Bogart Engineering

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How to use the TM-2030 to control two SC-2030 Solar chargers to control up to 62 amps from solar panels in a 12 or 24V battery system.

You can't just parallel the solar inputs of the SC-2030 and connect 60 amps from panels, because the current won't properly divide between the two. Therefore when using two SC-2030's, the solar panels should be separated into two roughly equal groups, with a separate pair of wires for each group going to the inputs of two separate SC-2030's. However the outputs from each SC-2030 to the batteries can be paralleled in the obvious way: + to + and minus to minus .This is illustrated on the next page.

The two SC-2030 Solar Chargers are slightly different: one will be identified as Unit 1 and the other Unit 2. They will be distinguished because Unit 2 has an identifying jumper (see kit below) that needs to be plugged into connector J6 on the rear of the unit. The temperature sensor should be connected to the SC-2030 Unit 1, without the jumper. Temperature information from the Unit 2 SC-2030 will be ignored.

When these are wired as shown on the wiring diagram on page 2, you will be able to see solar current (SOL) separately from each SC-2030. To access the SOL display, the SC-2030 must be properly connected to the Trimetric, and solar current must be available to the panels.

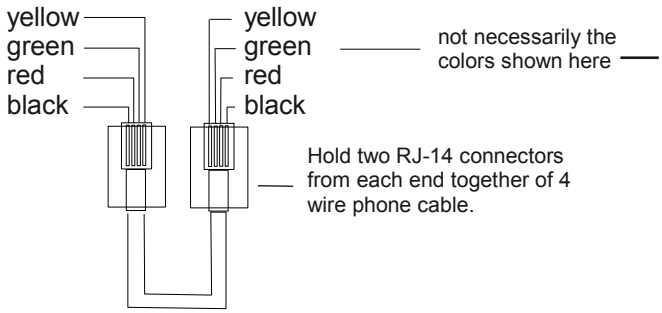
Press and hold select until you see AH appear in the display, then repeatedly press select to access SOL. This should appear after "rPC". The SOL display will show the solar current from unit 1. Press reset to show solar current from unit 2 (S02).

The "crossed" and "non-crossed" cables are distinguished by the way the two connectors are attached at each end as shown in the diagram below. Polarity of the connectors must be carefully observed.

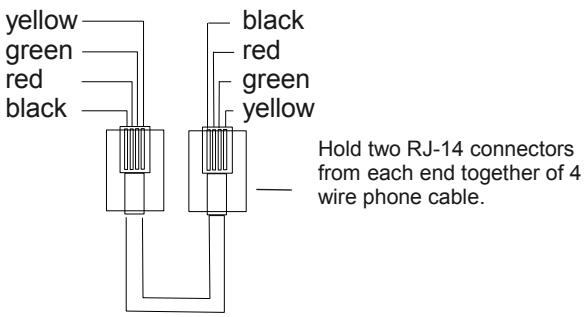
As shown on wiring diagram, three communication cables from TM2030 to SC2030's are required. Two of the two cables need to be "non crossed" as described below, and are usually short. One of these is connected to each of the SC-2030's, with the other end connected to the 3 way modular triplex adapter--thus occupying two of the three positions on the adapter.

A kit is available that contains two 3.5 ft straight cables, one triplex phone adapter, and one identifying jumper referred to above. The third longer cable *must be crossed* as shown below. This goes from the TM-2030 to the phone adapter. Verify polarity if purchasing from another store or retailer.

Make or purchase one (usually longer) Crossed phone cable from TM-2030 to 3 way phone adapter connector.



