
AQUATEK

Instruction Manual



DESCRIPTION

The AQUATEK Controller manages your pool, spa and heating requirements from your smart phone via the home WIFI. It will control single and many multi speed pumps, sanitiser, heater, solar heating, lights, water features, pool/spa valve actuators and all spa equipment requirements.

The AQUATEK Control system is modular and can accommodate most pool control requirements big or small.

INSTALLATION INSTRUCTIONS

THIS APPLIANCE IS NOT INTENDED FOR USE BY YOUNG CHILDREN OR INFIRM PERSONS WITHOUT SUPERVISION. PLEASE ENSURE THAT YOUNG CHILDREN ARE SUPERVISED TO ENSURE THAT THEY DO NOT PLAY WITH THE APPLIANCE.



Fix the mounting bracket to a solid structure via screws and wall plugs kit provided, and slide the controller on, locking into place. Adjust the screws on the back of unit to ensure a snug fit. To remove unit, lift and gently pull away from mounting bracket.

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 metres from the water's edge, at a minimum 600mm above ground. The power cable is 1.8m long and should be plugged directly into a general power outlet, not into an extension lead. Mount the pump and sanitiser according to the manufacturer's instructions.

SANITISER CONNECTION

The sanitiser (Ioniser, Chlorinator, etc) can be connected to any of the 240V sockets on either the Master Controller or on one of the Expansion Units. The sanitiser must be set to operate 24hrs per day as the AQUATEK controller will control the number of hours per day the system will operate. Refer to the sanitiser instructions for 24hr timer setup and dosing requirements.

Note: Both the Sanitiser and the Filtration pump will need to be allocated sockets in 6.1 of the Installer Menu.

POWER OUTPUT CONNECTIONS

The 240VAC Output Sockets are for equipment to be controlled via the AQUATEK controller. Each socket can be assigned via the menu and/or app. The maximum combined load for both sockets on the master controller, is 9.98 AMPS at 2395W.

HEATER CONTROL

Set the heaters temperature limit to maximum [40°C]. The heaters internal control will be interrupted, to turn off heating. The heater interlock cable connects to the green socket marked INT which switches on [closes] the voltage free NO/C relay contacts when the heater is to be turned on. The heater end of the interlock cable connects in series with the heater's pressure/flow or fireman's switch. Contact the heater manufacturer for the best location to connect to.

The heater interlock is for extra low-voltage [MAX 30V at 2Amps] switching only.

*Note: If the heater's flow or pressure switch circuit is 240Vac, an external relay [KIT10] which can be purchased separately, is to be **connected by a licensed electrician.***

If the heat pump/gas heater is equipped with a "Demand Heat" function, the heater interlock cable will be connected into the socket labelled as "Pump Call". The controller will over-ride the filter pump when flow is called for by the heat pump which monitors the temperature within its own defined run times. Connect the heater cable from the controller output to the heater's connection point. Check with heater manufacturer for correct interlocking procedure.

*Note: If the heater's flow or pressure switch circuit is 240Vac, an external relay [KIT11] which can be purchased separately, is to be **connected by a licensed electrician.***

VALVES

The AQUATEK has 4 valve actuator sockets for the controlling of solar heating, water features, pool/spa water flow, and In Floor cleaning.

Note: If wiring your own supplied valve then wire as per the label on the base of the controller [Red, Black then White] red and white are for direction control and black is the common. Ensure the switch on the valve actuator is in the ON position. Refer the valve instructions for mounting requirements, cam adjustments etc.

Maximum power for the VALVE output is 24VA.

SENSORS

POOL SENSOR

The pool sensor must be fitted into the heating circuit, upstream of the heater and preferably in a position out of direct sunlight. It is recommended that a 14.5mm hole be drilled in the side of the PVC pipe (not the top of the pipe where water will collect), this can be carried out using a Dontek PD01 grinding drill or a small pilot hole can be drilled with 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 sensor barb. Ideally ~30cm of the cable from the sensor should be tied to the shaded side of the pipe to prevent extreme ambient conditions leeching into the sensor via the copper in the cable. The blue sensor plug is to be fitted to either Sensor 1 or 2 port located beneath the controller (see diagram on p 4).

ROOF SENSOR

If a roof sensor is installed, it must be fitted into a small piece of collector material away from the main collector but on the same aspect, preferably no more than 50cm from the roof gutter (for ease of sensor replacement). If required, the roof sensor can be on a different roof as the solar collector as long as the alignment to the sun is similar to the solar collector. For encapsulated collector panels use the manufacturer's instructions for roof sensor placement. The red sensor plug is to be fitted to either Sensor 1 or 2 port located beneath the controller (see diagram on p 4).

SENSOR NOTES: All excess cable must be removed; coils of cable are not permitted under any circumstances and **must not** be tied to 240V wiring. If the cable is to be extended with non-genuine cable a size of 14/020 should be used. **Any cable joins should be soldered.** Heat shrink is to be used over soldered joints to eliminate moisture ingress.

EXPANSION UNITS

The AQUATEK has the capacity to have an additional 2 expansion units connected to it. Each Expansion Unit has an additional 3, 240VAC Output sockets that are controlled via the AQUATEK controller. Up to an additional 6 power sockets can be utilised and controlled by the AQUATEK master controller. The Expansion Units are rated at either 10Amps or 15Amps. All 3 sockets of the Expansion Unit are rated the same. 3 sockets at 10Amps or 3 sockets at 15Amps.

EXPANSION UNIT 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 metres from the water's edge, at a minimum 600mm above ground. The power cable is 1.8m long and should be plugged directly into a general power outlet, not into an extension lead.

Mount as per main controller.

The maximum combined load for all three sockets of the module is either, 9.98 Amps / 2340 Watts, or, 14.98 Amps / 3540 Watts. Please refer to the unit's rating label.

