

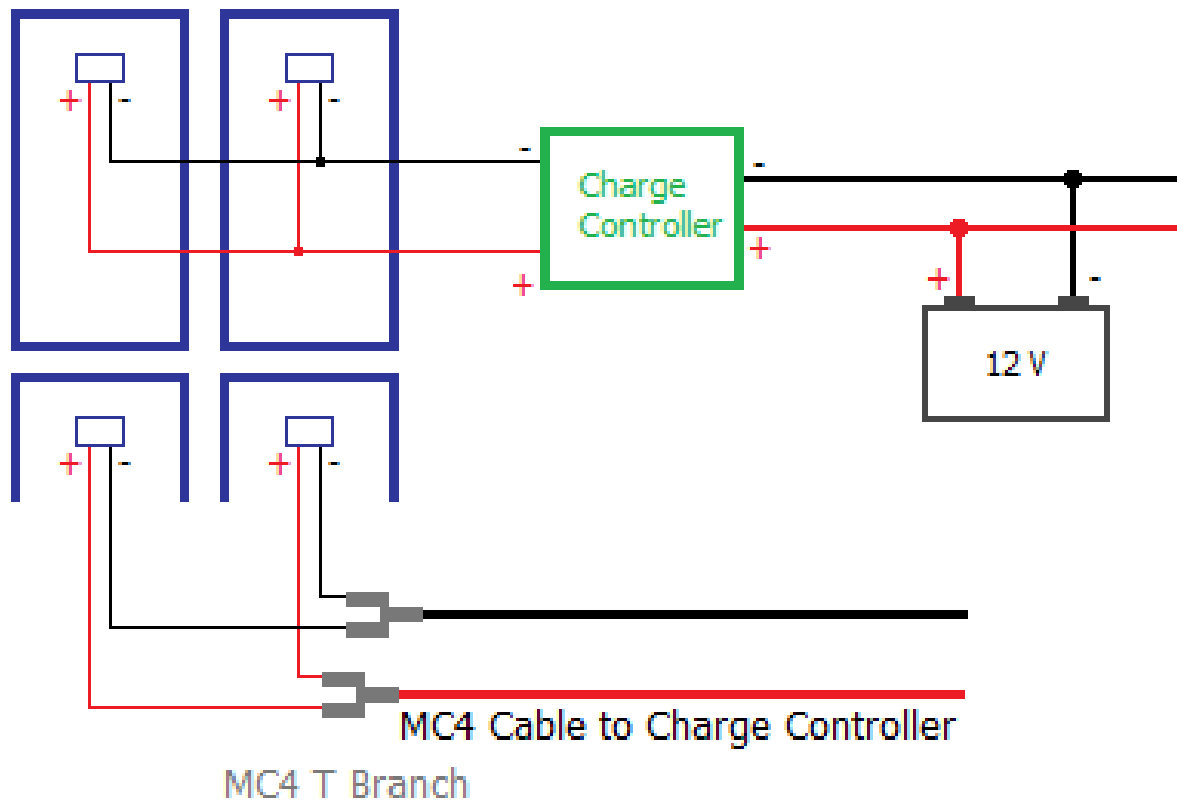


# ***Grape Solar 200 Watt Off Grid Kit*** **(GS-200-KIT)** **Installation Guide**

For additional information about this kit visit [grapesolar.com/products](http://grapesolar.com/products), or email [info@grapesolar.com](mailto:info@grapesolar.com)

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## Basic Wiring Diagram



## QuickStart Setup

**Step 1:** Check your order to make sure that all parts are included. For the 200 watt kit, this is two 100 watt solar panels, a pair of MC4 T-branch connectors, a red/black 6" MC4-to-bare cable pair, two 5-foot red/black bare-wire-to-ring-lug cable pair (one for charge-controller-to-battery, one for battery-to-inverter), a Xantrex Xpower 450 inverter, and a Xantrex C35 charge controller.



**Step 2:** For optimum output, place the panels so they are facing due south at approximately the same angle as your latitude, in full sun. 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.

