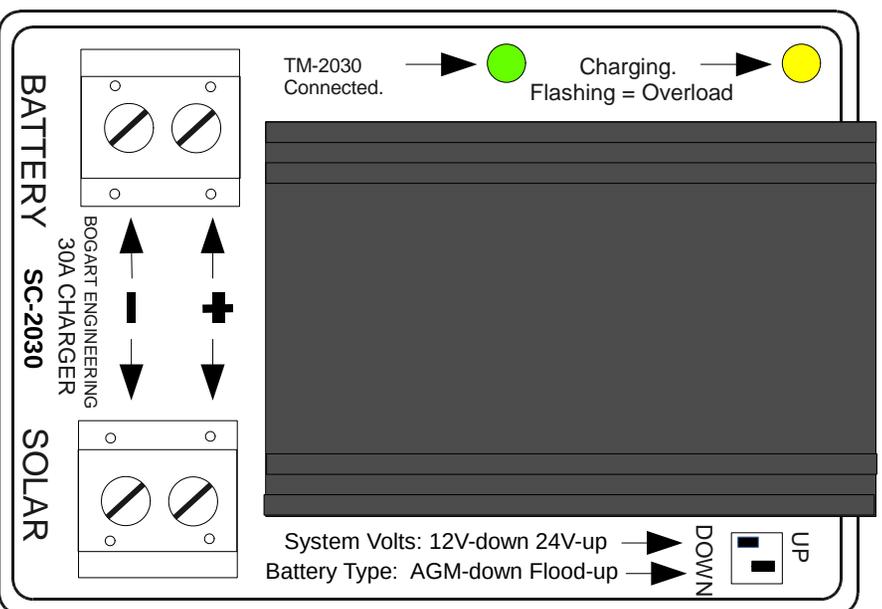


SC-2030

Solar Charge Controller

Installation and User Guide



Use Jumpers for Standalone mode (only)

Warranty: All items have a 3 year limited warranty covering any item that does not perform according to specifications stated or implied in our instructions, provided it does not show obvious signs of abuse or misapplication. We will replace or repair any such item at our option. A return authorization is required for all merchandise returned to Bogart Engineering.

Bogart Engineering 2017

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SC-2030 Installation

Crossover Modular Cable to
SC-2030 or serial data
connection

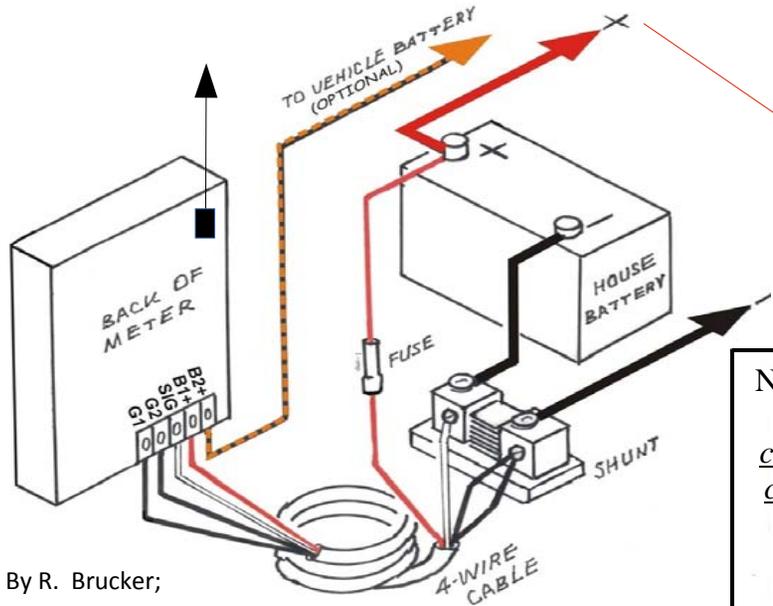
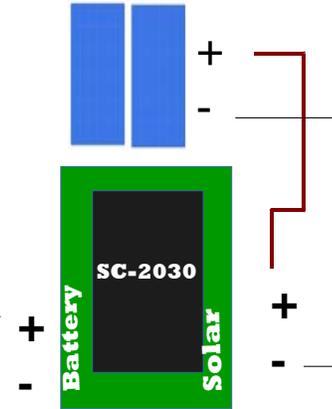