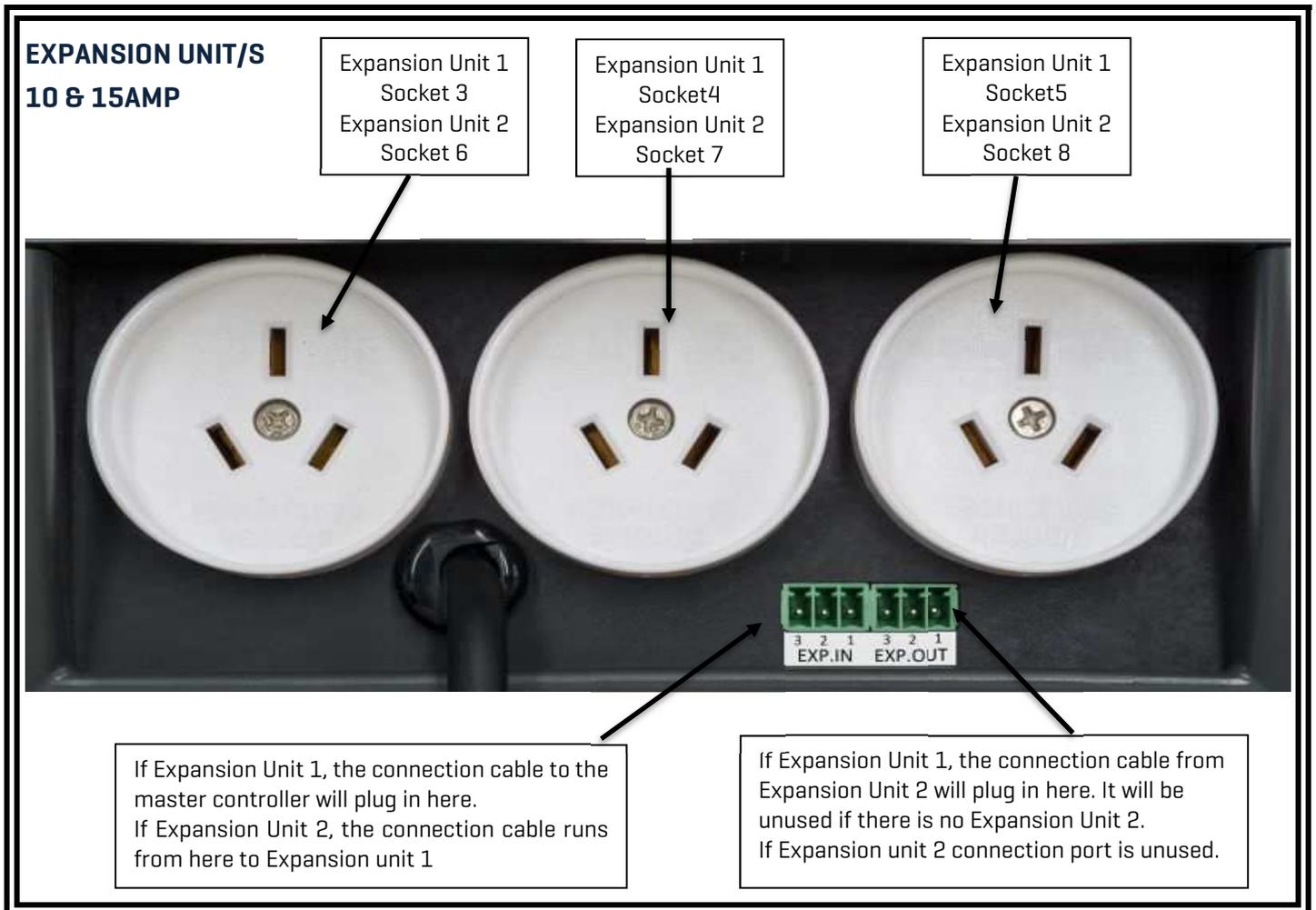
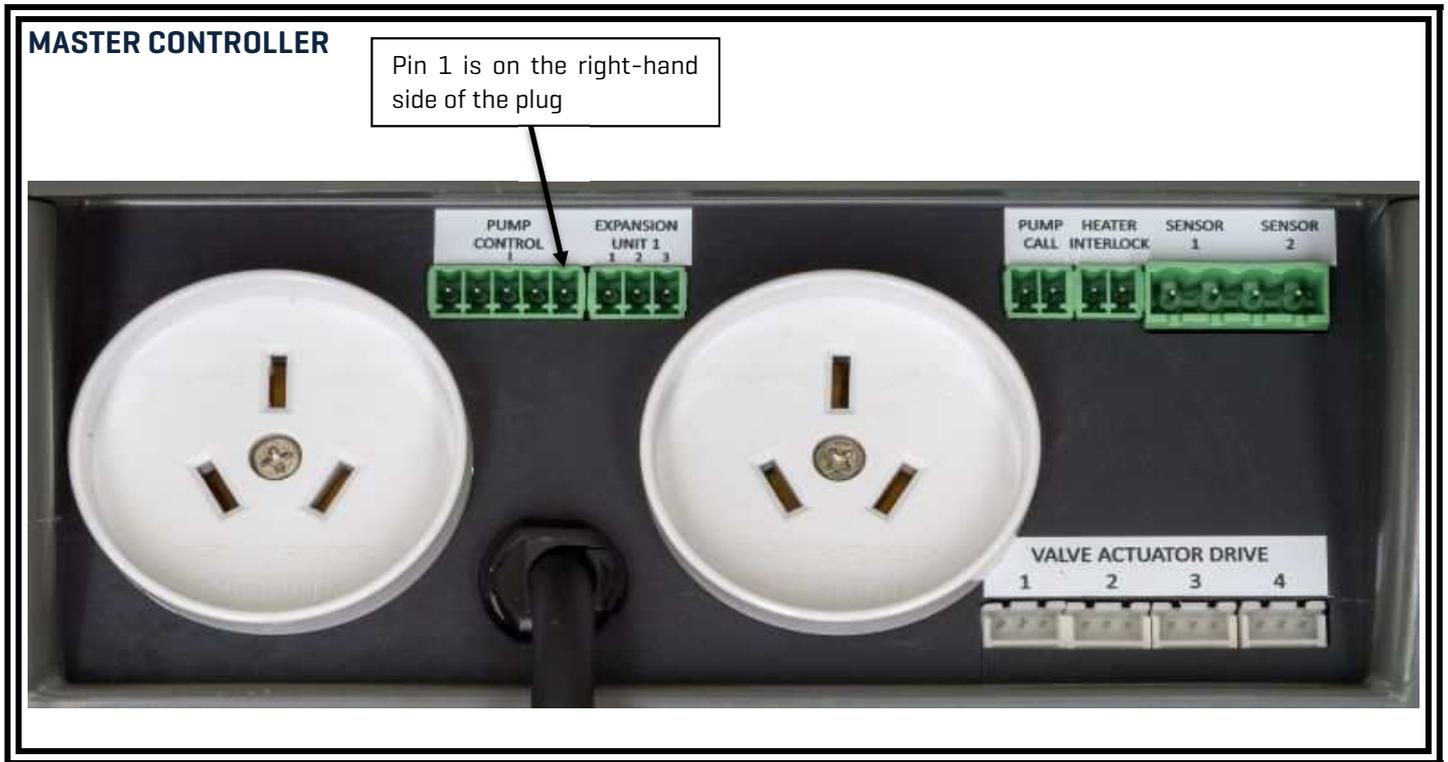
The 15Amp rated expansion unit must be plugged into a 15Amp rated GPO.

