

Solar Generator Trailer Quick Reference

Security:

- The keys to the trailer are in a lock box attached to the front right side of the trailer deck on a large D-ring. See Kyle DeHaas 512-560-6984 or kyle@TexasSolarTrailers.com for access code. Do not change the access code.
- There are four padlocks on the trailer, and they are all the same key. Two padlocks secure the inverter panel box, and two secure the job box.
- Inside the job box are other keyed systems to secure the hitch. These should be used in unsecured areas.

Configuration for all situations:

1. Inside the inverter panel box, notice the MidNite Classic charge controller. To its right is the photovoltaic combiner panel. These should be on at all times, unless there's an emergency. Open that panel and turn on all the breakers by switching them upward. This brings solar power through the charge controller, and to the batteries to keep them charged.
2. Open the breaker panel to the right of the slave inverter. Turn on all the breakers by switching them upward. This will bring power to the two 50 amp 240 volt outlets, and the 15-amp 120 volt outlet inside the box. These should stay on all the time as well, in all situations except an emergency.

Startup:

1. Use the sprung pins on either side of the panel arrays to align the panels for maximum power. Usually orienting the trailer long side to the south and tilting the panels about 30 degrees works well. Make sure all four pins are latched closed once the panels are in position.
2. Next, notice the two yellow Sunny Island inverters. The left one is the "slave" and the right one is the "master". Find the black breaker switch on the front panel of the slave inverter and turn it upward to turn on. Wait for the slave to power up, then turn on the master inverter breaker next. This will place both inverters in Standby Mode, after a minute of boot time.
3. All control of the inverters is done from the master inverter panel, on the right. Anything you do to it, will also occur to the slave inverter, so you should not have to do anything with the slave inverter button controls. On the master, tap the <Enter> button briefly, then press and hold the <Enter> button, and this will turn on the inverters.
4. In the job box, there are various adapters and connectors to enable power delivery from the 50-amp twist-lock outlets on the side of the trailer. Anything not being deployed should be stored in the job box.

Shutdown:

Shutdown is basically the reverse of startup. On step 3 above, tap, then press and hold the <Enter> button to bring both inverters back to standby mode, whereupon you can shut off the breaker switches on the front panel of both inverters.

Long Term Standby:

For storage and idle time, the breakers in the photovoltaic combiner panel should remain on so that the solar panels and Midnight charge controller will float charge the batteries.

Travel: The solar panels must be vertical during any trailer movement, and all 4 latch pins closed. The inverters should also be turned off.

Battery Maintenance: USE PROTECTIVE EYE AND HAND GEAR

Every two months: There are two battery banks of 24 cells of 2 volts each. Batteries should be checked to make sure water levels are correct. Use either distilled water to fill, or if a garden hose is available, you can use a combination of the RV filter inline behind the water de-ionizer in the job box.

Use the battery water filling container in the job box. Open the orange cap on each battery and check the level. Add water until the water just covers the top of the highest lead plate, and no further. Do not over-fill. Do not let contaminants get into the battery. Replace the cap securely.

Every six months: The batteries will sulfate over time, and they must be de-sulfated using the “Battery Chem” powder in the large white bucket in the job box. Use the funnel in the job box to pour one quarter cup of Battery Chem in each battery, after putting water in the battery.