



900-Watt Off-Grid Charging Kit (GS-900-PH-KIT)

Quick Connect Guide

IMPORTANT: Please read GS-MPPT-Zenith-60 charge controller owner's manual, and PowerHub Owner's Guide (included with products) before assembling kit.

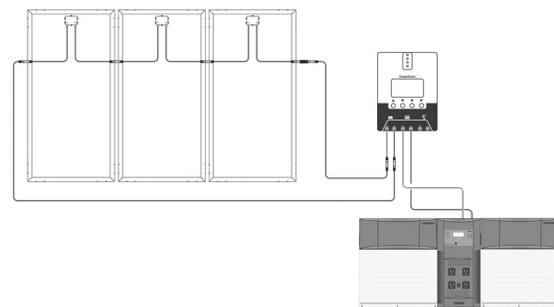
For additional information about Grape Solar products:
email Support@GrapeSolar.com, or
call **1-877-264-1014** for live telephone support.

To estimate how much average monthly power this system should produce in your area, please use the **PV Watts Calculator** found at:

<https://pvwatts.nrel.gov/>

This System Size= 0.9 kW DC

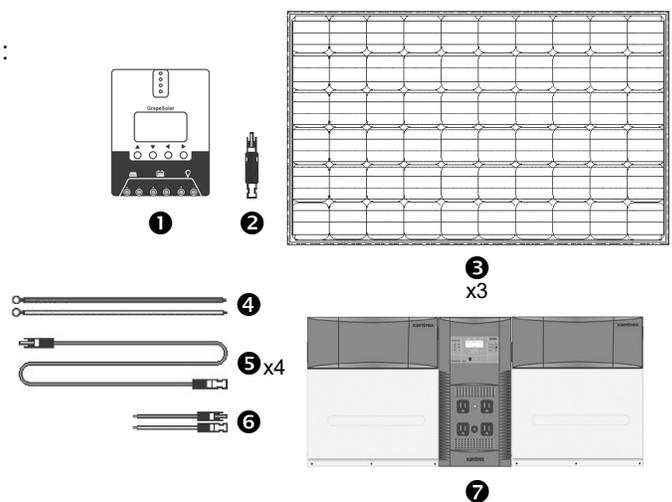
(only applicable for zip codes in the U.S.A.)



[The Quick Connect Guide diagrams are not to scale.]

1 Check your order to make sure that all parts are included:

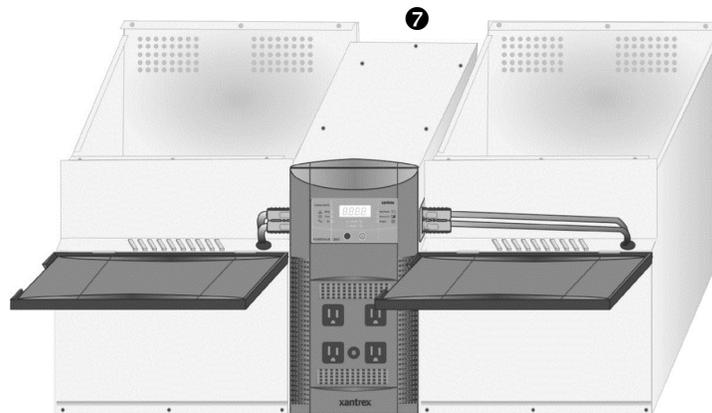
- ❶ 1x GS-MPPT-Zenith-60 Charge Controllers
- ❷ 1x 15-Amp MC4 In-Line Fuses
- ❸ 3x GS-M60-300-Fab1-US Solar Panels
- ❹ 1x 5-ft. Red/Black 4-AWG Cable Pair
- ❺ 4x 15-ft. MC4 Cables
- ❻ 1x 6-in. Red/Black MC4-to-Bare Wire Pair
- ❼ Xantrex PowerHub with 2x Battery Boxes



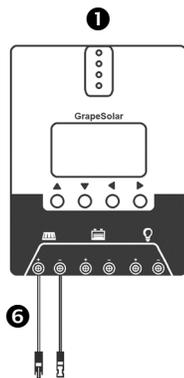
Additional tools and equipment you will need:

- Screwdrivers– Philips Head & Flat Head
- 1-4 12-volt deep cycle AGM batteries as per Powerhub manual
- Voltmeter (for Troubleshooting)

- 2** Mount the 300-watt solar panels **3** so that they are facing due South at approximately the same angle as your latitude. The ideal area has full sun and no shading. If the following connections are made during daylight, cover the panels with cardboard, cloth, or a similar opaque material so that the panel does not output power.
- 3** Use the instructions from the PowerHub **7** Installation Manual to attach the battery boxes to the inverter component. The two battery boxes can store a maximum of 4 x 100+ Ah 12V sealed lead acid batteries (not included with kit.) All batteries in the system must be identical in regards to make, model, and usage history. Follow all precautions while installing batteries into the PowerHub battery boxes. Follow instructions to connect the large Anderson connectors to the inverter port.