POWER OUTPUT CONNECTIONS

The 240VAC Output Sockets are for equipment to be controlled via the AQUATEK. Each socket can be assigned via the menu and/or app.

INSTALLATION DIAGRAMS

The AQUATEK'S Master Controller and an Expansion Unit.



OPERATING INSTRUCTIONS

LCD SCREEN

In Automatic (Pool) mode the LCD screen displays; the time of day, what time the current filtration cycle will finish/start at, if more than one filtration cycle is set, then the start time of the next filtration cycle is displayed, current pool and roof temperatures or any faults are displayed, current status of the pump [run/inactive], Heat Demand time [if active], and whether the WIFI is active or disabled.

In Spa mode the LCD screen will display; the time of day, SPA MODE on, pool temperature or sensor fault, Temperature – both current temperature and set temperature of the spa, pump status, and WIFI status.

LCD INDICATORS

There are arrow icons on the LCD screen that point to text on the label.

CONTROLLER BUTTONS

AUTO	Pressing the AUTO button will run the controller in automatic pool mode. If the AUTO button is pressed while in the settings menu, the changed settings will be used but not saved. If there is a power failure the controller will retrieve the previously saved settings. On power-up the controller will start automatic pool operation.
BACK	Pressing the BACK button will allow you to go back to previous menu options.
ENTER	Pressing the ENTER button will turn on the LCD backlight or Pressing the ENTER button will accept the currently displayed setting option.
MENU	After pressing the MENU button, a range of options can be selected from and changed. The selectable options in the MENU are as follows: 1) FILTER TIMES 2) TEMPERATURE SETTINGS 3) MANUAL ON 4) TIMERS 5) LIGHTS 6) INSTALLER MENU
UP & DOWN	The UP & DOWN buttons allow you to scroll through different functions and or settings in the menus, as well as increasing or decreasing temperature settings.
SPA	The SPA button allows you to toggle between Pool and Spa modes. Pressing the SPA button begins the process of heating the spa to the spa temperature limit. The pool/spa valve will move to the spa and prime the pump if required. Heating will occur to the displayed set temperature. To return to automatic pool operations press the AUTO button or press the SPA button to return to automatic pool operations

PUMP

If at any time the PUMP button is pressed the pump is switched on and the following will be displayed:

3 MINS BACKWASH
ENDS IN XX:XX:XX

This function is used for a system back wash, pool vacuuming, manually running the system for a set amount of time, running the filtration system after adding chemicals, etc. It can also be used to stop the pump from running [if maintenance is required] for a set amount of time.

Use the Up/Down buttons to increase or decrease the amount of time that the pump will run, or not run. The countdown timer lets you know how much time is left until the manual function ends.

The timer amounts after the 3 minute backwash are:

PUMP ON: 30 MINS,

PUMP ON: 1HR,

PUMP ON: 2HR,

PUMP ON: 3HR,

PUMP ON: 5HR,

PUMP ON: 9HR,

PUMP ON: 10HR,

PUMP ON: 15HR,

PUMP ON: 20HR, and

PUMP ON: 24HR.

The timer amounts to stop the pump are displayed as follows:

HOURS OFF: 01HR,

HOURS OFF: 02HR,

HOURS OFF: 03HR,

HOURS OFF: 05HR,

HOURS OFF: 09HR,

HOURS OFF: 10HR,

HOURS OFF: 15HR,

HOURS OFF: 20HR, and

HOURS OFF: 24HR.

At any time during the count down, if you press the ENTER button, the timer will reset to the selected time, and start again.

During the count down, if you press the PUMP button again, the controller will return to automatic operation.

NOTE

It is advisable to go into Installer Setup first and enter all equipment that will be utilised/allocated in the Menu functions.

MENU

The menu system can be navigated using the ↑ or ↓ buttons. All selectable and changeable values will be displayed on the LCD screen. Press the ENTER button to accept the currently displayed item.

All menu items are shown below:

- 1) FILTER TIMES
- 2) TEMPERATURE SETTINGS
- 3) MANUAL ON
- 4) TIMERS
- 5) LIGHTS
- 6) INSTALLER MENU

You have the option to choose up to 4 different Filtration Times.
When you select the FILTER TIMES menu option, the screen will display:

FILTER ON
TIME 1 OFF

When you select ON and press ENTER the screen will display:

FILTER XX:XX
TIME 1 ON XX:XX

Adjust the start time and end time for the required filter cycle. The circulation pump will run between these times for filtration purposes.

Once you have set the first filter time, you will then be asked to select a pump speed for the first filter cycle.

Note: This will only be displayed if you have installed a Multi Speed Pump through the Installer Setup [6.2]. You won't be asked for a pump speed if Single Speed pump was selected in the Installer Setup [6.2].

This will be displayed as:

FILTER TIME 1
SPEED 1, (2,3, or 4 can be selected, depending on pump).

Once you have selected a speed for the first Filter Cycle, the option for a second filter cycle will be displayed:

FILTER ON
TIME 2 OFF

Set and adjust as with Filter Time 1 or if not required then set the timer to OFF.

Repeat the above steps for Filter Time 3 and 4.

Note: You can run different pump speeds in the separate filter times.

- Filter cycle 1 may run at speed 4, filter cycle at speed 2, filter cycle 3 at speed 1, and filter cycle 4 at speed 4.
- For example:

Filter Time 1: 8.00 – 9.00 at speed 4.

Filter Time 2: 9.00 – 15.00 at speed 2.

Filter Time 3: 15.00 – 16.00 at speed 4.

