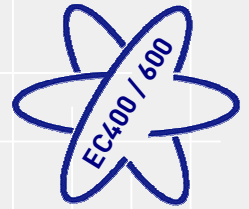




## EC400 / 450 / 600 Solar Panels & 150W Regulator



**This guide is a supplement to the handbook information and covers the operation of the solar system fitted to your caravan or motorhome**

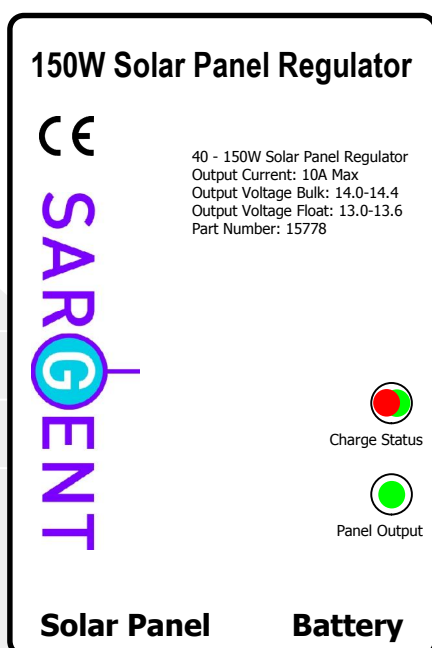
**Solar panel.** The following information covers a selection of solar panels or combinations of panels that may be fitted to your caravan or motorhome up to a maximum total output power of 150W.

**Regulator.** Unlike many regulators, the 15778 solar panel regulator has been specifically designed to draw no power from the leisure battery when the solar panel is not generating power. This feature is desirable especially in winter months when a normal regulator can gradually discharge the leisure battery.

**Regulator operation.** The regulator operates automatically, turning on and off as required to charge and maintain the leisure battery. When the solar panel is exposed to a source of sunlight the regulator starts to operate. When the voltage from the panel reaches a usable level, the Panel Output LED will flash indicating that the battery is being charged (see battery charging below). If insufficient power is being generated by the solar panel the regulator will turn off. The regulator checks the solar panel output ever 30 seconds and turns on / off as required. On overcast days when the solar panel output is minimal the regulator can still deliver a small charge, and in this mode the LED's are not illuminated to conserve power.

**Battery charging.** If a leisure battery is fitted and requires charging the Charge Status LED will illuminate. Depending on the state of charge of the battery this LED will illuminate red for bulk charge (14.4V output) or green for float charge (13.6V output). It may take a few hours to several days to charge the battery depending on its state of charge. When the battery is fully charged the regulator will turn off to prevent overcharging of the battery. If the mains charger is turned on to charge the leisure battery this can also cause the solar panel regulator to turn off.

**Power Supply Unit.** The PSU in your caravan or motorhome may have additional features relating to the solar panel so please refer to your handbook for further information. Motorhome systems incorporate a Smart charge feature that directs the solar panel power to the leisure or vehicle battery.



**Control Panel.** When the solar panel is operating the leisure battery voltage display on the control panel will increase, however this does depend on the amount of load placed on the system and the amount of power being generated by the solar panel at that time. On EC600 systems the control panel has a dedicated screen to show the power being generated by the solar panel.

**Maintenance & Cleaning.** The Solar panel will require cleaning periodically in order to maintain the performance of the panel. A caravan or car shampoo or simple soap can be used, but do not use abrasive cleaners.

**Caravan Storage.** When storing a caravan undercover or in locations where the light level is low, you are advised to shutdown the PSU (shutdown button out) to reduce the power drawn by other circuits from the leisure battery.

**Contact details.** Sargent Electrical Services Limited provide a technical helpline during office hours. Please contact 01482 678981 if you require technical help. For out of hours support please refer to the tech support and product assistance sections of the Sargent web site [www.sargentltd.co.uk](http://www.sargentltd.co.uk)