

**DESCRIPTION:**

The H7 FHC is a swimming pool controller that heats a swimming pool to a set temperature limit by the use of heat pump or gas heater.

Heating is based on the heat demand start and end time, if the pool reaches limit the pump turns off (if filter time is off) until the sample wait time has elapsed, the pump then turns on for 3 minutes to take an accurate reading of the pool temperature, and will then proceed to heat the pool if needed or if heating is not required it will enter it's sample wait state and the last accurate pool reading will be displayed.

If a chlorinator is plugged into the auxiliary socket it will be active with the filter times, during heat demand only the filter pump will operate, this will help to prevent over chlorination of the pool.

**SETTINGS MENU**

To enter the SETTINGS MENU push either the up or down buttons and the following will be displayed;

SETTINGS MENU

1) MANUAL MODE

Use *Up/Down* buttons to scroll to the option you wish to change. Press the *Enter* button to select the currently displayed menu item.

All menu items are shown below;

SETTINGS MENU

1) MANUAL MODE

2) FILTER TIMER

3) TEMPERATURE

4) HEAT DEMAND

5) CLOCK

6) SAVE & EXIT

**1) MANUAL MODE**

MANUAL PUMP MODE

UP=ON DOWN=OFF

MANUAL MODE allows you to manually set the pump to 'on' by pressing the *Up* button or 'off' by pressing the *Down* button.

Pressing *Enter* will return you to the SETTINGS MENU. You can also keep pressing *Enter* to toggle the filter pump from 'on' to 'off' and vice versa.

MANUAL MODE will time out, after 24 hours the unit will return to normal operation.

**2) FILTER TIMER**

FILTER TIMER  
(ON/OFF)

FILTER TIMER can be set to ON or OFF, this controls the power out of the right hand socket (PUMP), if OFF is selected the right hand socket will only be powered to run a pump for heat demand, selecting OFF will return you to the SETTINGS MENU.

When the FILTER TIMER is set to ON the right hand 240VAC socket runs a pump for filtration on a daily schedule with the following settings;

SINGLE CYCLE  
DUAL CYCLE

Single cycle sub menu

SINGLE CYCLE	SINGLE CYCLE
START TIME X:XX	END TIME X:XX

Dual cycle sub menus

FILTER CYCLE	FILTER CYCLE	2nd FILTER CYCLE	2nd FILTER CYCLE
START TIME X:XX	END TIME X:XX	START TIME X:XX	END TIME X:XX

When you enter the FILTER SETUP menu you will need to select SINGLE CYCLE or DUAL CYCLE, the selected option will be flashing, you can use the *Up/Down* buttons to change to the selected option, once you select the required cycle by pressing *Select* you will be prompted to set the cycle START TIME and END TIME, modify these by pressing the *Up/Down* buttons, press *Select* to accept the setting.

SINGLE CYCLE will run the filter pump once per day. DUAL CYCLE will run the filter pump twice per day.

Note 1: If you choose the 2<sup>nd</sup> filter cycle time to be within the 1<sup>st</sup> filter cycle time period the result will be a single cycle time.

Note 2: If 24 hour filtration is required then set the start and end time the same (e.g. 12:00-12:00)

Note 3: during heat demand times the pump will also run if heating is required

\*\*Factory Default is ON, DUAL CYCLE from 09:00 to 13:00 and 16:00 to 20:00

**3) TEMPERATURE**

TEMPERATURE  
POOL LIMIT XX.X°

When you enter the TEMPERATURE menu you may change the heater temperature limit setting by pressing the *Up/Down* buttons, if no change is required simply push *Enter*.

Factory default is 27°C.

**4) HEAT DEMAND**

HEAT DEMAND  
ON/OFF

When you enter the HEAT DEMAND you will need to select ON or OFF, the selected option will be flashing, you can use *Up/Down* to change the selected option, *Enter* to accept.