1. FILTER TIMES

<p style="text-align: center;">2. TEMPERATURE SETTINGS</p>	<p>When you enter Temperature Settings, the first setting that will be displayed is:</p> <p>POOL TEMPERATURE 27°.</p> <p><i>**Range is OFF, 20°c to 40°c in 1°c increments. Default is 27°c.**</i></p> <p>This temperature is the minimum pool temperature that you would like the Heater to heat the pool to if a heater is utilised. The temperature limit can be increased or decreased with the ↑ or ↓ buttons to a temperature of your choice.</p> <p>Once you have selected a Pool Temperature, press Enter and the temperature will be set. The controller will then display:</p> <p>SPA TEMPERATURE 37°c.</p> <p><i>**Range is OFF, 20°c to 40°c in 1°c increments. Default is 37°c.**</i></p> <p>This is the temperature that you would like the SPA to be at when in use. The temperature limit can be increased or decreased with the ↑ or ↓ buttons to a temperature of your choice.</p> <p>Once you have selected a Pool Temperature, press Enter and the temperature will be set. The controller will then display:</p> <p>SOLAR TEMPERATURE 30°c.</p> <p><i>**Range is OFF, 20°c to 40°c in 1°c increments. Default is 30°c.**</i></p> <p>This is the temperature you would like the solar to heat the pool to, if it is utilised. The temperature limit can be increased or decreased with the ↑ or ↓ buttons to a temperature of your choice. Once you have selected a Pool Temperature, press Enter and the temperature will be set. The controller will then return you to the Main Menu.</p>
<p style="text-align: center;">3. MANUAL ON</p>	<p>In this menu setting you will be able to manually turn on any socket or valve that has been allocated an appliance.</p> <p>Socket 1 through to 8, and valve 1 through to 4, if allocated. Press Enter to open the setting and the controller will display:</p> <p>S1: XXXXXXXXX AUTO</p> <p>Use the ↑ or ↓ buttons to move between the allocated sockets and valves. If a socket or valve hasn't been allocated an appliance, then it won't be shown. Press the Enter button to toggle between; AUTO, OFF, & ON.</p> <p><i>Press the Auto Button to return all appliances to normal automatic operation.</i></p> <p><u>Please remember that you will also need to turn the appliance back to Auto, otherwise it will continue to run.</u></p> <p><i>Note 1: If a socket has been set to ALWAYS ON, then you won't be able to turn it on manually. Note 2: If a valve has been allocated to Pool/Spa, you will not be able to turn it on using this menu option.</i></p>

4. TIMERS

When you enter the TIMER menu, you can set a number of the allocated appliances on a timer. The appliance has to be allocated a socket or valve to be allowed a Timer setting. Each appliance has the choice of either; Off, 1 time, or 2 timer allocations.

*****Note: Time periods for different appliances can overlap each other.*****

The first available appliance to be set on a timer will be displayed as:

Socket #X
XXXXXXXXXXXX.

Press the ENTER button to be able to adjust the time setting or use the ↑ or ↓ buttons to display the Appliance to be set.

You will see displayed:

XXXXXXXXXXXX
TIME 1 ON.

Toggle the ↑ or ↓ buttons to either turn the appliance ON or OFF the timer.

If you select OFF the next allocated appliance will be shown.

If you select ON then the controller will display:

XXXXXXXXXXXX
TIME 1 FRM XX.XX

Use the ↑ or ↓ buttons and the Enter button to allocate a start time. Once the time has been entered, the next display will be:

XXXXXXXXXXXX
TIME 1 TO XX.XX

Use the ↑ or ↓ buttons and the Enter button to allocate an end time. Once the time has been entered, the next display will be:

XXXXXXXXXXXX
TIME 2 ON/OFF

Adjust TIME 2 setting as with TIME 1.

Once the TIMER setting has been completed you can move onto the next allowable appliance. Adjust and set as above.

Notes:

- Socket type "Sanitiser" is not allowed on appliance timer, as it follows filter timer.
- Socket type "Filter Timer" is not allowed on appliance timer, as it follows filter timer.
- Socket type "Solar" is not allowed on appliance timer, it follows solar configuration.
- Socket type "Always On" is not allowed on appliance timer.
- Socket type "Blower" is not allowed on appliance timer, used only in Spa mode.
- Socket type "Jet Pump" is not allowed on appliance timer, used only in Spa mode.
- Valve type "Pool/Spa" is not allowed on appliance timer, used on in Pool/Spa mode.
- Valve type "Solar" is not allowed on appliance timer, as it follows solar configuration.
- VF contact types are not allowed on appliance timers.

Please ensure that when you set the timers for different appliances, that the maximum combined load DOES NOT exceed either the controllers power rating, or the power rating of the expansion unit when the different appliances are turned on at the same time.

5. LIGHTS

In this menu setting, you can only change the colour of your allocated Pool and Spa light/s. Garden lights are not given the option of colour changing.

The socket number and the brand/type of light must have been allocated in the Installer Setup under Appliances [6.3] before you can change the colours through this menu option.

When you enter the Lights menu the controller will display the allocated socket number, allocated light type, and the brand/style of light. For example.

S6: POOL LIGHT
SINGLE COLOUR

The ↑ or ↓ buttons can be used to move between the allocated lights to the light you wish to change. Once the Light is displayed on the screen, press Enter and the controller will display:

S6: [Brand name]
[current colour]

Use the ↑ or ↓ buttons to toggle through the range of colours (if any) associated with that brand of pool light. Press Enter to accept the colour you wish to choose.

If you so wish you can then move onto another allocated socket and change the colour settings of that socket.

Adjust the colour as described above.

Note:

- A maximum of 3 sockets can be allocated to lights, whether Pool, or Spa. Each socket/group of lights will be the same colour as chosen for that allocated socket.

6. INSTALLER MENU

The Installer Setup is where you will go to enter all the equipment that is installed on the Pool/Spa system and can have its settings changed in the Menu functions or via the App.

