



## Solar Charging

This solar charging kit uses individually fused solar panels, connected in parallel inside a combiner box to optimize partial shade performance. The output of the combiner box is routed to a master disconnect switch, then to an MPPT charge controller with Bluetooth programming and monitoring. The output of the charge controller is protected by a resettable breaker and fed onto the battery bank.



1  
CABLE OUTPUT  
INSTALLATION VIDEO



2  
ROCKER FOOT MOUNT  
INSTALLATION VIDEO



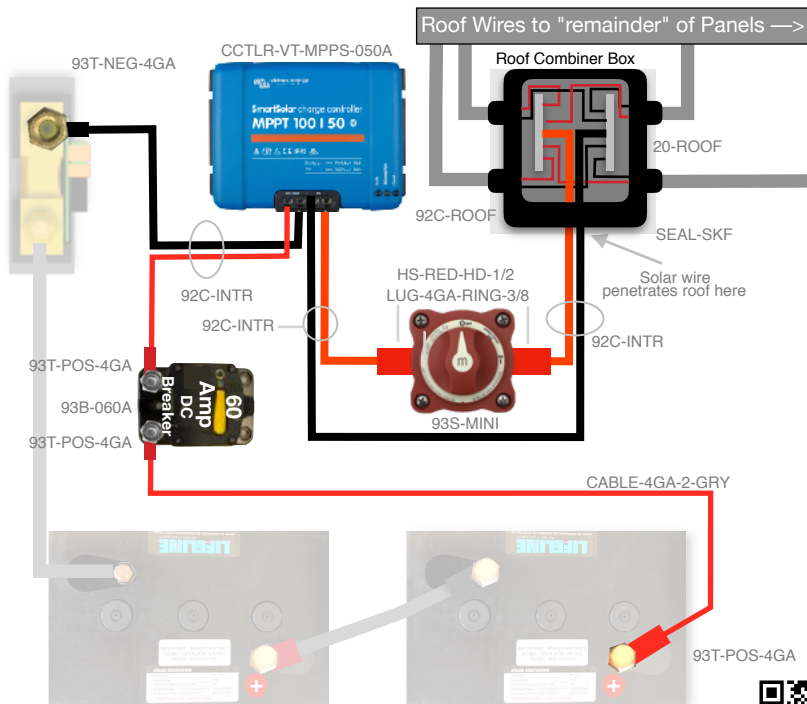
3  
SOLAR PANEL  
INSTALLATION VIDEO



4  
ROOF COMBINER BOX  
INSTALLATION VIDEO

### CAUTION:

There should be no continuity between the negative cable from the roof and the negative cable from the charge controller. If they connect it will fail. Keep these isolated from each other.

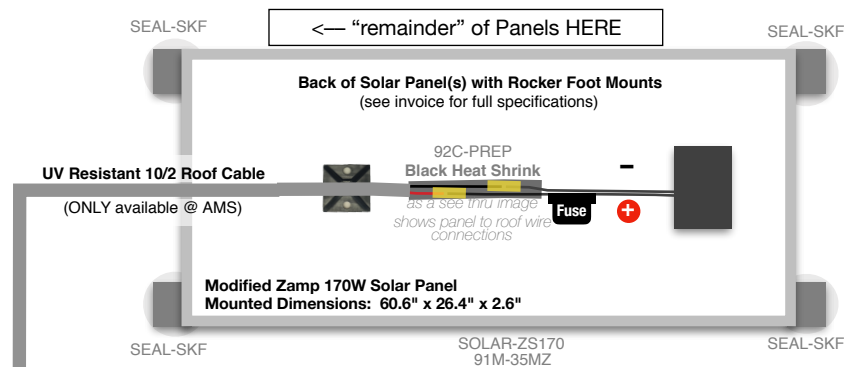


### IMPORTANT NOTICE:

The "greyed out" battery bank items were previously installed.



If the connections seem tight on the MPPT, that is normal. Scan here for assistance.



- Plan the placement of the components.** By using the cardboard boxes that the panels shipped in, you can strategize your optimum array layout and avoid shade from other roof-mounted obstructions. The combiner covers the roof penetration, so plan it's placement with the wire route to the battery bay in mind. The charge controller should be mounted adjacent to or inside the same enclosure as your battery bank for temperature sensing. If this isn't possible, contact AM Solar for a remote temp sensor.
- Prep the panels by installing the output cable.** In some cases your panels may come shipped already prepped. The DIY INSTRUCTIONS page on our website, or the link on the #1 QR Code to the left will provide detailed instructions.
- Attach panel mounts** according the video linked by the #2 QR Code to the left.
- Install the panels** according to the video linked by the #3 QR Code to the left. On a metal roof, penetrations are rarely required. Don't let any part of the panel overhang the leading edge of the roof. (NOTE: No panel installed by AM Solar has ever accidentally come loose.)
- Install the combiner box** by following the video instructions linked by the #4 QR Code to the left. It's a good idea to check polarity before making any connections.
- Route the roof cable** from the combiner box, through the roof penetration down to the battery bay. Install the Master Disconnect switch with the switch in the OFF position and connect to the charge controller. It may be difficult to connect thick cables to the charge controller. If you have trouble, follow the #5 QR Code to a PDF diagram.
- Connect to the batteries** by routing a segment of remaining roof cable from the charge controller to the breaker to the battery bank.
- Permanently mount components** and verify all connections.
- Activate your solar charger** by turning on the breaker then the Master Disconnect switch. Skip ahead to the programming section of this manual to program the charge controller.