

TROPICAL MODE. This mode is used to cool your pool at night if it overheats in VERY hot weather, as well as heating during the day. Most people do not need to use this function.

To select tropical mode, the unit must first not be in its winter mode or a solar override mode. Then press the "WINTER" and "DISPLAY" buttons together for 5 seconds. The "TROPICAL" LED will be on, and the unit will then run the solar pump for 6 minutes, then make a decision on how to heat or cool the pool based on the sensor's temperatures, activating the solar pump as required. When the pool has reached your preset "comfort" temperature, it turns everything off and waits 4 hours before starting the process again. Tropical mode will be remembered after a power interruption. To resume normal operations, press the "WINTER" and "DISPLAY" buttons together.

OVERRIDE MODES. Before selecting these modes, remember that the unit is designed to work automatically. Overriding the automatic operation can result in overheating of your pool or spa or even cooling if the solar system continues to run when the sun is not shining.

To select "timer override on", press the "TIMER" button, then the "+" button. The top display will alternate between "On" and the current time, and the filter pump will go on. Automatic solar operations can still occur, but winter mode will not operate (displays "w" instead of "W"). To remove the override, press the "TIMER" button, then the "+" button. "Timer override on" is remembered after a power interruption.

To select "timer override off", press the "TIMER" button, then the "-" button. The display will alternate between "OFF" and the current time, and the filter pump will go off. No solar operations (automatic or winter) are possible and "solar override on" mode (if selected) is ignored, and the display shows the last temperature or "w". To remove the override, press the "TIMER" button, then the "-" button. "Timer override off" is remembered after a power interruption.

To select "solar override on", press the "-" and "+" buttons together. Pressed for a short period, the solar (and filter) pump will normally go on for 1 hour. Holding them down for 5 seconds and 4 hours will be selected. The lower display will alternate between "On1" or "On4" and the pool (or last) temperature. To remove the override, press the "-" and "+" buttons together. "Solar override on" is NOT remembered after a power interruption.

To select "solar override off", press the "DISPLAY" and the "+" buttons together for 5 seconds. The lower display will show "OFF". The solar pump will be off and no solar operations (automatic or winter) are possible. Filter pump operations can still be controlled by the timer or timer override modes. To remove the override, press the "DISPLAY" and "+" buttons together. "Solar override off" is remembered after a power interruption

ERROR INDICATIONS

NOTE: In extremes of temperature, the sensor 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.

An indicated roof or pool sensor error will prevent automatic solar operation and stop solar pump operation, but will allow winter mode (including solar pump operation). Roof and pool sensor errors may show in some override modes, and may or may not stop normal operations.

If the unit displays "EEEE", then it has a memory fault, and may not operate correctly. The unit requires servicing



Solar Time Clock Model MTFS

The sun always shines with Ascon Pool

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MTFS SOLAR TIME CLOCK

The MTFS unit is designed to give you year round automatic control of pool systems employing a solar heating system. It provides complete control of the filter pump and the solar pump. By following these simple installation and operating instructions you will enjoy trouble free operation for many years.

THIS UNIT IS COVERED BY A 1 YEAR LIMITED WARRANTY. Please refer to web site for warranty details.

CAUTION:

DO NOT OPEN THE CASE OF THE MTFS UNIT. 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. ENSURE THAT THE MTFS AND SURROUNDING AREA IS FREE FROM VERMIN INFESTATION

INSTALLATION

The MTFS unit 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 the MTFS unit must not be mounted within 3.5 metres of the pool.**

Fix the unit to a wall or post, within 1.5 metres of a 240 volt outlet and within 2 metres of the Solar pump and the filter 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. This MTFS unit must be installed in the upright position. (Cables and mains sockets downwards).

Avoid cutting the sensor leads (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 underground.

Power connection.

Power is supplied through a standard 240 volt lead. A piggyback socket is provided on the lead if you need to run other appliances from the same mains outlet. Power for the solar pump comes from the left hand side socket on the bottom of the unit, power for the filter pump comes from the right hand side socket on the bottom of the unit.

Maximum pump rating - 1.5HP per pump.

ONLY THE SOLAR PUMP AND FILTER PUMP ARE TO BE CONNECTED TO THE CONTROLLER'S OUTLETS.

MORE THAN THIS WILL DAMAGE THE ELECTRONICS AND VOID YOUR WARRANTY.

TIMER OPERATION

The timer part of the MTFS unit primarily controls the filter pump. This can be set on or off in half hour blocks, or overridden on or off. The solar part of the MTFS unit can also control the filter pump when it requires to do so.

To set up the clock, press the "TIMER" button, followed by the "SETUP" and "DISPLAY" buttons together. The display will show "CLOC". Pressing the "+" button will advance the minutes, the "-" button will advance the hours.

To clear the filter time blocks, press the "TIMER" button and then press and hold down the "SETUP" button for 5 seconds . This will clear all timer blocks and display "CLr".

To set up the filter time blocks, press the "TIMER" button and then the "SETUP" button, and initially "06.00" will be displayed. If filter is required to be on at this time, press the "+" button so the "SET ON" LED is on, else press the "-" button so the "SET OFF" LED is on, or the "SETUP" button again, when the block

time will increment to the next half hour block. Repeat until desired pattern is set up, then wait 5 seconds until the displays return to their normal display.

To check the filter time blocks, press the "TIMER" button, then the "DISPLAY" button. If the display initially shows "End", then all the blocks are off. If the display initially shows "ALL", then all the blocks are on. The display will normally show the first time in a day that the filter unit will go on at (indicated by the "SET ON" LED being on). Further pressing of the "DISPLAY" button will show when the unit will go off (indicated by the "SET OFF" LED being on) and so on until it displays "End", where there are no more filter timer blocks to display.

SOLAR OPERATION

The solar part of the MTFS unit primarily controls the heating of the pool to a preset comfort setting using solar heating when appropriate. It can control the filter pump when it requires to do so.

AUTOMATIC MODE. For fully automatic operation, simply plug it in and switch on. The unit will run the pump for 6 minutes (decimal point after the P flashing), then make a decision to heat the pool based on the sensor's temperatures, activating the solar pump as required. When the pool has reached your preset "comfort" temperature, it turns everything off and waits 4 hours before starting the process again.

Comfort Temperature Adjustment

Adjustment of the comfort level is achieved by pressing either the "+" or "-" buttons. The first operation 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 MODE. To read roof, pool and comfort temperature settings, press the "DISPLAY" button. The display will cycle through the settings showing an "R" for roof , a "P" for pool or "L" for Last and a "C" for comfort.

DISPLAY MEANING (Lower display)

P28

Pool temp when filter pump is on.
Pool is 28°C

L28

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

C30

Shows Comfort setting 30°C

R48

Shows Roof temp 48°C

PPP

Flashing.
Faulty pool sensor,
or pool temp outside 3° - 50° range

rrr

Flashing.
Faulty roof sensor,
or Roof temp outside 3° - 98° range

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

WINTER MODE .

The MTFS unit is equipped with a unique "Winter mode" facility which allows the user to exercise the 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.

To select winter mode, press the "WINTER" button. The display will show "W" and the unit will turn on the solar pump for six minutes each time the filter pump comes on. For this function to work properly, at least one on and at least one off period needs to be programmed into the timer.

To resume normal operation, press the "WINTER" button again and the unit will begin automatic operation.