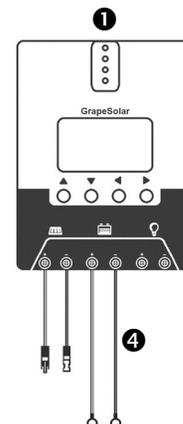


- 4** Using a Phillip's head screw driver, open the blue front panel on the Zenith-60 charge controller **1**.
Connect the bare wire end of the 6-in. Red/Black MC4-to-Bare Wire Pair's **6** red wire to the (+) solar terminal of a Zenith-60 charge controller **1**.
Connect the bare wire end of the pair's black wire to the (-) solar terminal.



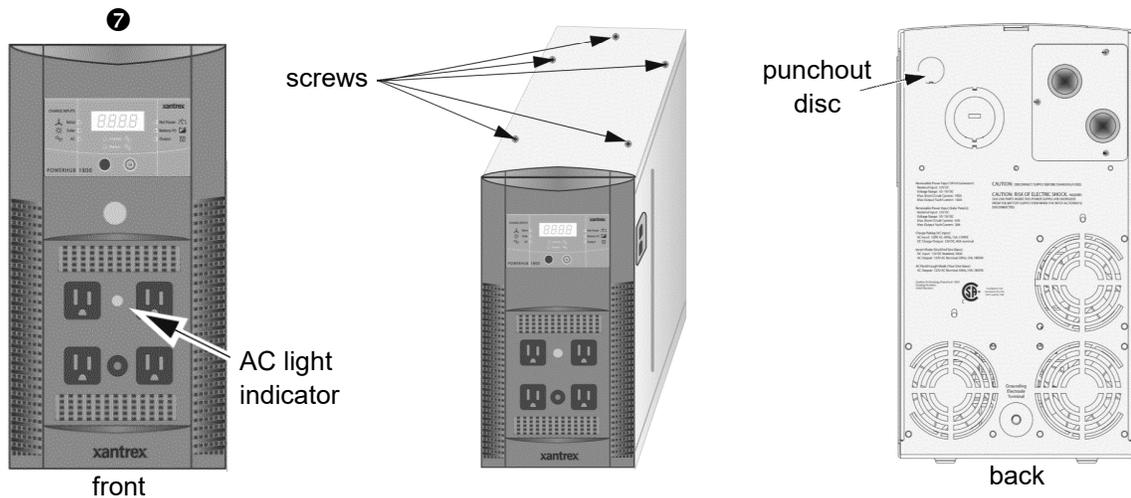
- 5** Connect the bare wire end of the 5-ft. Red/Black 4 AWG Cable Pair's **4** red wire to the (+) battery terminal of a Zenith-60 charge controller **1**. Connect the bare wire end of the pair's black wire to the (-) battery terminal.

Reattach the blue front panel to the controller unit.

