



Grape Solar 100 Watt Basic Off Grid Kit (GS-100-BASIC) Quick Connect Guide

IMPORTANT: Please read the Panel User Manual (formerly titled the Safety & Installation Manual), the kit sizing guide (available at www.grapesolar.com/manuals.html) and the PWM-165 manual before following the steps in this guide.

TOOLS REQUIRED: wire cutter/stripper, phillips head screwdriver

Exclusion for Documentation

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Step 1: Check your order to make sure that all parts are included. For the GS-100-BASIC, this is:

- 1 pc GS-STAR-100W solar panel,
- 1 pc 15-foot MC4-comparable cable (to be cut in half),
- 1 pc red/black 5-foot bare-wire-to-ring-lug cable pair,
- 1 pc 10 amp inline fuse, and
- 1 pc Grape Solar PWM-165 charge controller.



Step 2: If you are connecting the system during daylight, cover the panel with cardboard, cloth, or a similar option so that it does not output power. Place the panel so it is facing due south at approximately the same angle as your latitude, in full sun.

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Step 3: Mount the controller if desired (note that it must be in a NEMA-4 rated enclosure if it is outdoors). Use the 5-foot red & black cable pair to connect your positive and negative battery terminals to the battery inputs on the charge controller.



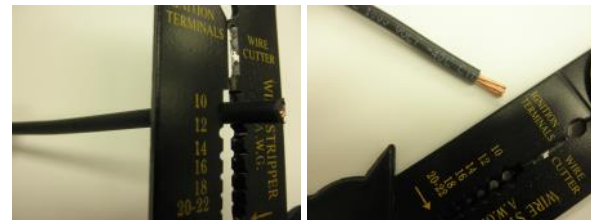
Step 4: Attach the lug end of the red cable to the positive terminal on the battery. Attach the lug end of the black cable to the negative terminal on the battery (see photo, below left). If your battery has sufficient charge (11.5 volts or more), you should now see the controller's LCD display activate. This means the controller has power (controllers are powered by the battery, not the panels).



Step 5: Connect the positive MC4 output of the panel to the 10 amp inline fuse, as shown below:



Step 6: Cut the 15-foot MC4 cable into two equal halves (7.5 feet each). Strip back the wire on the cut end around 1/4 inch to expose the wire (see photos to right). Connect the MC4-comparable ends of the 7.5 foot wires to the panel leads. Follow the positive lead and mark the bare wire end of the 7.5 foot cable to differentiate it from the negative.



Step 7: Connect the bare wire end of the positive cable to the "Solar +" input of the PWM-165, and the other (negative) cable end to the "Solar -" input as shown to the right.



Step 8: Uncover the panel. As the day progresses, you should see charge level increase to 100%. At this point the battery can be used to provide power.

FOR ADDITIONAL INFORMATION, SEE:
WWW.GRAPESOLAR.COM/MANUALS.HTML

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