

**To select winter mode**, press the winter button. The display will show " W " and the controller will turn the pump on for a short time each day. To resume normal operation, press the winter button and the unit will begin automatic operation.

#### **TROPICAL MODE.**

**NOTE:** This mode is used to cool your pool at night if it overheats in VERY hot weather. Most people do not need to use this function.

**To select tropical mode**, hold winter and display buttons together for five seconds. The tropical led will come on and the unit will then turn on for a short time every 4 hours to check the pool temperature and heat or cool as required. To resume normal operation, press winter and display buttons together.

**OVERRIDE MODE. Before selecting this mode, remember that Multi solar is designed to work automatically. Overriding the automatic operation can result in overheating of your pool.**

**To select override on**, press the + and - buttons together. The display will flash between " ON1 " and the current Pool temperature. The override led will flash and the pump will operate until these buttons are operated again or power is removed from the Multi Solar unit. This mode will time out after 1 hour. To select 4 hour override on, press and hold the + and - buttons down for 5 seconds, the display will show " ON 4 ". To resume normal operation, press the + and - buttons together.

**To select override off**, press the + and display buttons together. The display will flash between " OFF " and the current Pool temperature. The override led will flash and the pump will turn off and stay off until the buttons are operated again. This mode will time out after 1 hour. To select permanent override off press and hold + and display buttons for five seconds. The display will show OFF and will remain off until deactivated. To resume normal operation, press the + and display buttons together.

#### **ERROR INDICATION**

**NOTE:** In extremes of temperature, the fault displays may show although the unit is not faulty. Remember the pool temperature is sensed from the inlet pipe which can be much colder or hotter than the pool if the system has been off for some time. Multi Solar will sense a fault in roof or pool sensors, and indicate it by flashing PPP or rrr.

In this state the unit will not work properly until serviced.



**AssociatedControls**

# Solar Controller

## Model MS3D

r2

**SOLARVAC**

UNIT 3, 37 HOWE STREET

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## MULTI SOLAR INSTALLATION

Multi Solar is designed to give you year round automatic control of your swimming pool solar heating system. By following these simple installation and operating instructions you will enjoy trouble free operation for many years.

### THIS UNIT IS COVERED BY A 2 YEAR WARRANTY

**CAUTION: DO NOT OPEN THE CASE OF YOUR MULTI SOLAR. IT IS NOT USER SERVICEABLE. IF THE POWER CORD IS DAMAGED, IT MUST BE REPLACED BY THE MANUFACTURER OR AN AUTHORISED AGENT. OPENING THE CASE WILL VOID YOUR WARRANTY.**

## INSTALLATION

Multi Solar is weather resistant, however it should be mounted in a sheltered position where it is not exposed to direct weather, splashing or spray from the pool or filtration equipment. **Electrical building regulations specify that Multi Solar must not be mounted within 3 meters of the pool.**

Fix the unit to a wall or post, within 1.5 meters of a 240 volt outlet and within 2 meters of the Solar pump. Mounting points are provided on the back. Two sets of temperature sensor cables are supplied. One short (3m) for the pool and one long (24m) for the roof.

**INSTALLATION:** Avoid cutting the sensor lead (excess can be neatly coiled). If the cable is cut, it must be reconnected with the **POSITIVE (stripe) to the POSITIVE, and the NEGATIVE (no stripe) to the NEGATIVE.** Do not place any wire joins under ground.

**Power connection.** Power is supplied through a standard 240 volt lead. A piggyback socket is provided on the lead if you need to run the filter pump and solar controller from the one power outlet. Power for the solar pump comes from the socket on the bottom of the Solar Controller.

**Maximum Pump rating - 2HP,** larger pumps can be run with a contactor driven from the snubberless version of the controller

**ONLY THE SOLAR PUMP IS TO BE CONNECTED TO THE CONTROLLER OUTLET . MORE THAN THIS WILL DAMAGE THE ELECTRONICS AND VOID YOUR WARRANTY.**

## OPERATION

**AUTOMATIC MODE.** For full automatic operation, simply plug it in and switch on. When the Multi solar senses the sun's heat it compares it to the pool's temperature and your preset "comfort" temperature and decides when to heat the pool. Whenever the unit is powered up, there will be a delay of 2 minutes before the solar pump is activated. The unit will then run for at least 6 minutes to reset the pool temperature sensor. During this time a dot will flash to indicate the unit is going through a startup procedure.

### Comfort Temperature Adjustment

Adjustment of the comfort level is achieved by pressing either the + or - buttons. The first press will simply display the present comfort temperature. Any further operation of the buttons will increase or decrease the setting. The setting will automatically change if either button is pressed and held down. This temperature will be stored permanently in memory, even with power off.

**DISPLAY FUNCTION.** To read roof, pool, comfort and last temperature settings, press the Display button. The display will cycle through the four settings showing an "r" for roof, a "P" for pool or "L" for Last and a "C" for comfort.

### DISPLAY MEANING.

#### P28

Pool temp  
when pump is on  
Pool is 28°C

#### L28

Last pool temp  
when pump is off  
Pool was 28 when  
pump turned off

#### C30

Shows  
Comfort Setting 30°

#### r48

Shows  
roof temp 48°C

#### PPP

Flashing.  
Faulty pool sensor,  
or Pool outside [ 1° - 50° ]

#### rrr

Flashing.  
Faulty roof sensor,  
or Roof outside [ 1° - 100° ]

**NOTE:** When pump is off controller shows the L temperature as the pool sensor is no longer reading a valid temperature.

### WINTER MODE.

Multi Solar is equipped with a unique "Winter mode" facility which allows the user to operate the solar system daily throughout the colder months. By using this facility you will extend the life of your solar heating by preventing pump seizure and drying of chemical build up in the collector.