<p style="text-align: center;">6. INSTALLER MENU</p>	<p>Under the Installer Menu there is a range of options to choose from. These are:</p> <ol style="list-style-type: none">1. Appliances2. Pump3. Lights4. Heating5. Spa6. Heat Demand7. Pump Call8. Water Feature9. Temperature Sensor10. Expansion Unit11. Set Time12. WIFI13. Factory14. About <p>Use the ↑ or ↓ buttons to toggle through the list of menu options. When the option you want is displayed on the screen, press the Enter button.</p>						
<p style="text-align: center;">6.1 APPLIANCES</p>	<p>Appliances can be allocated on up 8 power sockets, 4 valves and 1 VF contact. Socket 1-2, Valves 1-4, and the VF Contact are all located on the master controller. Sockets 3, 4, & 5 are located on Expansion Unit 1.</p> <p><i>These sockets are only available for selection if the expansion unit is there and has been enabled.</i></p> <p>Sockets 6, 7, & 8 are located on Expansion Unit 2.</p> <p><i>These sockets are only available for selection if the expansion unit is there and has been enabled.</i></p> <p>The list of appliances available to choose from are listed below:</p> <p><u>Sockets</u></p> <table border="0"><tr><td><ul style="list-style-type: none">• Sanitiser• Filter Pump• Cleaning Pump• Blower• Pool Light• Spa Light</td><td><ul style="list-style-type: none">• Garden Light• Water Feature• Solar Pump• Other• Always On• Jet Pump• None</td></tr></table> <p><u>Valves</u></p> <table border="0"><tr><td><ul style="list-style-type: none">• Pool/Spa• Filter Pump• In Floor cleaning</td><td><ul style="list-style-type: none">• Water Feature• None</td></tr></table> <p><u>VF Contact</u></p> <table border="0"><tr><td><ul style="list-style-type: none">• Gas Heater• Heat Pump</td><td><ul style="list-style-type: none">• None</td></tr></table>	<ul style="list-style-type: none">• Sanitiser• Filter Pump• Cleaning Pump• Blower• Pool Light• Spa Light	<ul style="list-style-type: none">• Garden Light• Water Feature• Solar Pump• Other• Always On• Jet Pump• None	<ul style="list-style-type: none">• Pool/Spa• Filter Pump• In Floor cleaning	<ul style="list-style-type: none">• Water Feature• None	<ul style="list-style-type: none">• Gas Heater• Heat Pump	<ul style="list-style-type: none">• None
<ul style="list-style-type: none">• Sanitiser• Filter Pump• Cleaning Pump• Blower• Pool Light• Spa Light	<ul style="list-style-type: none">• Garden Light• Water Feature• Solar Pump• Other• Always On• Jet Pump• None						
<ul style="list-style-type: none">• Pool/Spa• Filter Pump• In Floor cleaning	<ul style="list-style-type: none">• Water Feature• None						
<ul style="list-style-type: none">• Gas Heater• Heat Pump	<ul style="list-style-type: none">• None						

6.1
APPLIANCES
CONTINUED

When you enter the Appliance Menu, the first thing that will be displayed is:

SOCKET #1
[currently allocated appliance]

The ↑ or ↓ buttons are used to toggle between the Sockets of the Master Controller then Expansion Unit 1, then Expansion Unit 2, then the Valves and VF Contact of the Master Controller. Once the Appliance you want to change is displayed on the screen, press Enter.

This will move the cursor next to the allocated appliance. Use the ↑ or ↓ buttons to toggle through the range of Appliances that can be selected for that output. Once the Appliance you want to select is displayed, press Enter. The Appliance will have been selected and the controller will then display the next socket/valve/VF contact:

SOCKET #2
[currently allocated appliance]

Note: When you move onto the next appliance the cursor will still be next to the allocated appliance.

If you wish to change this appliance simply use the ↑ or ↓ buttons to toggle through the range of allowable appliances. Press Enter to select.

Keep pressing Enter to scroll through the allocated appliances [if there is another socket, valve, or VF contact you wish to change] until the appliance you wish to change is displayed. Use the ↑ or ↓ buttons to toggle through the range of allowable appliances. Press Enter to select.

Alternatively, if you don't want to change any more appliances, press the MENU button to exit.

When changing the Valve appliances, the controller will display:

VALVE #1
[currently allocated appliance]

The Valve appliance is changed the same way as the Socket appliances.

When changing the VF Contact, the controller will display:

VF CONTACT
[currently allocated appliance]

The VF Contact is changed the same way as the Socket & Valve appliances.

6.2 PUMP

In this menu option, you will be able to select which type and brand of filtration pump your system is running and what its default speed will be.

When you Enter this sub menu option, the controller will display the option to choose either a Single Speed Pump or Multi Speed Pump:

PUMP TYPE
MULTI-SPEED

Use the ↑ or ↓ buttons to switch between the 2 options, press Enter to accept the option you require.

If you Enter SINGLE SPEED, the controller will accept the option and return you to the Installer Setup Menu.

If you Enter MULTI SPEED, then the controller will display:

PUMP BRAND
THERALUX.

Use the ↑ or ↓ buttons to scroll through the range of allowable pump brands. Press Enter on the brand you wish to select when you see it displayed.

The options for brands of Multi Speed Pumps are:

Theralux
Reltech
Theralux 485
Reltech 485
Pentair VS/F
Insnrg
DAB

Once you have pressed Enter to select the pump, the controller will ask you to set 4 pump speeds.

- In the case of the Theralux 485, Reltech 485 & Insnrg brands you will be asked to set the speeds in RPM.
- In the case of the Pentair VS/F, Theralux, and Reltech pumps, you will be asked to set the default speed only as the pump has pre-set speeds.
- In the case the DAB brand, you will be asked to set the 4 speeds as a percentage.

Note: The Theralux and Reltech pumps only have 3 speeds to choose from and need to be set via the manufacturer's instructions.

Once the speeds have been set for the Theralux 485, Reltech 485, Insnrg, and DAB pumps, the controller will then ask what Default speed you would like the pump to be set at.

This is displayed as:

PUMP DEFAULT
SPEED X

Use the ↑ or ↓ buttons to scroll through the range of pump speeds [1, 2, 3, & 4] that you have just set.

Once you have adjusted the default speed, press Enter to accept.

The controller will accept the default speed and return to the Installer Setup Menu.

6.3 LIGHTS

In this menu option, you will be able to select which type and brand of Pool & Spa lights that you have installed.

- *A maximum of 3 sockets can be allocated to lights, whether Pool, or Spa. Each of the 3 sockets will run a Light Transformer. Each socket/group of lights will be the same colour as chosen.*
- *Before any pool or spa lights can be setup in this menu option, 1, 2, or 3 sockets need to have been allocated in appliances to either the pool or spa light.*

When you enter this menu option, the first socket that has been allocated will be displayed along with the allocated appliance. The controller will display:

S2: SPA
SINGLE COLOUR

Use the ↑ or ↓ buttons to scroll through the allocated sockets, press Enter to change the displayed socket.

