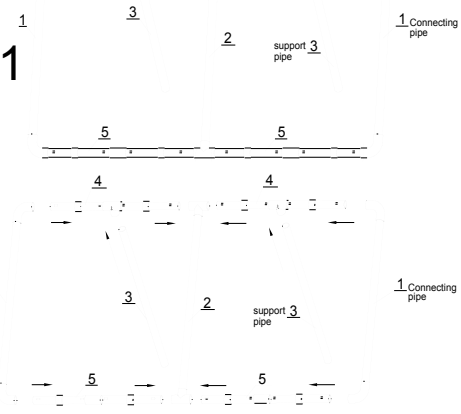
10



4 in 1 connector



11



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Installation
Connection to a battery:
Attach the Battery Charge Controller positive (+) wire to the positive (+) battery terminal. Then connect the Battery Charge Controller negative (-) wire to the negative (-) battery terminal. WARNING: The clips MUST be placed on to the battery in the aforementioned order—wrong connections may cause sparking or explosion.

Connect to Solar Panel:
Connect positive (+) to positive (+) and negative (-) to negative (-). Ensure the connections are secure.

Operation:
Green light indicates a full-charged battery. When the battery reaches 14.2 V, the Battery Charge Controller will cutout voltage thereby ensuring no overcharging.

Yellow light indicates a battery that is being charged. When the battery reaches 13 V, the Battery Charge Controller will cut-in and charging will begin.

NOTES:

- It is normal for both lights to flicker on and off during normal operation. The Battery Charge Controller should be placed within 5' of the battery in a dry, well-ventilated area. This Battery Charge Controller can support up to 100 W and up to 7 A of array current. All connections should be parallel to ensure 12 V (positive to positive and negative to negative).

-Measure the panel voltage with a voltmeter. The voltage reading should be between 16 to 25 V in the sun.

FAQ

What types of batteries can this solar panel charge?

Any 12 V battery used in cars, boats, RV's, motorcycles, etc.

How can I run 120 V AC appliances with my Solar Power Panel?

Connect the battery to a power inverter that converts DC power to AC power.

Can I overcharge my battery?

Yes, it is strongly recommended that a Battery Charge Controller

Can I use this Solar Power Panel outdoors?

Yes, this Solar Power Panel has been weatherproofed. The weatherproofing includes UV protection and protects from weather effects of -35°F to 175°F.

Can I extend the wire?

Without loss of power or voltage, the 12' wire can be extended up to a maximum of 25' with a 16-gauge wire. Ensure proper connections.

Connect voltmeter to each individual panel separately and observe Open Voltage. Open Voltage can range from 16 Volts to 24 Volts. Once all panels test for voltage, proceed to step B.

B. Test Connection to Charge Controller for Voltage.

Reconnect Solar Panels, and connect to charge controller as per instructions. Measure open circuit Voltage at the battery side of the charge controller. Open circuit voltage should read 5-10% lower than without charge controller. Open circuit measurement will read between 15 and 23.5.

C. Connect charge controller to battery

First, disconnect solar panels and connect charge controller to battery. Always connect charge controller to battery first and remove last. Observe polarity – positive to positive and negative to negative.

D. Reconnect Solar Panels to Charge Controller.

If battery voltage is 14.2 or higher, the GREEN light should be on. If battery voltage is between 13 and 14.2, the YELLOW LED should be on.
If battery voltage is 13 or lower, the YELLOW LED should be on.

If all testing results within the above indicated ranges, solar system is in acceptable range. If Voltage reading indicate lower ranges, repeat above connections and retest. Finally, it is common to have 12V Battery issues such as dead cells or non-rechargeable battery problems.