

INSTALLATION INSTRUCTIONS

Controller Mounting

Find a suitable location to mount the control box. Remember all Pool equipment should be installed out of direct weather and no closer than 3 meters from the water's edge. Lift up the two mounting tabs and use two appropriate screws to mount the control box to the wall, keeping in mind that the power cable is 1.8m long and should be plugged directly into a general power outlet, not into an extension lead.

Retro-Fit (Boosted) Systems

If the SL6RR Controller is to be fitted to a Retro-Fit (Boosted) system the mains power cable is to be plugged into the same power source as the filtration pump. This is to prevent the solar pump turning on and running dry. Ensure that the maximum current draw of the two pumps does not exceed the switching device rating. If plugged into a salt chlorinator or chemical dosing system, check the installation instructions and warranty for compliance.

Pool Sensor

For stand alone systems with separate suction and return the pool sensor must be fitted into the suction line of the solar boost pump, preferably in a position out of direct sunlight. For retro-fit systems the pool sensor must be fitted in the suction line of the main filter pump or between the outlet of the filter and before the take off Tee fitting for the solar boost pump. It is recommended that a 14.5mm hole be drilled in the PVC pipe, this can be carried out using a Dontek PD01 grinding drill or a small pilot hole can be drilled and a 14.0mm drill-bit used spinning in a counter clockwise direction to minimize the chance of shattering pipe. Insert the grommet into the pipe and gently push in the black sensor barb. The green sensor plug is to be fitted to the centre plug socket.

Transmitter

It is recommended that the transmitter be tested on the ground before mounting it to the roof guttering (or similar location), this ensures site suitability before you proceed. Ideally the Solar Panel is to point towards the sun and the antenna is to be vertical.

As the unit operates in a UHF radio band, reflections and moving objects can cause a transmission to be corrupted, up to 50 minutes can be missed before pump action will occur and the solar pump will turn off. If this occurs, and if the solar conditions are still favourable, the solar pump will not turn on again and resume normal operation unless it has received a valid transmission.

The remote roof transceiver obtains its operating power from a solar panel, it will not operate if there is no sun or if there is significant cloud cover. Obviously solar heating would not occur in such conditions. When sunlight is available a transmission of roof temperature occurs every 10 seconds and is indicated by 4 flashes of the roof LED.

Due to the possibility of reception ghosting and electrical interference the Transmitter may be required to be moved to an alternative position, this may be as little as two meters and keep in mind that the roof sensor cable may be extended 20 meters if required. The main controller should be mounted away from other electrical appliances as far as possible to reduce the chance of interference. If the unit is to be installed in a metal shed there may be reception issues and the controller may need to be optioned with a remote antenna or moved outside. On low sun light the display will show 89 which is normal operation.

Roof Sensor

Roof sensors must be fitted into a small piece of solar collector or equivalent and attached to the roof. The best location is within arm's length of the gutters edge of the house or shed as long as the sensor end is not shaded and is on a roof of similar aspect of the main collector. It **must not** be fitted on top of the solar collector or fitted to high points on the roof like Ridge Capping as false readings will be detected.

Keep in mind that it is of the utmost importance to keep the roof sensor as short as possible as this will assist in the longevity of the sensor and controller in the event of electrical storm activity

and power surges. Sensor cables **must not be run parallel to power cables** and run lengths should be less than 20m. **Any excess cable should be removed and re-fitted ensuring that the wire ends are tinned with solder.** The sensor plug is to be fitted to the socket at the base of the Transmitter Box.

Notes

All excess cable must be removed; coils of cable are not permitted under any circumstances and **must not** be tied to 240V wiring. If the cable is to be extended with non genuine cable a size of 14/020 should be used. **Any cable joins must be soldered and this includes where the cable enters the terminal block at the case base.** Heat shrink is to be used over soldered joints to eliminate moisture ingress. If the cable end is to be refitted to the plug sockets then the polarity must be observed as incorrect polarity will show an error as stated in Fault Diagnosis. The sensor cable with the thin white trace is the positive and should be fitted to the left hand cable entry when the screws are in a vertical position.

Once cables have been correctly fitted the unit can be turned on.

Clock:

This model is fitted with a settable 24 hour clock, if the clock needs to be adjusted then hold the up and down temperature buttons together until the display goes blank, then release the buttons.