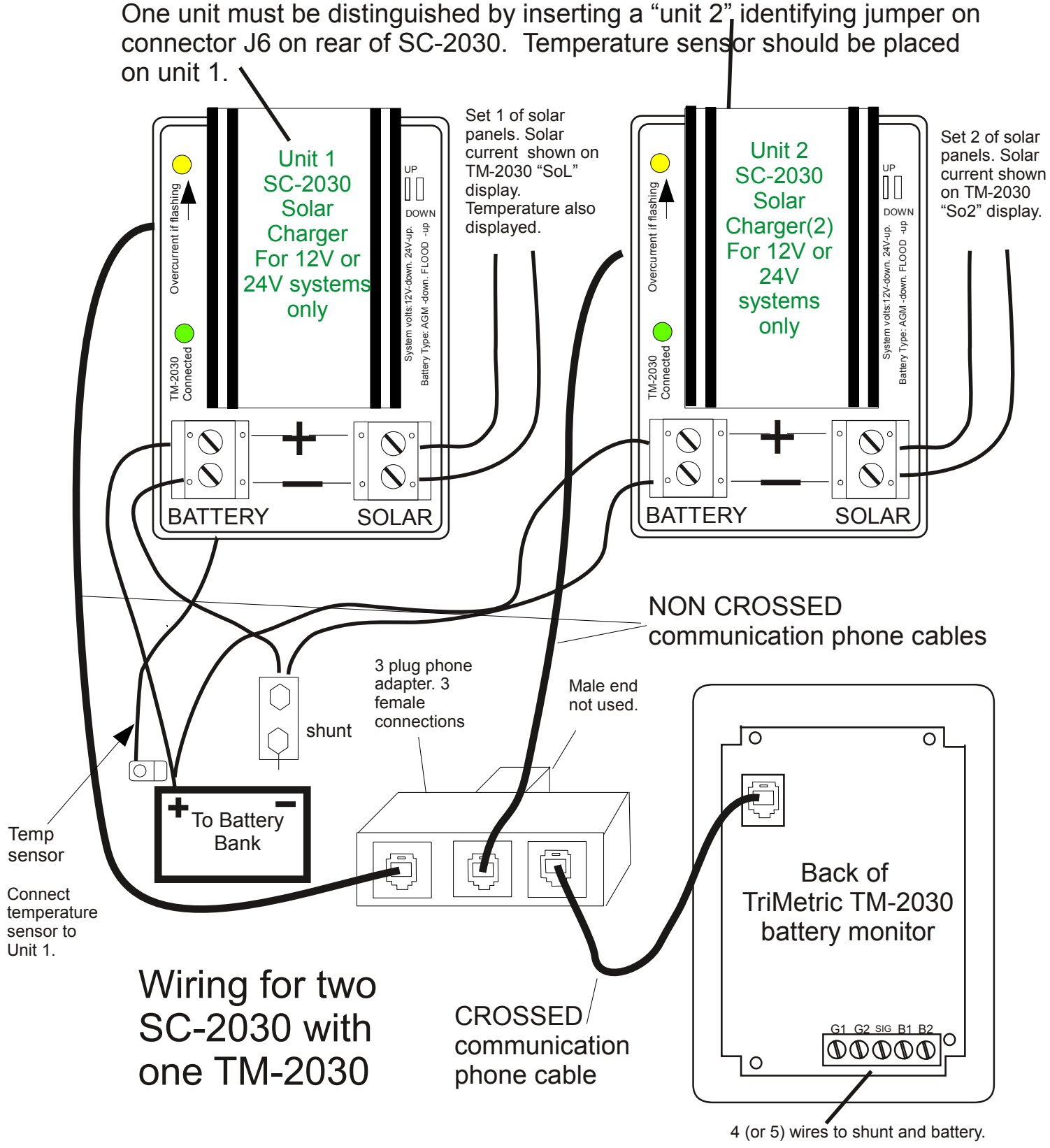
Make two (usually shorter) Non-crossed phone cables.



These views show facing the sides of the connectors that do not have the plastic retainer clip. Commercially modular cables used to usually be made "crossed", but recently there seems to be no consistency to the way they are made.

Each SC-2030 can deliver up to 31 Amps to batteries. If current exceeds 31 amps, this will not damage the SC-2030 but the battery current will then be limited to less than 31A to protect the charger and the yellow light will flash.

One unit must be distinguished by inserting a “unit 2” identifying jumper on connector J6 on rear of SC-2030. Temperature sensor should be placed on unit 1.



Wiring for two SC-2030 with one TM-2030