

**NIGHT SUB MODE.** This mode is used to prevent heating and filter pump operation at night (10pm to 8am), in cases where noise may be a problem.

**To select night mode,** the unit must first not be in a heater override mode. Then press the 'winter' and 'display' buttons together briefly. The 'night' LED will be ON, and the unit will then run as per SUMMER (automatic) mode or WINTER mode, except no operation will occur between the hours of 10pm and 8am. Night mode will be remembered after a power interruption. To resume normal operations, press the 'winter' and 'display' buttons together for 5 seconds.

**TEST MODE.** Pressing the '+', '-', 'winter' and 'display' buttons together will initiate a short test routine that will exercise the display, LEDs and controlled outputs.

**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.

**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 heater 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 heater operations (automatic or winter) are possible and heater 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 heater override on,** press the '-' and '+' buttons together. Pressed for a short period, the heater (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. Heater override on is NOT remembered after a power interruption.

**To select heater override off,** press the 'display' and the '+' buttons together for 5 seconds. The lower display will show 'OFF'. The heater will be off and no heater 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. Heater override off is remembered after a power interruption.

#### **PRO.**

The display may show 'Pro' at the end of heating cycles, when it is allowing the heating system to cool, whilst pumping water through it. During this protection period, many of the unit's functions will not be accessible.

#### **ERROR INDICATIONS**

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.

An indicated pool sensor error will prevent automatic heater operations, but will allow winter mode. 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.



# Heater Time Clock Model C1710

The sun always shines with Ascon  
Pool

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## C1710 HEATER TIME CLOCK

The C1710 unit is designed to give you year round automatic control of pool systems employing a conventional (not solar) heating system. It provides complete control of the filter pump and the heater. 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 C1710 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.**

### INSTALLATION

The C1710 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 C1710 unit 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 heater and the filter pump. Mounting points are provided on the back. One temperature sensor cable is supplied, (3m) for the pool. This C1710 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 heater control 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 HEATER'S CONTROL 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 C1710 unit primarily controls the filter pump. This can be set on or off in half hour blocks, or overridden on or off. The heater part of the C1710 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 set up 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'. Now press the 'timer' button and the 'setup' button, and initially 0600 will be displayed. If filter is required to be on at this time, press the 'override set on' button, else press the 'night set off' button or the 'setup' button again, where 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. The display will normally show the first time in a day that the filter unit will go on at (indicated by the On Led). Further pressing of the 'display' button will show when the unit will go off and so on until it displays 'END', where there are no more filter timer blocks to display.

### HEATER OPERATION

The heater part of the C1710 unit primarily controls the heating of the pool to a preset comfort setting when appropriate. It can control the filter pump when it requires to do so.

**SUMMER (automatic) MODE.** For full automatic operation, simply plug it in and switch on. The unit will run the pump for 6 minutes, then make a decision to heat the pool based on the pool sensor's temperature, activating the heater 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 pool and comfort temperature settings, press the 'display' button. The display will cycle through the three settings showing a 'P' for pool or 'L' for Last and a 'C' for comfort.

### WINTER MODE .

The C1710 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 heating system by preventing pump and 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 heating 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 SUMMER (automatic) operation.

### 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

#### PPP

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

#### Pro

The unit is protecting the heater  
Some function may not be  
accessible.

#### W--

Timer blocks not set  
up suitably for winter  
Mode.

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