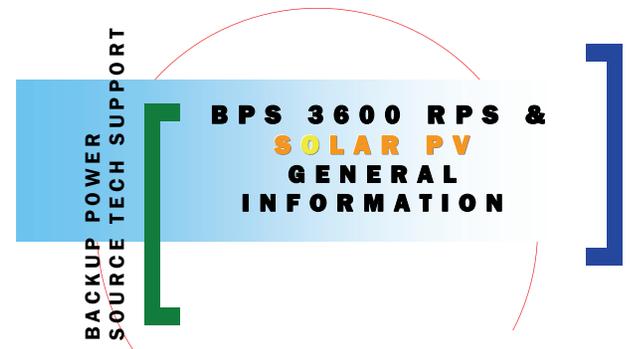


- All electrical work must be done in accordance with local, national and/or international electrical codes.
- Before installing or using this device, read all instructions and cautionary marking located (in or on) the manual, the inverter, the controller, the batteries and the PV array.
- Do not expose this unit to rain, snow or liquids of any type. This product is designed only for indoor installation.
- To reduce the chance of short-circuits when installing or working with the inverter, the batteries or the PV array, use insulated tools.
- Remove all jewelry such as rings, bracelets, necklaces, etc., prior to installing this system. This will greatly reduce the chance of accidental exposure to live circuits.
- The inverter contains more than one live circuit (batteries and AC line). Power may be present at more than one source.
- This product contains no user serviceable parts. Do not attempt to repair this unit.
- Do not install 120 volt AC stand-alone inverters onto 120/240 volt AC multi-branch circuit wiring. This could pose a fire hazard due to an overloaded neutral wire in this configuration.



READ
THIS
FIRST!

Assembly*

*performed by licensed electrician

1. REMOVE BATTERY HOUSING COVER—
4 Battery systems pull toward you, or 8 battery systems Lift up, both sides with a firm and equal pull.



2. Open DC Disconnect box (Fig B.) Using a Phillips screwdriver, remove front plate from DC disconnect Box.



Fig. B



What you'll need: #3 Phillips & a #3 Flathead screwdriver, a socket set with a deep socket 9/16, and a stripper/crimper, several feet of Ground Wire, possibly more 10ga. Outdoor wire.



BACKUP POWER SOURCE
TECH SUPPORT

ENERGISTX

1012Third Street Santa Cruz, CA 95060

Phone: 866.733-8686

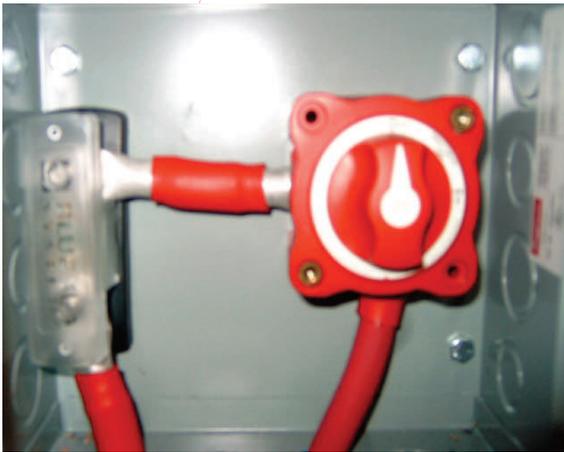
Fax: 831 423 9331

E-mail: info@energistx.com

SAFTEY FIRST!

3. Make sure DC Disconnect is in OFF Position. (Fig. C) This will prevent sparking while you connect all battery cables.

Fig. C



4. Connect cables as described in Fig. D, make sure batteries are positioned the same as the positive & negative labels marked on the inside bottom of the battery housing. Red to positive and black to negative.