After you press Enter, the cursor will be located on the second line. Use the ↑ or ↓ buttons to scroll through the allowable brands of lights.

The allowable brands and types are as follows:

AquaQuip

AquaQuip INS

Spa Electrics

Astral Pool

Single Colour (non-branded)

Press Enter to select the light brand installed.

The controller will now display: [For Example]

AQUAQUIP
PURE RED

Use the ↑ or ↓ buttons to scroll through the colours that are associated with the brand of light.

Once the colour you want is displayed on the screen, press Enter to accept the colour.

- If there is only one socket that is allocated to a light, the controller will return you to the Installer Setup Menu.
- If there is more than one socket allocated to a light, the controller will keep you in this menu option. You can use the ↑ or ↓ buttons to scroll through the other allocated sockets. Press Enter when another allocated socket is displayed in order to change that sockets settings. Change the settings as above.
- Once you have finished, either press the Back Button to return you to the Installer Setup Menu or press the Menu Button to return the controller to normal operations.

6.4 HEATING

In this Menu option, you will be setting up the type/s of heating that is installed.
The options are:

Solar

Heat Pump

Gas Heater

When you enter this menu option the first thing that is displayed is:

SOLAR

1. NONE

With Solar Heating, you have the options of:

1. None
2. Separate [Independent plumbing]
3. Valve
4. Boosted [Integrated plumbing]

- If you have an independent solar heating system, use ↑ or ↓ buttons to scroll down to 2. Separate and press Enter. The controller will display:

SOLAR

START TIME XX.XX

Use the ↑ or ↓ buttons to adjust the time you would like the solar to start. Press Enter to accept the hours, then adjust the minutes and press Enter.

- If you have a system where a valve is turned to send water into the solar panels, select 3. Valve.
- If you have a Boosted [integrated] system, then scroll down to 4. Boosted and select.

With options 3. Valve & 4. Boosted, [once you have pressed Enter to select] the controller will display:

SOLAR

SPEED X

The controller is asking what speed you would like the pump to run at when solar heating is asked for.

Note: If you are running a single speed pump, this question will not appear.

Use the ↑ or ↓ buttons to select which pre-set speed you would like, and press Enter.

Once you have selected the pump speed, the controller will then display:

SOLAR

START TIME XX.XX

Adjust as above.

Once you have adjusted and accepted the Solar Heating start time, the controller will move you onto the next option.

- If you have no Solar Heating installed, press Enter to accept 1. None and the controller will move you onto the next option and display:

**6.4
HEATING
CONTINUED**

HEAT PUMP ON
OFF

Use the ↑ or ↓ buttons to highlight either ON or OFF.
Enter On to enable the controller to run the Heat Pump or OFF to disable the heater.
Press the Enter button to accept.
Once you have accepted an option the controller will display:

GAS HEATER ON
OFF

If you select ON, the controller will then display:

GAS HEATER
COOL DOWN XXMIN

This is the controller asking how many minutes you would like the filtration pump to run for once the Heater has stopped heating. Use the ↑ or ↓ buttons to increase or decrease the amount of time.

The range of time for the Cool Down is 00Mins to 59Mins.

Note: This function is here to help prolong the life of a Gas Heater. 5Mins is an acceptable minimum but the time can be extended if so desired.

Once you have selected the timeframe you would like for the Gas Heater COOL DOWN, the controller will move you onto the next option.

If you select OFF, the controller will move you onto the next option and display:

HEATING PUMP
SPEED X

Use the ↑ or ↓ buttons to select which pre-set speed you would like, and press Enter.
Once you have selected the pump speed the controller will exit you to the Installer Setup Menu.

6.5 SPA

In this menu option, you are able to turn ON or OFF Spa operation, and Spa options. Use the ↑ or ↓ buttons to highlight either ON or OFF. Press Enter to accept.

Note: These Spa options can only be turned ON or OFF if they have been allocated a socket in the Appliances Menu.

If you select OFF the controller will turn off all spa options (including the ability to use the SPA button on the front of the controller) and return you to the Installer Setup Menu.

If you select ON then the controller will display (only if allocated):

BLOWER ON
OFF

If you select ON, the controller will display:

BLOWER
SWITCH ON AT XX°

Use the ↑ or ↓ buttons to select what temperature you would like the Blower to turn on at and press Enter to accept.

Note: The Temperature range is within a 10° offset from the set Spa temperature or Always On.

If you select OFF, the controller will move you to the next option and display: (only if Allocated)

JET PUMP ON
OFF

If you select ON, the controller will display:

JET PUMP
SWITCH ON AT XX°

Use the ↑ or ↓ buttons to select what temperature you would like the Jet Pump to turn on at and press Enter to accept.

Note: The Temperature range is within a 10° offset from the set Spa temperature or Always On.

Note 1: If you have both a Blower and a Jet Pump allocated under Appliances, the controller will let you select ON for Blower but will wait until after you select ON or OFF for Jet Pump before asking you what temperature you want temperature you want the Blower to turn on at.

Note 2: If you select ON for both the Blower and the Jet Pump, the message that is displayed is:

*BLOWER + JET PUMP
SWITCH ON AT XX°*

Once you have adjusted the above, the controller will display:

SPA ON
CHLORINATOR OFF

**6.5
SPA
CONTINUED**

If you select ON, the controller will display:

SPA CHLORINATOR
DUTY CYCLE 10%

Use the ↑ or ↓ buttons to adjust the percentage of chlorination you would like, while the Spa is running. The percentage is adjustable in lots of 10% from 0% to 100%. Adjust and press Enter to accept. The controller will then move you onto the next option.

If you select OFF to Spa Chlorinator, the controller will move you onto the next option.

Once you have selected the temperatures for the Blower and/or Jet Pump, and if you have adjusted the Chlorinator Duty Cycle, the controller will move you onto the next option which is selecting the Spa Pump speed (if a Multi Speed pump is installed) and will display:

SPA PUMP
SPEED X

Use the ↑ or ↓ buttons to select which pre-set speed you would like, and press Enter.

If you don't have Spa lights allocated, the controller will display the message:

NO SPA LIGHT CONFIGURED

and will exit you to the Installer Setup menu after a period of time, or you can press the menu button to exit.

