

## SOLAR HEATING CONTROL MODEL SL2 AND DUAL SL2.

### USER INSTRUCTIONS

The model SL2 has the capability to satisfy most solar heated pool and spa installations in Australia. The DUAL SL2 is identical in operation but has an auxiliary power socket which is permanently powered on for use with other electrical equipment as long as the maximum current rating is observed as shown on the front panel. The functions the SL2 can be configured for are as follows;

1. Independently plumbed solar heated pools or spas. It allows setting of a limit or comfort level between 20 and 40 degrees Celsius. It will turn on the solar pump when the roof temperature exceeds the pool temperature by 6 or more degrees unless the limit has been reached already. In this case it will disable solar heating until the pool temperature falls one degree or more below the limit setting. During weekdays from Monday to Friday the solar pump is only allowed to turn on between 7am and 8pm. On Saturday and Sunday when most people like to sleep in, the pump is only allowed to start after 9am and again will turn off at 8pm if running. A manual mode can be used to turn on the pump if necessary. Note A tropical or cooling mode can be selected which will allow the pump to turn on at any time should the pool temperature rise by 2 degrees or more above the limit setting and should the roof temperature fall below the limit setting by 2 degrees or more. In practice, this function is rarely used as the noise of a pump turning on at night, which is often accompanied by pipes thumping etc, can disturb sleep habits of adults and small children. It is offered mainly for use in tropical regions such as Queensland and Northern Territory where ambient temperatures may cause pools to heat past the desired comfort level. This can easily happen when pool blankets are used.
2. A wireless remote temperature function can also be offered to overcome difficulties with having to run cables, particularly in installations where paving and landscaping can make the job, time consuming, expensive and often impossible. The remote unit is wall mounted close to the collector location and operates with a 9V Lithium battery. The life of the battery is in excess of 12 months and can be changed simply by removing the lid of the unit and replacing with fresh batteries. It is suggested that the same approach with battery replacement is adopted as with smoke alarms and replaced at the start of daylight saving. A wireless pool temperature in-house pool (or spa) temperature display will be offered in the near future. When available, this will be advertised on our website.
3. A function is provided that allows the existing filter pump to be also used as the solar pump by controlling a Jandy motorised valve or similar, to divert the pool return water up to the solar collector array before returning to pool. A motorised valve is sometimes also used in the foregoing arrangement. If used then this requires an independent 24 vac power source for the valve motor but the control is provided by a relay in the SL2. Connections for the valve

and power supply are provided in the SL2. When used there is a 50 second delay when called on to allow the valve to rotate before a boost pump (if fitted) is allowed to turn on. Note that two holes for the necessary cables are provided just above the sensor sockets and have nylon plugs which can be removed for access. This allows for cable entry of both the motorised valve (typically Jandy) and the 24vac external supply (typically a plug pack). When ever these cables are installed it is important that some silicon sealant is applied around the entrance holes to prevent ants or other insects from gaining access. Ants in particular leave formic acid trails which can bring about failure of the electronics and destruction of the printed circuit boards. If the unit is damaged in any way it should be returned to the manufacturer or it's service agent for repair.

### General Notes for Distributors.

All functions mentioned can be configured as desired by setting one or more jumper links on 3 pin headers which are designated on the circuit board. They are accessible when the unit lid is removed after first turning off power to the unit. This should only be done by qualified personnel and is not end-user applicable. Refer to the installation instructions which show the position of the relevant jumper links. Note that the wireless remote configuration must be specified at time of order as receiver components must be installed and a remote temperature transmitter unit, model RTT-E3 is required. The LCD display is permanently backlit so messages can easily be seen, day or night. The temperature sensors (if cabled) and pressure switch (if used) are plugged into sockets at the bottom of the unit. The two sensors are supplied with matching plugs attached. There is a power outlet available for the solar pump. If necessary, settings can be changed as desired by pressing the E button or the limit setting can be changed on it's own by pressing either the up or down arrows. When set it will be retained by pressing the E button. Manual pump mode is entered by pressing both the up and down arrows together and will return to normal run automatically after 1 hour if inadvertently left on. It can return to normal run at any time when the E button is pressed.

### WARRANTY

This product is warranted against faulty workmanship or faulty components for a period of two years from date of manufacture . This date is referred to the unit serial number. Incorrect or poor installation may void the warranty at the discretion of the manufacturer. Any complaints should be directed initially to the company performing the installation or to the distributor. Faulty units should be returned to the manufacturer for repair or replacement.