If OFF is selected you will return to the menu, If ON is selected you will be prompted for START and END time, modify values by using the *Up/Down* buttons, use *Enter* to accept the values. Factory default is 'heat demand off'

HEAT DEMAND TIME            HEAT DEMAND TIME  
START TIME X:XX            END TIME X:XX

NOTE: if a 24 hour continuous run time is required then set the start time and end time to the same value. (e.g. Start 12:00, End 12:00)

IF LIMIT ACTIVE  
SAMPLE AT XXXX

Sets the sampling period once the pool has reached the auxiliary temperature limit, options are 15 min, 30 min, 1 hour, 2 hours. Once the pool reaches the aux temperature limit and the filter pump is turned off it will not be turned on until the sample period expires, the filter pump will then run for a minimum period of 3 mins so that water can flow past the pool temperature sensor and obtain an accurate reading. Should heating be required the pump will remain on to heat the pool.

Factory default for HEAT DEMAND is OFF (06:00 to 22:00, sample @ 1 hour)

**5) CLOCK**

TO CHANGE CLOCK    TO CHANGE CLOCK  
SET MINS XX        SET HOURS XX

When you enter the CLOCK menu you will be prompted to change the MINS (minutes of the hour) settings, adjust minutes by pressing the *Up/Down* buttons, to accept the setting press the *Enter* button.

You will then be prompted to change the HOURS (hour of the day), adjust by pressing the *Up/Down* buttons, to accept the setting press the *Enter* button.

**6) SAVE & EXIT**

When this menu is selected, push *Enter* to save ALL settings, the unit will return to normal operation automatically.

Note: If any of the menu items are left unattended for 3-4 mins the menu will time out and automatically save all settings and return to operation.

**The *Enter* button.**

FOR MANUAL MODE  
PRESS ENTER NOW

Pressing the *Enter* button once will display the above message for ~3 seconds, simply wait and the unit will return to normal operation.

If you *Enter* is pressed for a second time within a 3 second period, the display will indicate you have entered Manual mode, operation is the same as manual mode in the menu with the only difference being the timeout value is 4 Hours.

**INSTALLATION:**

**Controller Mounting**

Find a suitable location to mount the control box. Ideally as with all pool equipment it should be installed out of direct weather and no closer than 3 meters from the waters 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.

**Pump & Chlorinator**

The Filter pump plugs into the right hand 240Vac socket marked as PUMP and the chlorinator plugs into the left hand 240Vac socket marked as AUXILIARY. Set the chlorinator time clock (if fitted) to run 24 hours a day or select Manual On mode.

If a chlorinator is plugged into the auxiliary socket it will be active 3 minutes after the pump is started and will be turned off 3 minutes before the pump is stopped. The maximum combined current is 10 AMPS 2400W.

**Pool Sensor**

The water temperature sensor should be fitted into the suction line of the Filter pump, preferably in a position out of direct sunlight. 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 plug socket beneath the H7 control box marked POOL. **DO NOT** cable-tie or tape sensor wires to mains power.

**Heater Interlock**

Connect the heater control wire in series (daisy chain) with the low voltage heater pressure switch or flow switch back to the H7 control box marked RELAY 1. **DO NOT** connect if pressure or flow switch is 240 Volt, an optional switch box must be ordered and fitted by a person licensed to carry out this kind of work. Turn the temperature setting on the heater 5 Degrees or more above the desired water temperature to allow the H7 to be in control without conflict.

**NOTES.**

1. If a sensor fault is detected the H7 will display which sensor and what the fault is.
2. Should power be interrupted for any reason, the H7 will resume normal operation when power is restored, all information will have been kept.
3. Temperature sensors used with this unit are Digital and are accurate to 0.5 Deg. C, no calibration is required.
4. The sensor cable with the thin trace is the positive and is usually fitted to the right hand side of the green plug, incorrect polarity will be displayed.
5. Auxiliary heater interlock relay has a maximum load of 5A at 32VAC max.
6. Maximum rated output load for both 240V sockets is 10 Amps 2400 Watt combined.

Return to Manufacturer for repair.