If you have Spa Lights allocated, the controller will display:

S4: SPA LIGHT

When you press Enter you will be able to change the colour of the Spa light. This will be the colour that the Spa light will turn onto when the controller is switched into SPA MODE. It may be a different colour to what is set under the Timer menu.

Use the ↑ or ↓ buttons to scroll through the colours, press Enter to select.

Once you have pressed Enter to select, the controller will return you to the Installer Setup menu.

**6.6
HEAT
DEMAND**

In this menu option you will be able to set the timeframe in which you would like your heater to run.

When you enter the menu option, the controller will display:

HEAT ON
DEMAND OFF

If you select OFF, the controller will accept the selection and exit you to the Installer Setup menu.

If you select ON, the controller will then display:

HEAT 06.00
DEMAND 22.00 [default times]

Use the ↑ or ↓ buttons and the Enter button to allocate a start and finish time. Once the time has been entered, the controller will exit you to the Installer Setup menu.

<p style="text-align: center;">6.7 PUMP CALL</p>	<p>When you enter this menu option, the controller will display:</p> <p>PUMP ON CALL OFF</p> <p>If you select OFF, the controller will return you to the Installer Setup menu. If you select ON, the controller will display: [if a Multi Speed pump is installed]</p> <p>PUMP CALL SPEED X</p> <p>Use the ↑ or ↓ buttons to select which pre-set speed you would like and press Enter.</p> <p>More often than not, this menu option will be utilised in the case of a Heater telling the controller that it is turning on, and the controller needs to turn the filtration pump on. Not the controller telling the Heater to turn on.</p> <p><i>Note:</i> There may also be other situations where this function can be utilised. An example of this would be if a pool has an overflow trough, wet edge, negative edge, etc, where pool water needs to be pumped back into the main system. This can be done by plugging a float level switch [purchased separately] into the pump call port beneath the controller. When the float rises/drops to a set point, it will turn the filtration pump on to start pumping water back into the pool/spa system.</p> <p><i>There may be other situations where this feature can be utilised to turn the pump on.</i></p>
<p style="text-align: center;">6.8 WATER FEATURE</p>	<p>It is under this menu option that you will be able to set what type of water feature you have installed.</p> <p>When you enter the Water Feature menu, the controller will display:</p> <p>WATER FEATURE 1. NONE</p> <p>The other options are:</p> <p>2. PUMP 3. VALVE</p> <p><i>Note: Options 2 and 3 will only appear if a socket or a valve has been allocated for a Water Feature in 6.1, Appliances menu. If neither have been allocated, then you will not be able to set a type in this menu option.</i></p> <p>Use the ↑ or ↓ buttons to scroll through the options available and press Enter to accept the option you wish to set.</p> <p>If you select 2. PUMP, the controller will accept the option and return you to the Installer Setup menu.</p> <p>If you select 3. VALVE, the controller will then display:</p> <p>WATER FEATURE SPEED 1</p> <p>You are being asked to select a filter pump speed while the system is running the Water Feature. [If multi speed filter pump is used]</p> <p>Use the ↑ or ↓ buttons to select which pre-set speed you would like, and press Enter.</p> <p>Once you have selected a pump speed, the controller will return you to the Installer Setup menu.</p>

<p style="text-align: center;">6.9 TEMPERATURE SENSOR</p>	<p>In this menu option, you are able to decide which sensor port belongs to which sensor, Pool or Roof.</p> <p>When you enter the menu, the controller will display:</p> <p>TEMPERATURE SENSOR 1.</p> <p>Use the ↑ or ↓ buttons to scroll between SENSOR 1. And SENSOR 2. Press Enter when the sensor you want to change is displayed.</p> <p>When you press Enter the controller will display:</p> <p>SENSOR 1 or 2 TYPE NOT USED</p> <p>Using the ↑ or ↓ buttons, you have the option of selecting, NOT USED, POOL, and ROOF.</p> <p>Scroll up or down to select the option you want, and press Enter to accept. Repeat to change the other Sensor type.</p> <p>When you choose a Sensor to be a Pool Sensor the controller will display:</p> <p>SENSOR 1 or 2 OFFSET 0.0</p> <p>This option allows you to adjust the offset temperature of the pool sensor in a range of -5.0° to 5.0°, in .5° increments. Default is 0.0°.</p> <p><i>Note: The controller will not allow both the sensor types to be the same.</i></p> <p><i>If you chose SENSOR 1. To be a Pool Sensor, then you will only be allowed to select between Roof, and Not Used for SENSOR 2.</i></p> <p><i>If you wish to swap the sensor types around, you will need to change one of the sensors to Not Used. Then you will be able to change the alternate sensor to what you want it to be.</i></p>
<p style="text-align: center;">6.10 EXPANSION UNIT</p>	<p><u><i>Initial Installation.</i></u></p> <p>When you initially install the Master Controller with either 1 or 2 Expansion Units, <u><i>DO NOT TURN THE POWER ON TO ALL 3 UNITS AT ONCE.</i></u></p> <p>Once the Master Controller has started, turn the power on for the Expansion Unit that will be allocated as Unit 1. Allow a period of about 20seconds to pass before you turn the power on for the Expansion Unit that will be allocated as Unit 2.</p> <p>In the first 2 minutes after startup, the Master Controller will scan to see if any Expansion Units are connected and will automatically assign them.</p> <p><i>Note 1: If you don't leave a time period between turning the Expansion Units on, you may end up with Expansion Unit 2 being assigned as Unit 1.</i></p> <p><i>Note 2: If you don't have a second Expansion Unit it doesn't matter about the time frame.</i></p> <p>You will still need to enter 6.10 Expansion Unit menu function in order to increase the amount of Expansion Units that can have Appliances allocated to it. The process is described below.</p>

**6.10
EXPANSION
UNIT
CONTINUED**

Secondary Installation.

If at a later stage you add an Expansion Unit, (whether first or second) you need to ensure that the signal cable is connected (as per diagram on page 4). Once the signal cable is connected, plug the Expansion Unit into a power point and turn it on.

The Master Controller will detect that the Expansion Unit is there and assign it to either EXP:1 (if first unit) or EXP:2 (if second unit) and will be displayed as below.

Enter 6.10 Expansion Unit menu function to increase the amount of Expansion Units that can have Appliances allocated to it. The process is detailed below.

