October 11, 2014

Overvoltage issue when using TM-2030 Monitor to control the SC-2030 Solar Charger in some RV's.

The following additional option has been in incorporated in shipments of the TM-2030 Monitor and SC-2030 Solar Charger since October, 2014. Any TM2030 with Version 2.1 or SC-2030 Version 1.1 firmware has this option.

The SC2030 charger has been designed specifically to charge batteries in a manner that has been recommended by battery manufactures. However, it has been brought to our attention that some RV components which are designed to operate from 12V batteries are unable to withstand charging voltages that are commonly recommended. That is the reason the following program option is offered.

New program item P8 added: Overvoltage "issue" (not a bug) applies when using SC2030 charger with TM2030: An "issue" brought to our attention—not a bug, has motivated us to add an additional option to prevent the voltage from rising beyond an upper limit. The reason for doing this is that we discovered that many less expensive inverters would cut off power when the voltage rose to as little as 15.0 volts. We think that this is unacceptably low, since many liquid electrolyte batteries manufacturers recommend charging voltages that can range above 15.5 volts, especially under cold conditions. In some cases other devices, such as DC refrigerators, may not be tolerant of voltage above this. Ideally any components designed to be used by 12 volt rechargeable batteries should be designed to tolerate a voltage of at least 16.0 volts, and preferably a little higher to be safe. As an expedient for getting around this **we added a new program mode to the TM2030, "P8" that limits the SC2030 to a maximum charging voltage** to less than an upper limit which you may set. This may restrict the charging somewhat from the ideal for the batteries, but this will be an expedient to prevent the inconvenience that a higher voltage may cause to devices intolerant of higher voltage while batteries are being charged, especially under cold conditions if you use temperature compensation.