

HandyBob's Blog

Making off grid RV electrical systems work

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2015 – The TRIMETRIC 2030... PERFECT



I tested the new Trimetric SC2030 and TM2030 for over a year, so I know from personal experience that they not only work, I've run mine at 32 amps and it didn't even get warm. The SC can be used as a stand alone charger without the meter if you are financially challenged and it works better dollar for dollar than anything else I've ever touched. Here is the picture of what I consider to be the perfect small RV solar system today. I did this in a friend's new Lance trailer last fall (2014), disconnecting the No -Power controller that the factory had installed and connected to the DC panel without even putting a fuse in the wires. Not only non working, but also very dangerous. I didn't bother trying to talk to Lance about this.... Why would I? I won't try to talk with the people at No-Power either. They have their minds made up that producing things that will only work on rigs parked with nothing on is the right thing. There is still a lot of this going on in the world, people who are afraid to turn the voltage up because they are convinced that the sun never sets. It is 2015, you fools... Wake up.

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Notice above I said SMALL RV system. I still love the Morningstar Tristar for larger systems, using a Trimetric for metering. Read my MidNite page and look at the last picture there.

I set this for the standard Crown battery setting and then increased the P1 voltage setting to 14.8V so that it will still work on very short winter days. This equipment was mounted on a board and pre-wired before I crawled into the basement and mounted it on the wall that backs up to the batteries. It would be very easy to take it to another rig. There was a very good reason for this.

Their batteries got deader every day as they camped here with us while waiting for the right things to be delivered, running nothing but LED lights & water pump. The controller was shutting off every day before noon and saying full, but a hydrometer showed the truth. We left the old controller as a very expensive hole cover. People wonder why I have this attitude. Wake up, people. The RV dealer who sold them the thing was convinced that it would work great and the starter batteries that were labeled deep cycle marine were the best things made. These folks knew what to expect since this was their 4th rig with solar power. The first never worked and the next two had systems I installed. Do I really need to say that they worked? I made them run their wires while I kept working on our place. I only did the things that a retired doctor could not do for himself. The message there was "stop trading rigs." See, I am serious about being retired.

On the left is a Trimetric SC2030 with both input and output 40 amp circuit breakers, with a companion TM2030 up inside the rig at the end of a phone cable, plus the 4 wire communication cable connected to the shunt and positive lug with a 1 amp fuse. On the roof there can be as much as 600 watts of panels, but this one has about 450W. The batteries are two Crown CR260's, equal to, but a bit better than Trojan T145's (IMHO). I set the SC2030 for 14.8V plus temperature compensation and the high voltage limit is set at 15.6V. (Stop asking me about voltage limits of RV electronics and the stupid people making them.)

On the right is a Magnum MMS1012 inverter charger that is fed from a 20 amp circuit breaker on the AC side and then feeds out to both of the AC receptacle circuits in the rig that were removed from the existing circuit breakers (including the neutral wires). The Magnum has a 15 amp output breaker, so you don't need to add one. On the DC side you can see a 200 amp ANL DC fuse. The cables here are bigger than Magnum requires, but it was what I had on hand. Read the directions for cable sizing. An MMRC25 remote is up inside.

I heard from these folks later that they were trying to figure out how to sell power to neighbors in the camp ground. You have no idea just how many times I have heard this, but it never gets old. Makes me smile.

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