

SolarPodTM Standalone Installation sequence

There will be one package (or palette) of materials. This palette contains six sections (A1, A2, A3, A4, B1 & B2). A1, A2, A3, A4 are top panel portion and B1 and B2 are bottom portions. One box will contain framing hardware and the other two boxes will contain inverter & charge controller pre-assembled and one battery containing box. All tasks must be performed by qualified individuals familiar and trained in wiring safety and electrical codes.

Framing the Solar panels is the first step as given below. Refer to the installation video for mechanical framing installation. As this is a SolarPodTM Standalone, the electrical installation in the video will not be for the Standalone system. Ensure the solar panels face due south and have no (or minimal) shading to maximize solar potential.

1. We will connect the B1 and B2 first using the leg bracket given and secure them. Secure the bolts and tighten. Splice bar shown is not necessary for most applications and is placed only in hurricane prone regions. The closeup of the splice is shown below. If you require splice bars for your application please call SolarPodTM.



2. Then the six feet's will be attached to the bottom portion (B1 and B2) as shown below and tighten.



3. The ground is prepared using six patio blocks and leveled.
4. The SolarPodTM bottom frame is placed on the patio blocks. The Easy hook anchors are driven into the four corner leg plates anchoring them securely. Use additional ways to secure the leg to the ground or roof if you feel it is necessary.
5. Join A1 and A2 using the plate joint provided. A1 can be identified easily since it is the only solar panel with cable that has been coiled and tied to the frame.
6. Join A3 and A4 using the plate joint provided.

7. The A1 & A2 will then be attached to the B1 side of the bottom portion through the hinge nut. Closeup of the hinge is given below. Tighten the hinge. (A1&A2 is the panel top half with coil of wire)

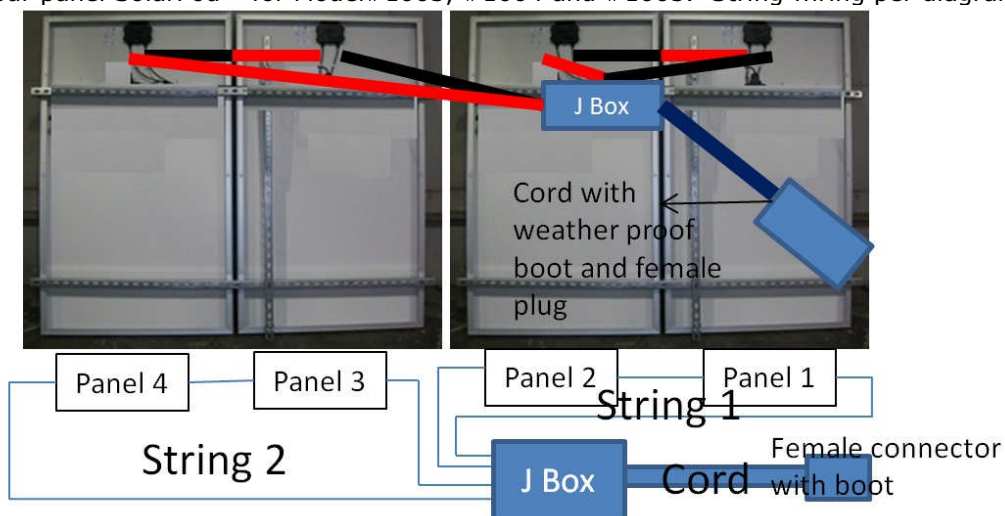


8. The A3 & A4 will then be attached to the B2 side of the bottom portion through the hinge nut. Attach the hinge as in (7) above.
9. Then the "A1 & A2" AND "A3 & A4" will be connected using the splice bar (flat 4 hole plate in the box). There are two splice bars given in the box with hardware.