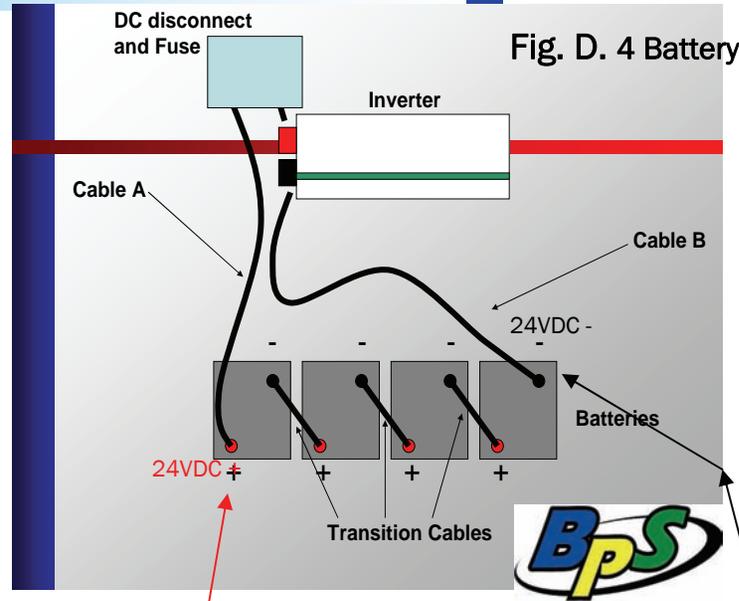
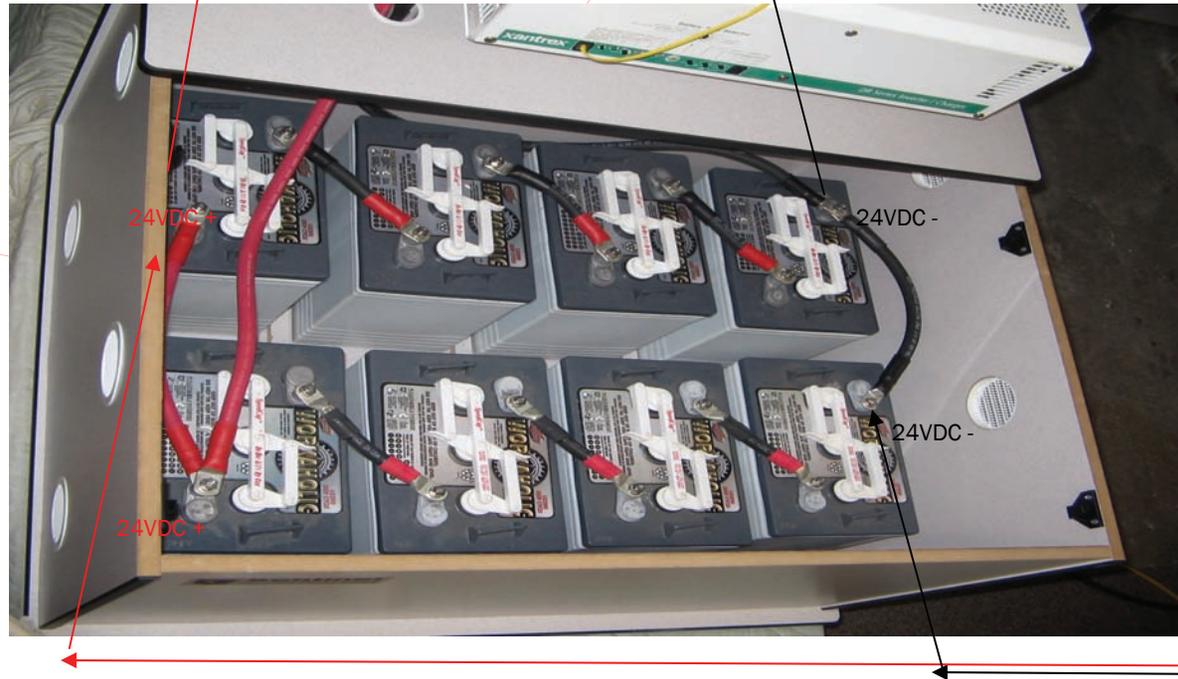


Fig. D. 4 Battery

Fig D. 8 Battery



5. After insuring all cables are connected correctly and the in-feed to the inverter has been installed, and AC out to sub panel (backed up load center) & 120V/30A AC input from main breaker panels has been connected, switch the DC Switch to the ON position. Make sure power is turned on at main breaker box to the inverter then press the inverter (small button on front/left of inverter) power button. Lights will flash, the batteries will take a brief charge, and your system should power up and be ready for blackout and brownout protection.

Locate Install location for Solar PV panels:

Find your best location to mount your Solar PV panels. Usually facing south (North American Residents) where the least amount of shade occurs year round. **You have enough cable to go up to 50 ft from battery/inverter housing.** (100 ft. total, with 1 male & 1 female connector) Obtain 10ga weather proof cable from your installing electrician, hardware store or electrical supply if you need more length. Each PV panel has 1 **positive+** and 1 **negative-** lead, each has one male & the other a female. The lead will either make a series (to another panel's opposite - to+ ,adding voltage) a parallel (a + to + or - to - maintaing same voltage) or connecting to a cable leading to the combiner or controller.

