

Solar Computer (Model SCM) operation instructions. (Manufacturers Warranty 2 Years)



OPERATION

Primary function:

The normal mode of operation is "ON" (green LED showing) and "HEAT ONLY" (red LED showing). In this mode the computer will energise a solar circulator pump or filter pump (depending on system configuration) when roof temperature as sensed by a sensor located on the roof (hot sensor) is 7°C warmer than pool temperature as sensed by a sensor located in the filtration or solar pipework (cold sensor) upstream of the solar collector connections. When this temperature difference drops to 2°C the pump is turned off e.g. cloud cover or nightfall.

Pool Temperature Sampling: Unit will run the solar circulator pump for 5 minutes every 2 hours to take a true pool water temperature. Sampling only occurs during daylight hours.

Pump operation is indicated by the "SOLAR ON" LED (red).

Pool temperature is shown in the display window. *This reading will only be accurate if pool water is flowing across the cold sensor.* When the system is turned off it will read the water temperature in the pipe as opposed to actual pool temperature.

Secondary functions:

1/ Temperature setting

A temperature setting facility is incorporated to stop the solar pump when pool temperature reaches the operators desired level. This is set by scrolling the "SELECT" button for "TEMP.SET" (yellow LED showing) and the current temperature setting is shown in the display window. This setting can be changed by pressing the up and down arrows on each side of the "SELECT" button. After 10 seconds the display will revert to the pool temperature display.

"ROOF" temperature is also an option using the "SELECT" button.

"TEMP. SET" and "ROOF" are both temporary displays and will revert to "POOL" after 10 seconds.

2/ Manual operation

Manual operation of the solar circulator pump, that is the ability to run the solar pump at any time for test purposes, can be achieved by pressing the "MANUAL" button (yellow LED showing).

3/ Heat and cool

In hot climates there may be a need from time to time to cool a pool which exceeds the temperature setting of the computer due to direct heating of the pool by the sun. In "HEAT & COOL" mode the computer will energise the solar pump every 4 hours during the night for 5 minutes to sample pool water temperature. If the roof temperature is 7°C below pool temperature the solar pump will be energised. When the difference between roof and pool temperature drops to 2°C the solar pump will stop.

4/ Winter mode

The solar computer incorporates a Winter mode function which runs the solar pump for 10 minutes each day during periods of low solar input. This can be initiated by pressing the "ON/OFF" button and holding it for 5 seconds. The symbol "L J" will show in the display window. This 10 minute run time will occur again 24 hours later.

To de-activate Winter mode the "ON/OFF" button must be pressed again.

5/ Fault Diagnosis

If sensor leads are damaged, that is broken somewhere along their length "Er" will show in the display window and the "POOL" LED will flash if the cold sensor is faulty. The "ROOF" LED will flash if the hot sensor is faulty. The same indications apply if the sensor leads are short circuited (a remote possibility)

6/ Calibration

If the pool temperature displayed is out of calibration with respect to a reliable reference thermometer (for example a mercury thermometer) then press and hold the "SELECT" button for 5 seconds. The display will then start to flash: the up and down arrows can then be pressed to change the displayed temperature by plus or minus 5°C. Press the "SELECT" button to fix the change.