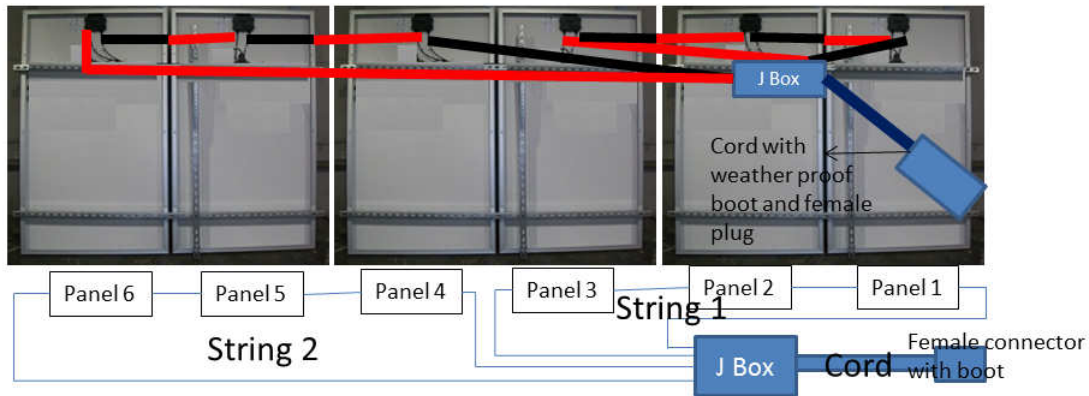


10. Two grade 8 "gold" bolts are used to fasten the telescopic legs to the appropriate tile angle. Now the whole SolarPod™ Standalone is all mechanically connected.
11. Now the electrical portion begins.
12. On the back of each panel, there will be a +ve and -ve wire. Connect the +ve of one to the -Ve of the adjacent. The connections are shown pictorially in the figure below.

Four panel SolarPod™ for Model#1003, #1004 and #1005. String wiring per diagram below:



Six panel SolarPod™ for Model #1006. String wiring per diagram below:

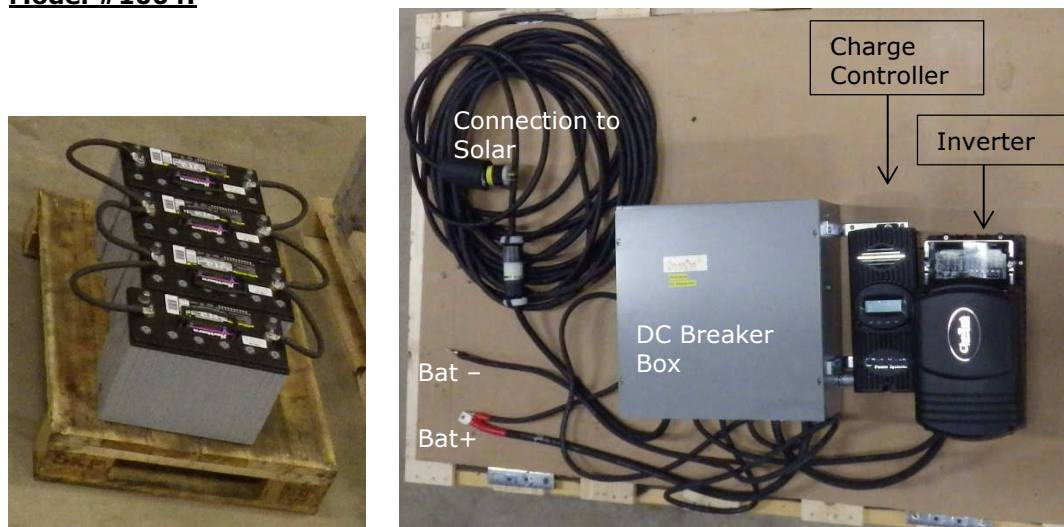


13. The junction box will also have a weather proof twist lock female plug attached. Insert the twist lock male plug extension with weather proof boot to the female plug with weather proof plug attached to the junction box in the SolarPod™ Standalone. The extension cord is not a direct bury cord. Ways to protect the cord from any physical damage to the cords is the responsibility of the installer.
14. Attach the battery unit to the inverter before you connect the Solar panels.

Model #1003: Please see photo below as illustration.