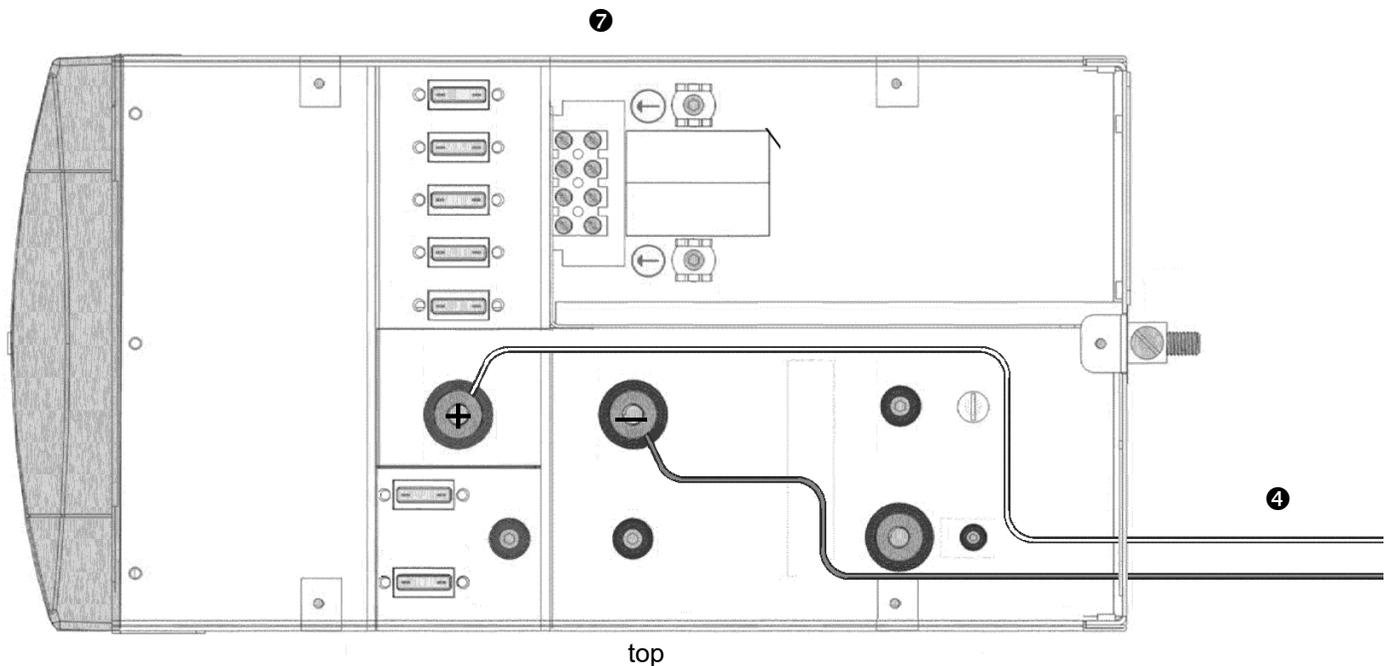


6 IMPORTANT— READ CAREFULLY: If the AC Indicator LED on the front of the PowerHub 7 is off (see picture below,) it is safe to remove the top of the inverter. Remove the 5 Philips screws to detach the inverter lid.

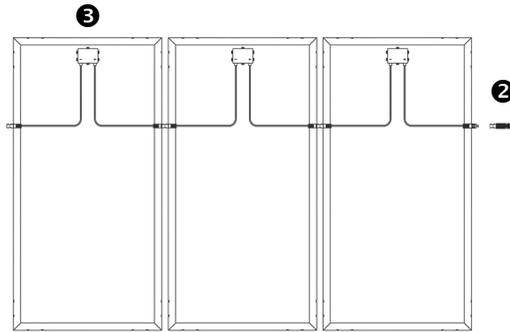
Remove the upper-left punchout disc on the backside of the inverter.



7 With the inverter 7 lid removed, place the charge controller ring-lug cable 4 ends through the punchout hole. For this system, these ring lugs must be connected to the “WIND” INPUT. (Do not connect the charge controller cables to the solar input.) Screw both RED ring lugs onto the positive (+) wind terminal. Screw both BLACK ring lugs onto the negative (-) wind terminal.

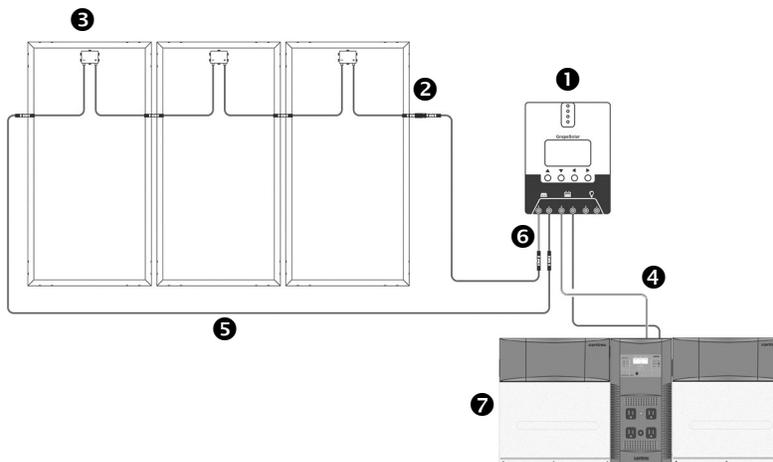


- 8** Connect the solar panels **3** together into a three-panel series “string.” Series connections are made when the positive cable from one panel is connected to the negative cable from the next panel. On the open positive end of the solar panel triad, connect a 15-amp in-line fuse **2**.



- 9** Use the 15-ft MC4 cables **5** to connect each solar panel **3** triad to a Zenith-60 charge controller **1**. Use the all 4 of the 15-ft cables to provide 30-feet of span between the panels and the charge controller.

If the batteries are not already full, you should now begin to see power flowing into the batteries.



DISCLAIMER:

Installations of this kit could be subject to national and local building and electrical codes. Installers should have adequate knowledge of national and local code to ensure the installation passes inspection by the local electric authority.

Proper fuses or breakers should be used to comply with all local and national codes. Contact Grape Solar for specific recommendations.

All batteries used for this system should be identical. Do not mix battery types or sizes. Do not mix old batteries with new batteries. Performance and charging anomalies can occur if types, sizes, or age of batteries are not identical.

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