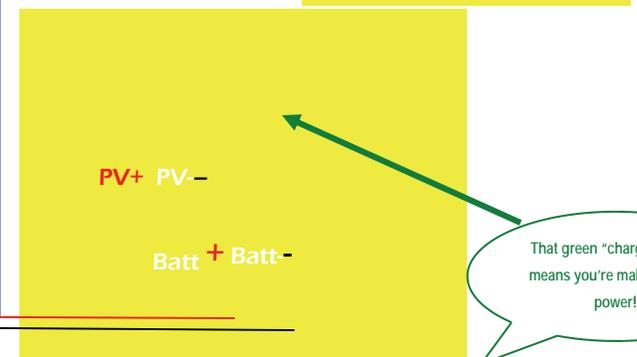
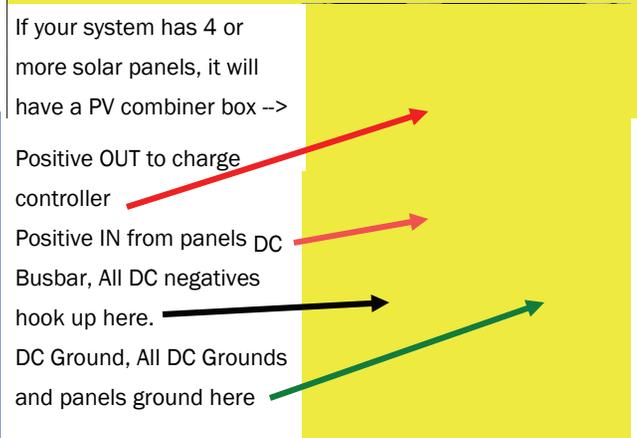
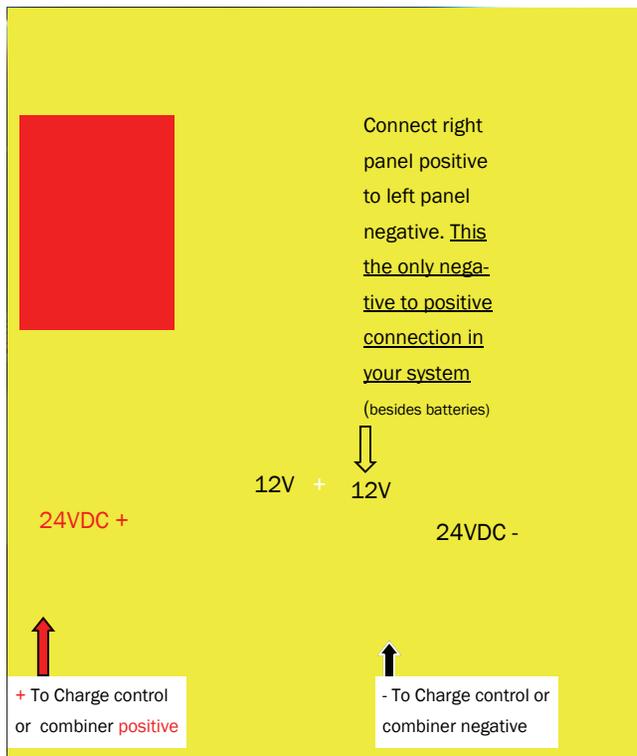
Mounting Rack: *1/2" & 7/16" socket & socket wrench* Carefully, lay down the panels glass down on a tarp or on thick debris-free grass with the long ends flush, and where you want the PV panels junction boxes to be. (usually same side). Then lay down the longest rails in about a foot from the short dimension of the panel, or perpendicular to where the panels meet the long way. Connect the panels and rails together with the provided (7/16") nuts & bolts. Face the bolts up, so the nuts are on the rail, not the panel. (See >)Connect the feet (small "L" shaped) pieces to the bottoms of all 4 rails with the 1/2" nuts & bolts. (leave somewhat loose until you get to install location)Connect the shorter rails anywhere along the rails that holds together both panels with the provided 1/2" nuts & bolts.

Carefully, move to desired install location and mount.

This longer rail connects both/2 solar PV modules

This shorter rail connects to the longer rail with a single bolt along the longer rail, depending on the angle you desire.

There are four foot pieces, that bolt to the bottom (roof contact) of all four rails.



Solar Panel Series Interconnect(s): 24VDC

Connect right panel's positive + solar PV cable (as marked on the junction box) and connect it to the left panel's - negative. This is adding each 12V panel together to match your system's 24V. REPEAT process for each set of 2, 12V panels for systems with 4 or more PV panels.

Controller to batteries: *Not applicable if your unit in non-solar or backup only OR are already connected by BPS #3 Phillips screwdriver*

Connect the positive stripped end of the red fused charge controller (10AWG, thinner) wire to (middle) battery input on the SunSaver20 charge controller and screw tight, and drop the round lug end into the hole directly below the SunSaver20 Charge controller. Take the black stripped end (10AWG) charge controller to battery wire and connect it to the SunSaver20's negative battery connection and screw tight, and drop the lug end down the hole directly below the SunSaver20.

Skip combiner box section if you have less than 4 panels

Combiner Box: *#3 Phillips Screwdriver & Flathead*

Place combiner outside near the PV Panels. Use the provided PV cabling and connect 1 positive from each set of 2 panels to the bottom of each breaker. Repeat process if you have more panels or have added panels. Connect all DC negative (IN from panels and OUT to charge control to the DC- busbar. Connect all panels to the DC ground busbar. The combiner fuses, grounds, and parallels all the panels to maintain 24VDC.

Solar Panels to Charge Control:

10ga.stripper/crimper, #3 Phillips screwdriver

Next, connect the positive/ stripped end from the PV cable (or from the proper combiner box busbar) to the positive on the far left terminal of the charge controller and screw tight. Finally, connect the negative PV cable to the (2nd to far left) and screw tight.