Illustration By R. Brucker;
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Refer to <http://www.nfpa.org>
for electrical wiring standards
and information

Negative from all
loads and
charging sources
connect to shunt
-Inverter
-SC-2030
-Alternator
-Chassis Ground

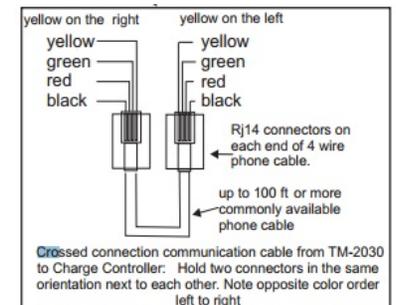
Solar panels
"12" or "24 volt" types
(36 or 72 cells per panel)



-30 amps max
charging current
-Open Circuit
Voltage limit
from Solar
Panels: 55 V

Important: Crossover type modular cable
required to connect SC-2030 to TM-2030

Visit www.bogartengineering/support for more information.



Programming the TM-2030 when using the SC-2030

Programming Instructions for the TM-2030: <http://www.bogartengineering.com/wp-content/uploads/docs/EnterP1Data.pdf>

The SC-2030 will operate as a standalone charger with minimal function unless connected to the TM-2030. Visit our website for more information

The following settings apply only when using the SC-2030 Solar Charge controller with the TriMetric monitor. **P8-P22** are accessible only when Program **P7** is set to L3 or L4. Default values shown below are automatically installed when switching from L4 or L3 into L2 or L1.

P8: Maximum voltage limit: Limits the maximum charging voltage. **Default 65. Note: P8 overrides P15. Set at or above the P15 value.**

P14: Maximum finish-charge time in hours until float (0.0-5.0 Hr.)

P15: Maximum finish charge voltage (10.0-65.0 V)

P16: Float voltage setting (10.0-65.0 V)

P20: Percentage overcharge compared to last discharge until float (1-20%)

P21: Finish charge current: Enter 0-10% of battery capacity **P3**

Quickly enter correct settings for SC-2030 charger: Visit www.bogartengineering.com/support for more information.

The following secondary displays will appear if solar current is available to the panels and if the TM-2030 and SC-2030 are connected and communicating

SOL: Solar amperes: the amount of current being delivered by the solar panels from the SC-2030.

UPr: Unused solar power in watts: shows if extra power is available from the sun that could be used when battery charging is tapering down in the afternoon. Displays "YES" when nearly all solar power is available for extra use; if a number is displayed, it shows watts available.

°C: The battery temperature in degrees Celsius (with temperature sensor present).

- **P22:** Battery charging profiles (18 different profiles to choose from): Choose profile based on battery manufacturer recommendations. Once profile is selected, press Select once and then hold Reset for at least 5 seconds to ensure profile has been entered.
- **SC-2030 Charging Parameters Calculator:** visit <http://www.bogartengineering.com/support/charging-parameters/> then enter your battery system information.

SC-2030 Solar Charger LED light indicators

Not flashing: ready to bulk charge, but not enough solar input to charge batteries.

One flash: bulk charging.

Two flashes: battery at "absorb" voltage.

Three flashes: battery is in "float" mode.

Four flashes: battery in "finish charge" mode with the SC-2030 limiting the current to P21 value.

Five flashes: battery in "finish charge" mode with the SC-2030 limiting the voltage to P15 value.

Six flashes: battery is between 98-100% charged after having been in "float".

Yellow LED: Marked "over-current" when lighted indicates that at least 0.4 amp solar current is available from solar panels. If the current exceeds 31 amps, this LED will flash while the SC-2030 limits current to a safe value.

Green LED: Marked "TM-2030 Connected" indicates the charging state of the battery. When the green LED is on most of the time, this indicates the TM-2030 is connected and solar current is available to charge the batteries. When the green LED is off most of the time and blinking, this means the TM-2030 is not connected, or that no solar current is available. The number of flashes indicates charging stage.

Visit www.bogartengineering.com/support for more information.