When you first enter this menu option the controller will display whether any expansion units are configured and which version if so. For example:

```
EXP:1    1.00B1    *
EXP:2    NONE
```

Note: A blinking dot in the top right-hand corner of the screen, indicates that auto-configuration is in progress.

Pressing the Enter button will move you into the next option which is to choose how many expansion boxes can have Appliances allocated to it. This is displayed as:

```
NUMBER EXP
UNITS  0
```

Use the ↑ or ↓ buttons to change the number of Expansion Units required: 0, 1, or 2. Once the amount you require is displayed, press Enter to accept.

If none [0] is selected, the controller will return you to the Installer Setup menu and you will be unable to allocate any Appliances beyond Sockets 1 & 2.

If 1 or 2 is selected, the controller will display a message to reset all addresses:

```
RESET ALL
ADDRESSES  NO
```

If you DON'T want to reset the Expansion Unit address, press Enter and the controller will return you to the Installer Setup menu.

Note: You will only need to reset the Expansion Unit address if you want to change Units 1 and 2 around or if an Expansion Unit is being added to a system after being installed at another site.

If you DO want to reset the Expansion Unit address, use the ↑ or ↓ buttons to change the NO to a YES, press the Enter button. If you press the Enter button the controller will display:

```
EXP UNITS
RESET ADDRESSES. . . .
```

Before then displaying

```
EXP UNITS
RESET DONE !
```

Press Enter and the Following will be displayed:

```
SCAN FOR EXP
UNITS NOW?  NO
```

Use the ↑ or ↓ buttons to change the NO to a YES, press the Enter button to scan for Expansion Units. You will only need to scan for Expansion Units if you have Reset the Expansion Units addresses.

If you select NO the controller will return you to the Installer Setup Menu.

<p>6.11 SET TIME</p>	<p>When you first set up the controller, it is in this this menu option, that you are able to set the time. When you enter this menu option the controller will display:</p> <pre>AUTO SET TIME? YES</pre> <p>Use the ↑ or ↓ buttons to alternate between YES or NO. Press Enter to accept. If you select Yes, the controller will ask for your location and display:</p> <pre>LOCATION ACT</pre> <p>Use the ↑ or ↓ buttons to scroll through the options available and press Enter to accept the option you wish to set. The controller will then display:</p> <pre>AUTO ADJUST DST YES</pre> <p>The controller is asking if you would like its time clock to be automatically adjusted at Day Light Savings time. Use the ↑ or ↓ buttons to alternate between YES or NO. Press Enter to accept. Once you have pressed Enter to select either option, the controller will return you to the Installer Setup menu. Once the time is set, the controller will automatically update from internet time when the controller connects to Wifi. If you selected NO at the AUTO SET option, you will then be able to set the time manually. When you enter this menu, the controller will display:</p> <pre>SET TIME XX.XX</pre> <p>Use the ↑ or ↓ buttons to scroll through the hours and press Enter when correct hour time is displayed. Once you press Enter, you will then be able to adjust the minutes as above. When you press Enter to accept the minutes, the controller will return you to the Installer Setup menu. <i>Note: Controller time is set in 24hr time, 6pm is 18.00.</i></p>
<p>6.12 WIFI</p>	<p>This menu option is used for setting up the WIFI connection to the controller. When you enter the menu option, the controller will display:</p> <pre>WIFI ON OFF</pre> <p>If you select OFF, the controller will disable the use of the WIFI connectivity and return you to the Installer Setup menu. If you select ON, the controller will display:</p> <pre>WIFI NETWORK ##### XX%</pre> <p>The controller is displaying which Wifi network it is connected to and the percentage of reception that the controller is receiving.</p>

<p>6.12 WIFI CONTINUED</p>	<p>Press the Enter button to move onto the next option and the controller will display:</p> <pre>RESET WIFI YES SETTINGS NO</pre> <p>IF NO, the controller will return you to the Installer Setup menu.</p> <p>If YES, the controller will reset any existing Wifi settings, including network password.</p> <p>When yes is selected the controller will display:</p> <pre>WIFI SETTINGS RESET OK</pre> <p>The controller will then restart, displaying:</p> <pre>CONTROLLER RESTARTING</pre> <p>and go into Wifi configuration mode after the reboot, the Wifi arrow will blink.</p>
<p>6.13 FACTORY</p>	<p>If you wish to re-set the controller and start over again (thereby losing your settings), it is done in this menu option.</p> <p>When you enter this menu option, the controller will display:</p> <pre>RETURN FACTORY SETTINGS NO</pre> <p>If you DON'T want to reset the controller, press Enter and the controller will return you to the Installer Setup menu.</p> <p>If you DO want to reset the controller, use the ↑ or ↓ buttons to change the NO to a YES, press the Enter button and the controller will reset itself to factory settings and return you to the Installer Setup menu.</p>
<p>6.14 ABOUT</p>	<p>All Firmware and controller unique codes are displayed here</p> <p>The APP CODE: can be typed into the app if no QR code is available.</p>

NOTES:

1. If any of the menu items are left unattended for 3 minutes the menu will time out and automatically save all settings and return to automatic operation.
2. If a fault is detected the controller will display what the fault is.
3. Should power be interrupted for any reason, the controller will resume normal operation when power is restored. All information will have been kept for up to 10 days.
4. If the controller has stopped the pump and is displaying a higher temperature than expected it may be caused by a pump which is failing to prime. Check the pump and if necessary, prime the pump as per the pump manufacturers' instructions. Then reset the controller by turning it off/on.
5. Maximum combined rated output load for the 240V socket[s] is 9.98 Amps / 2395 Watts.
6. Degree of protection against moisture: IP33.

Store pool chemicals at least 3 metres safely away from all pool equipment.

WARRANTY

- This range of product is covered by a limited 3 year warranty against component failure or faulty workmanship from the date of installation.
- Faulty units should be returned in the first instance to the dealer from which the unit was purchased. [Return to Base]
- Damage to the unit due to misuse, power surges, corrosion from pool chemical fumes, lightning strikes and or installation that is not in accordance with the manufacturer's instruction may void the warranty.
- Warranty does not include on-site labour or travel costs to or from installation site.

If the power cord is damaged, do not use the controller. Return the unit to the supplier for repair.

CUSTOMER RECORD (To be retained by the customer)

DEALER/INSTALLER NAME

SERIAL NUMBER

DATE INSTALLED



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