

## Jupiter Gen 5 on Solar

The first Jupiter 2 Gen 5 mobile system is about to go solar!

The RVer who put this together and contributed this information about his installation is willing to answer questions from other RVers out there who want to do something similar. If you have questions, just go to the [forum post](#) and leave a message.



Figure 1. Standing in the middle of the roof looking rearward. Cables are routed primarily under the panels.

## Components

Here are the details about the components:

- 100w HQST polycrystalline panels x10 (1000W total)
- Panels wired 2s5p (strings of two panels in series, with 5 strings wired in parallel - this is done for partial shade tolerance)
- 6 position combiner/breaker box for PV cables
- Midnite Solar Classic 150 MPPT charge controller (can do 96A output to a 12v battery bank, I have room to grow)
- Baby box with 60A input breaker between combiner box and controller and 100A output breaker between controller and battery
- #4 wire connecting combiner box, controller, baby box, and batteries
- 4x 6v deep cycle house batteries
- 2x 12v truck batteries
- 2000w pure sine Magnum inverter/charger
- Panels attached to roof using a method of my invention (I believe), which is using 2x 36 inch lengths of 1x1 square aluminum tubing under the long side of each panel, adhered to both panel frame and fiberglass RV roof with 1 inch wide strips of 3M VHB tape style 5952. Normally only 18 square inches of this tape is needed for a 100W panel, but I'm using 72 inches. Totally overbuilt.
- Controller is mounted horizontally due to space constraints. This is not recommended due to cooling concerns. However, I mounted it directly to sheet metal which is welded to the vehicle frame, so that should act as an adequate heat sink. If it does not, I will add thermal paste compound in between the controller and sheet metal for thermal coupling and heat transfer.
- Total cost for Panels, wiring, boxes, breakers, controller, AL tubing, VHB tape, odds and ends was roughly \$2600 (shipped, all applicable taxes). I already had the batteries and inverter. This is a shockingly low price for this kind of install (esp. with a top shelf charge controller like the Midnite).

## Additional Photos

And, here are some additional photos of the installation:



Figure 2. Standing at the rear looking forward. Cables visible routed under and behind the 3rd air conditioner. Dirty rag on top. More wire ties needed.



Figure 3. From left to right, charge controller, baby box, combiner box. This is the rearmost storage bay on the curb side of the RV adjacent to the engine.



Figure 2 Four house batteries on the top slide-out tray; two chassis batteries on the bottom tray. This battery bay is located adjacent to and just forward of the bay with the controller, etc.