

## The TRAXIDE SC80 ISOLATOR INSTALLATION & OPERATING INSTRUCTIONS

**The TRAXIDE SC80 Isolator is DESIGNED & MANUFACTURED in AUSTRALIA**

The SC80 Isolator kit contains the following items:-

1 x SC80 Isolator with 0.5m x 6B&S Red Cable.

2 x 8mm Heavy Duty Eye Terminals.

2 x RED Heat Shrink

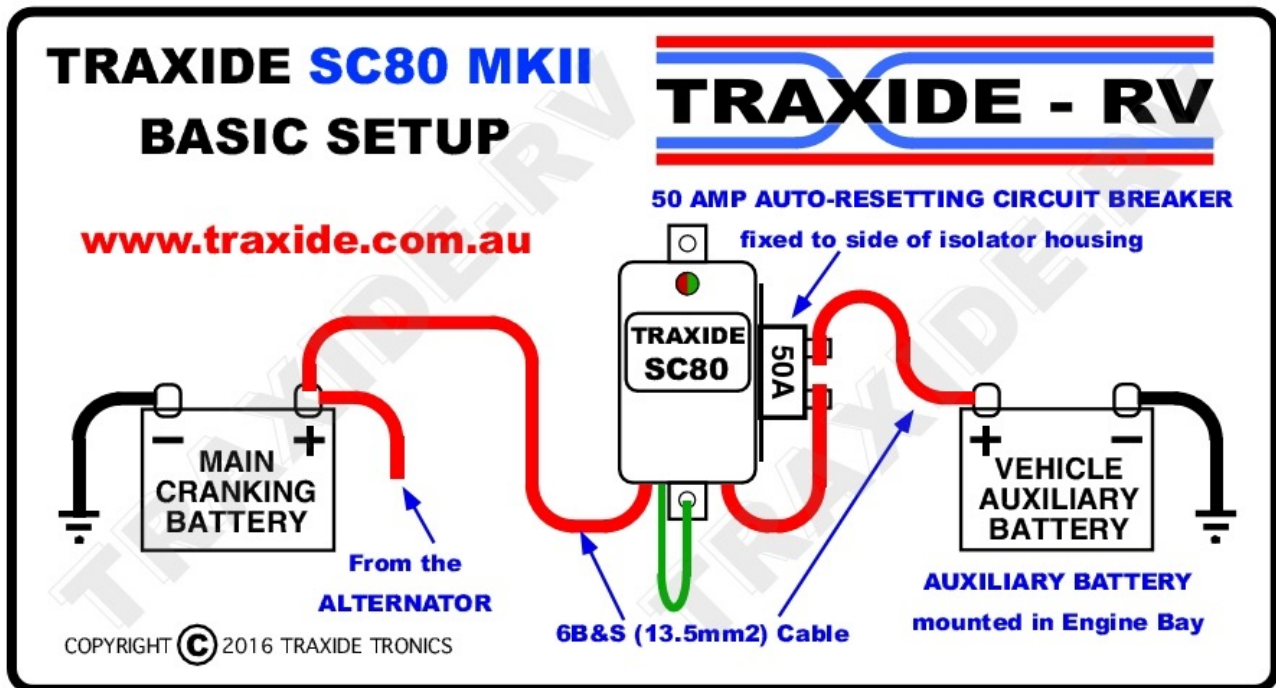
2 x Stainless Steel Mounting Screws.

1 x Butt type Cable Joiner.



The SC80 can be located anywhere in the tow vehicle ( or in a caravan or camper trailer ), so if your auxiliary battery is in the engine bay, the SC80 can be located anywhere between the auxiliary battery and the cranking battery.

If the auxiliary battery is located in the rear cargo area then the SC80 can be fitted in the engine bay near the cranking battery or it can be fitted in the rear cargo area near the auxiliary battery.



When the auxiliary battery is located in the rear cargo area, it is usually more convenient to locate the SC80 in the same area as it will make the wiring of connections for accessories, running off the auxiliary battery, a lot easier.

Once you have a fitting location for the SC80, run a cable from the unused STUD on the Circuit Breaker fit to the side of the SC80, to the Auxiliary Battery's positive terminal.

Then run the cable marked MAIN Battery to the cranking battery's positive terminal.

If both batteries are located in the Engine Bay then only the one Circuit Breaker, mount on the SC80 is required.








Note, if the SC80 is located near the CRANKING Battery and the AUXILIARY Battery is in the rear of the vehicle, you must fit 50 amp auto resetting circuit break in the positive cable at, or near, the AUXILIARY Battery's positive terminal.

If the SC80 is located in the REAR of the vehicle, near the AUXILIARY Battery, then you must fit 50 amp auto resetting circuit break in the positive cable at, or near, the CRANKING Battery's positive terminal.

**NOTE**, for optimum charging, use 6B&S ( 13.5mm<sup>2</sup> ) between the two batteries.

Next, there is a Red insulated Eye crimp terminal on the end of the Green/Yellow earth wire. Run this wire to where you can get an good known earth. If a good EARTH point is some distance from the SC80's mounting point, you will need to extend this wire.