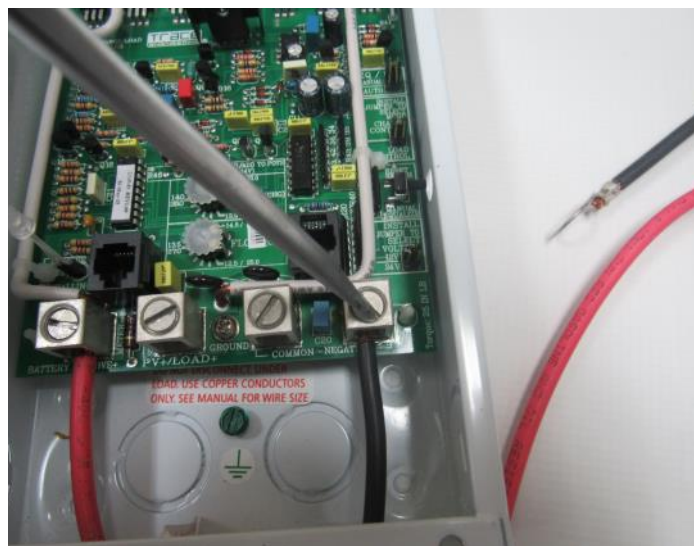


## QuickStart Setup

**Step 3:** Unscrew the top plate of the C35 charge controller. Mount it if desired (note that it must be in a NEMA-4 rated enclosure if it is outdoors).

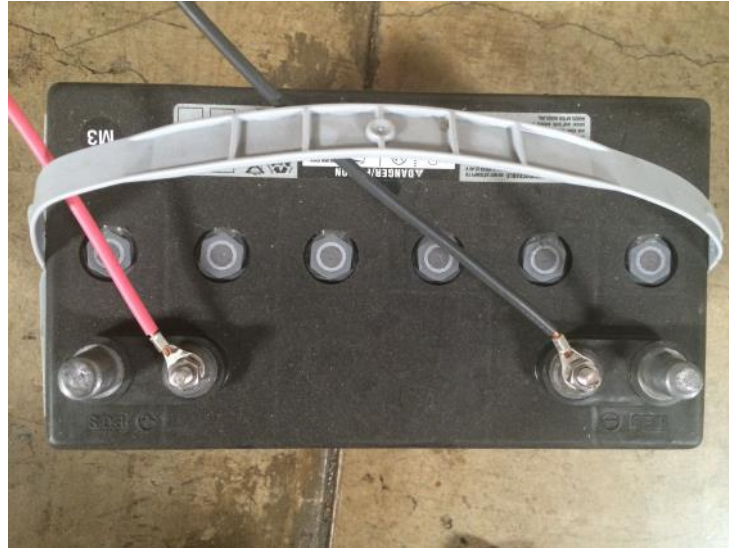


**Step 4:** Use the 5-foot red & black cable pair to connect your positive and negative battery terminals to the “Battery Positive” (use red cable from the positive battery terminal) and “Common Negative” (use black cable from the negative battery terminal) inputs of the C35 charge controller. It does not matter which Common Negative input you use.



## QuickStart Setup

**Step 5:** Attach the lug end of the red cable to the positive terminal on the battery and the bare end to the Battery + input on the charge controller. Attach the lug end of the black cable to the negative terminal on the battery and the bare end to the Battery - input on the charge controller.



If your battery has sufficient charge (11.5 volts or more), you should now see a single green flash repeating on the charge controller's LED display. This means the controller has power (controllers are powered by the battery, not the panels).

**Step 6:** Connect the positive and negative outputs of both panels to the appropriate T-branch connector.



## QuickStart Setup

**Step 7:** Connect the MC4 outputs of the T-branch connectors (or, if you are using MC4 extension cables, the MC4 output of those) to the 6" MC4-to-bare wire pair as shown below:



**Step 8:** Connect the bare wire end of the red cable to the “PV Positive” input of the C35, and the black cable end to the other ‘Common Negative’ input (it does not matter which one).





## QuickStart Setup

**Step 9:** Connect the red (positive) and black (negative) 5-foot cable from battery to inverter.



**Step 10:** Uncover the panel. As the day progresses, you should see an increasing number of consecutive green flashes, until the LED is solid green indicating that the charge controller is in float mode. At this point the battery can be used to provide power (turn the inverter on and plug your AC devices into it for power).