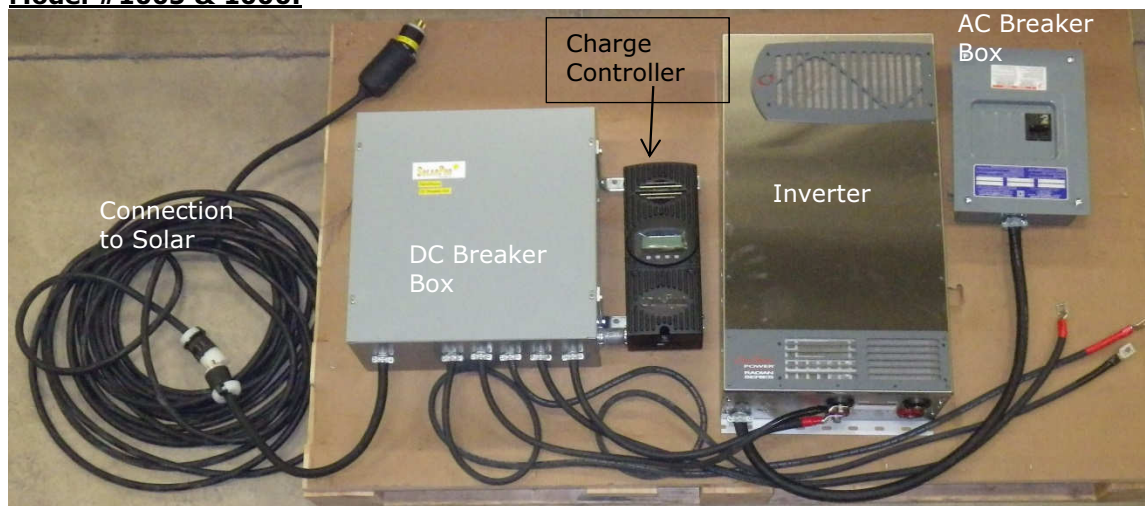


Model #1004:



All terminals are labeled and must be torqued to enable good contact with the terminator of the devices.

Model #1005 & 1006:



All terminals are labeled and must be torqued to enable good contact with the terminator of the devices.

15. Attach the other end female without weather proof to the inverter with the male twist lock without weather proof boot.

Connect the wires as labelled on the wire. Ensure the bolts are torqued for best contact.

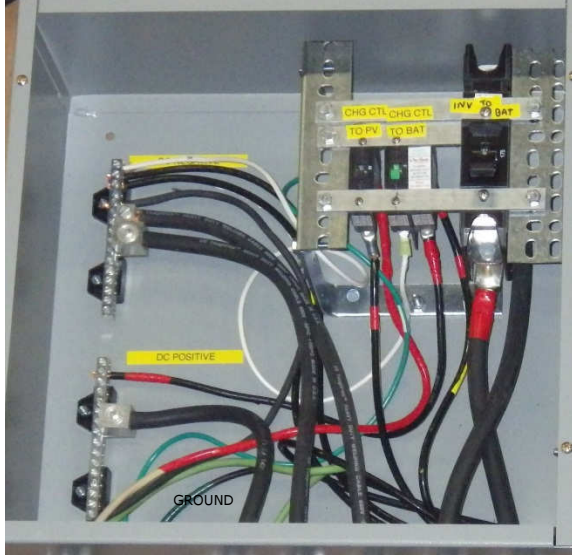
16. Power up sequence:

- a. Ensure all DC breakers in the DC Circuit Breaker Box are off.
- b. Turn on the Charge Controller to DC Circuit Breaker.
- c. Turn on the Charge Controller to Battery Circuit Breaker.
- d. Program the charge controller.
 - i. Language – English
 - ii. Nominal System Voltage : Model #1004 – 12V ; Model 1005 & 1006 – 48V
- e. Turn on the PV Array by connecting the twist lock plugs.
 - i. Check charging status. Must indicate charging if enough Sun light present.
 - ii. Verify in the inverter there is 120V output between L1 and Neutral.
 - iii. Program float and absorption voltages for the DTM31 battery on the charge controller as follows:

Model	Float voltage	Absorption Voltage
1004	13.5V	14.1
1005 and 1006	54V	56.4V

17. Run #6 ground wire through ground lug provided and use a ground rod appropriately distanced to ground the SolarPod™ Standalone.

The DC Breaker Box has a ground bar. The ground bar must be wired to a ground rod.



Ground bar must be wired with AWG #6 or larger wire to a code compliant ground rod.

18. Ensure the solar panels are facing due south and have no shading.
19. Allow some time to let the battery charge (about a day or two; may depend on weather and Sun exposure).
20. Read the manuals for the charge controller and inverter and get familiar with them.
Model 1003: The outlets in the inverter can take only 120VAC and a maximum of 12A. The inverter is a modified sine wave inverter.
Model 1004: The outlets in the inverter can take only 120VAC and a maximum of 17A. The inverter is a pure sine wave inverter.
Model 1005 & 1006: The outlets in the inverter can take only 120VAC / 240VAC and a maximum of 34A. The inverter is a pure sine wave inverter.
21. The warranties are from the manufacturers of the charge controller, inverter and solar panel warranties.
22. Ground fault protection :
 - a. Model #1003: The Powerhub has intergral PV Ground Fault Protection (GFP) hence the GFP on the MPPT60 has been disabled.
 - b. Model #1004, 1005 and 1006: The Charge controller to battery and the inverter to battery are connected through a GFDI breaker.
23. System Voltage:
 - a. Model #1003 and 1004: 12V DC system. 12V batteries have to be hooked in parallel and not in series.
 - b. Model #1005 and 1006: 48V DC system. 148V batteries have to be hooked in series.
24. You are now making SolarPod™ power. Enjoy the system.