While the minutes light (M) is flashing rapidly, use the up or down buttons to set the minutes then press the select button. The (H) light will now be flashing rapidly so using the up or down buttons set the hours then press select.

The SL6RR will now resume in summer mode (auto).

NOTE: it is a 24 hour clock so 3 pm is 15 (add 12 after midday).

Setting the clock correctly ensures the booster pump will run only when maximum heating is available, that is from 0800h (8 am) till 1800h (6 pm). It also ensures that the booster pump will not run at night to sample the pool water. Night time is indicated by a flashing AUTO light.

Fault Diagnosis

In the event of a cable, sensor or transmitter fault, the display will indicate the type of fault as follows;

ROOF SENSOR.

A display of 99 indicates a broken or disconnected sensor cable or open circuit sensor.

A display of 88 indicates wrong polarity connection or short-circuited cable or sensor.

A display of 00 when in show roof mode indicates no roof transmitter reception (or night-time).

A display of 01 when in show roof mode indicates low light levels (dawn, dusk or cloudy).

POOL SENSOR

A display of 77 indicates a broken or disconnected sensor cable.

A display of 66 indicates wrong polarity or short-circuited sensor cable.

A display of 67 indicates a sensor reading out of normal operating range.

Return to supplier for repair

SUNLOVER HEATING WARRANTY – SL6 RRP

This product is covered by a limited 3 year warranty against component failure or faulty workmanship from the date of installation.

A faulty unit should be returned in the first instance to the dealer from which the unit was purchased.

Damage to the unit due to misuse, power surges, lightning strikes or installation that is not in accordance with the manufacturer's instruction may void the warranty.

Warranty does not cover travel costs to or from installation site. Unit must be returned to manufacturer for repairs.

If the power cord is damaged, do not use the controller; return the unit to the supplier for repair.

Customer Record. (To be retained by the customer);

Dealer/Installer Name _____

Serial Number _____

Date Installed _____

For service assistance phone SUNLOVER HEATING

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MODEL SL6RR PV Radio Remote Solar Controller with Time Clock

OPERATING INSTRUCTIONS

Summer Mode is normal operating mode used during the Pool Swimming Season. You may set the desired pool limit by pressing the UP or Down Buttons. The display shows the pool temperature then flashes the limit setting and light, the pump light and pump will be on when solar gain is available.

Manual Mode is used to prime, clean or test the pump. To select manual mode press the SELECT button until the PUMP/MAN light is illuminated. The pump will then start, or stop if it has been running. To return to normal run simply press the SELECT button till the AUTO light is illuminated. The SL6RR will automatically return to AUTO run after 30 minutes, with a limit of 30 degrees.

Winter Mode should be selected when the pool is not being used for extended periods. The pump will be turned on for 3 minutes every day at the same time Winter Mode was selected. This will assist in the systems off-season maintenance and save energy. To enter this mode press the SELECT button till the WINTER light is illuminated. If the power is interrupted during winter mode the SL6RR will continue to count time accurately. The batteries in the transmitter may be removed if desired at this stage.

Tropical Mode is used to assist in cooling over heated pools. If the limit has been reached, which is indicated by the limit light on, and the roof temperature drops below the limit temperature, usually sometime late at night which is why this mode is not supported on the PV model (To set this function press the SELECT button till the TROP light is illuminated. To switch back to Summer Mode press the SELECT button till the AUTO light is illuminated.)

Roof Temperature

When selected, the roof temperature will be displayed constantly for 3 minutes then return to AUTO. The ROOF indicator will give 4 quick flashes when a signal is received from the transmitter.

OPERATION

The SL6RR will turn the pump on when the roof temperature is higher than the pool (pipe) temperature by 8°C and off at 4°C. Roof temperature is received every 10 seconds from the transmitter. When the pool temperature reaches the limit setting the limit light will flash, it will remain in this state while the roof is hot to prevent over heating the pool. The SL6RR will then wait till 8:00 AM the next day to start the process again. This function is to minimise the pool from overheating, hence reducing water evaporation and consumption of chemicals. An auto flush program is incorporated to ensure accurate pool temperature readings are obtained as the pool sensor is normally located well away from the actual swimming pool and may sit in direct sunlight or in warm enclosures, the last recorded pool temperature will be displayed for 6 hours from when the pump was last running. When auto flush is in wait mode the limit light will be on constant until the pump is turned on for a three minute test, the pump light will flash until this test is over.