The operation of the LED in the new SC80 has been enhanced.

STATE of CHARGE	BATTERY VOLTAGE	GREEN and RED LED INDICATOR
<b>SURFACE CHARGE</b>	<b>ANY VOLTAGE ABOVE 12.75v</b>	 <b>BOTH BATTERIES</b>
<b>85%-100%</b>	<b>12.45 - 12.70</b>	 <b>BOTH BATTERIES</b>
<b>70% - 85%</b>	<b>12.32 - 12.45</b>	 <b>BOTH BATTERIES</b>
<b>60% - 70%</b>	<b>12.20 - 12.32</b>	 <b>BOTH BATTERIES</b>
<b>50% - 60%</b>	<b>12.06 - 12.20</b>	 <b>BOTH BATTERIES</b>
<b>20% - 50%</b>	<b>11.58 - 12.06</b>	 <b>AUX BATTERY ONLY</b>
<b>Below 20%</b>	<b>Below 11.58</b>	 <b>LOW BATTERY</b>

The new SC80 has a BiColour LED.

When you first install and power up the system, ( before you start your motor ) if the State of Charge ( SoC ) of the cranking battery is above 12.0v ( 50% SoC ) the SC80 will display a short **GREEN** flash every 2 seconds.

If the cranking battery is below 12.0v, then the SC80 will display a **SHORT RED** flash every 2 seconds, to indicate your cranking battery is in a low state.

Once you start your motor and the voltage at the cranking battery rises above 13.2v, the SC80 will display 2 short **GREEN** flashes every 2 seconds, for 15 seconds. Then the SC80 will CUT-IN ( turn on ) and the LED will glow a **CONSTANT GREEN**.

NOTE after one minute, the LED will go to a **DULL CONSTANT GREEN**. More on this later.

When you turn your motor off, there will be a SURFACE CHARGE in your batteries.

The SURFACE CHARGE is the remnants of the voltage used to charge LEAD ACID battery and this will dissipate over time. Anything from a few seconds to as much as an hour.

Once the SURFACE charge dissipates, the battery voltage settles and then the SC80 will indicate the SoC of the batteries by giving a number of **SHORT RED** flashes and one **LONG GREEN** pulse.

**5 SHORT RED** flashes means the batteries are between 85 and 100% SoC.

**4 SHORT RED** flashes and the batteries are between 70 and 85%

**3 SHORT RED** flashes means the batteries are between 60 and 70%

**2 SHORT RED** flashes indicates the batteries are between 50 and 60% and the SC80 is about to CUT-OUT ( turn off ).

The SC80 will turn off under two different conditions. One as above, where the common voltage of all batteries connected to the SC80, drops below 12.0v.

### **TIME-OUT feature**

The other turn off condition is controlled by the TIME-OUT feature, where if the vehicle's motor has not been run for 72 hours ( 3 days ), SC80 will automatically turn of to conserve battery energy.

After the SC80 turns off, it will still continue to monitor and display the charge level of the CRANKING BATTERY ONLY.

Once the SC80 turns off, if the cranking battery voltage is above 12.0v ( 50% SoC ), the SC80 will display a short **GREEN** pules every 2 seconds.

If the cranking battery voltage is below 12.0v, the SC80 will display a short **RED** pules every 2 seconds. This indicates the cranking battery needs to be charged,

either by starting the motor and going for a drive, or connecting an external charge source, such as a battery charger or a regulated solar charge.

### **REVERSE CHARGING**

The SC80 MKII now has REVERSE CHARGING. This allows you to charge both batteries via the auxiliary battery, if the SC80 has turned off.

This can be done through an Anderson plug, if fitted, at the rear of the vehicle.

If the SC80 has turned off and you have a regulated solar panel or a battery charger, you can connect either to the Anderson plug and the SC80 will first fully charge the AUXILIARY battery and then when the Auxiliary battery is nearly fully charged, the SC80 will turn on and charge the Cranking battery.

This feature is primarily designed for use when free camping or the likes, and can take quite a few hours, depending on how low bother batteries are and how small or large the charging device is.

### **OVER VOLTAGE Protection**

Also, if the voltage at the SC80 exceeds 15.1v, the LED will glow a constant RED for 15 seconds.

If the voltage remains above 15.1v for more than 15 seconds, the SC80 turns off and displays a continuous rapid flashing GREEN > RED > GREEN > RED.

The SC80 will not turn on again, until the voltage drops back below 14.75, and it then returns to normal operations.

If you want to check your battery's SoC using a multi meter, this table will help you determine the the charge state of your battery[311216].

**The TRAXIDE SC80 Isolator is DESIGNED & MANUFACTURED in AUSTRALIA by TRAXIDE TRONICS and is supplied with a 5 Year Warranty**

[www.traxide.com.au](http://www.traxide.com.au)