



HAYWARD®



Temperature Probe Upgrade Kit For the AquaRite™+

Owner's Manual

To prevent potential injury and to avoid unnecessary service calls, read this manual carefully and completely.

SAVE THIS INSTRUCTION MANUAL

Hayward Pool Products (Australia) Pty Ltd.
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WARNING: Electrical hazard.
Failure to comply with these instructions can result in serious injuries or death.

THE EQUIPMENT IS INTENDED TO BE USED ONLY ON PERMANENTLY CONSTRUCTED POOLS AND SPAS

-  **WARNING** – Disconnect/isolate the equipment from the electricity supply before any installation/service/repair.
-  **WARNING** – All electrical wiring must be performed by a qualified and licensed electrical contractor in accordance with all Local/State/Federal Government electrical regulations and the latest edition of the AS/NZS 3000 Wiring Rules.
-  **WARNING** – Ensure that the device is plugged into a power outlet that is protected against short-circuits. The device must also be powered via an isolating transformer or through a residual current device (RCD) with a fixed residual operating current not exceeding 30 mA.
-  **WARNING** – Check that the supply voltage required by the product corresponds to the voltage of the distribution network.
-  **WARNING** – To reduce the risk of electric shock, do not use an extension cord to connect the device to the mains. Use a suitably rated GPO as per the standard AS/NZS 3000.
-  **WARNING** – Chemicals can cause internal and external burns. To avoid death, serious injury and/or damage to equipment, wear personal protective equipment (gloves, goggles, mask, etc.) when servicing or maintaining this device. This device must be installed in an adequately ventilated place when equipped with the chemical feed options.
-  **WARNING** – Carefully read the instructions that appear in this manual and on the device. Failure to comply with the instructions can cause injuries. This document must be given to the pool owner, who should keep it in a safe place.
-  **WARNING** – The appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
-  **WARNING** – Use only genuine Hayward replacement parts.
-  **WARNING** – If the power supply cord is damaged the device must not be used. The power supply cord must be replaced by the manufacturer or similarly qualified persons to avoid any danger.

INTRODUCTION

The Temperature Probe Upgrade Kit is an optional accessory for the Hayward AquaRite+ chlorinator which is required if the function of heating the pool or spa will be controlled by the AquaRite+. When used in conjunction with a Hayward gas heater or heat pump, the temperature of the pool or spa can be set and adjusted via the AquaRite+ interactive display panel or App if the Wi-Fi Network Upgrade Kit is installed.

Not installing this temperature probe in the correct position as explained in this manual, or continuing to use the integral temperature probe of the T-Cell will see the AquaRite+ displaying the outlet water temperature of the heater and not the actual water temperature of the pool or spa. This will also ensure that the heater short cycles where it turns on and off constantly as the set point temperature is reached with the heated discharge water of the heater, and then instantly falls away triggering a heater restart as the pool/spa water temperature is then measured.

The temperature of the pool affects not only swimmer health and comfort, but also the pool's water chemistry. Water that is too warm requires more chemicals to balance the water, as bacteria thrive as the water temperature increases. There is also a greater risk of scaling and damage to pool equipment at higher temperatures, as the solubility of calcium salts decreases. Yet if the water is too cold, the calcium absorption rate can increase and cause etching on the pool's surfaces. A safe and comfortable temperature range is between 24 - 27 degrees Celsius for pools and 35 - 38 degrees Celsius for spas.

The Temperature Probe comes installed into the Faucet Tee which then needs to be installed after the pump and before the heater. See Installation Schematic below.

COMPONENTS



Temperature Probe



Wire Isolator



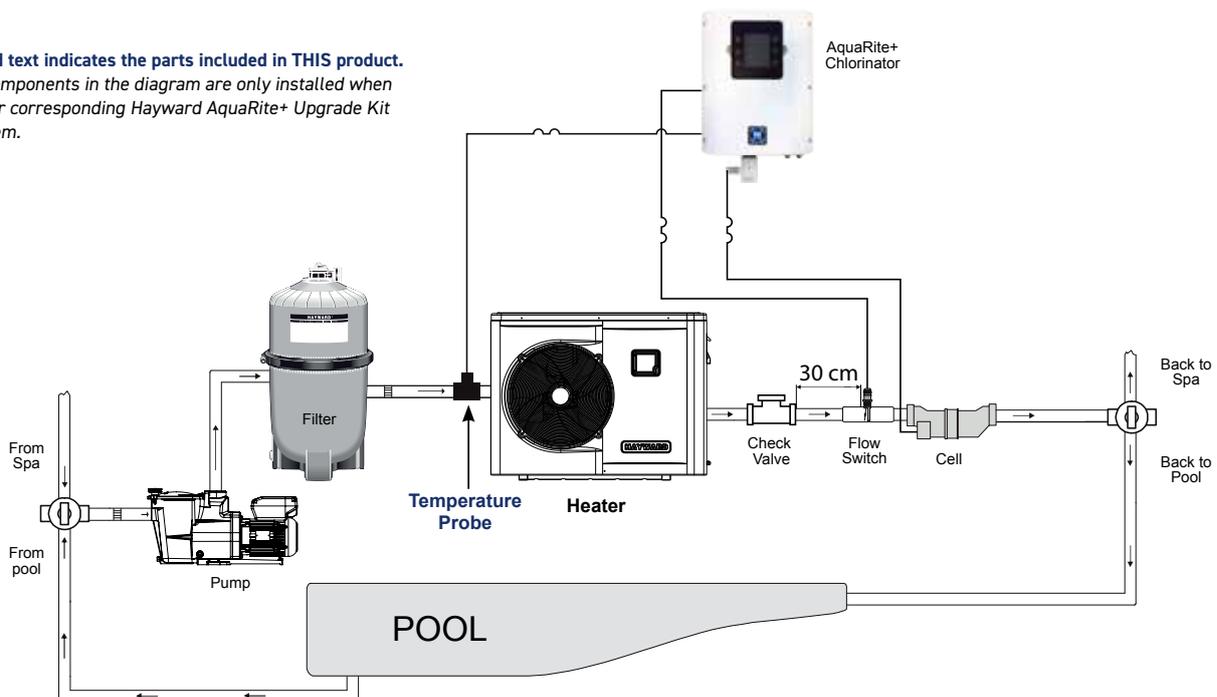
2 x Cable Glands



Faucet Tee

NOTE

» **Blue bolded text indicates the parts included in THIS product.**
All other components in the diagram are only installed when adding their corresponding Hayward AquaRite+ Upgrade Kit to the system.



Installation Schematic

ELECTRICAL

Removing the Dead Front Panel

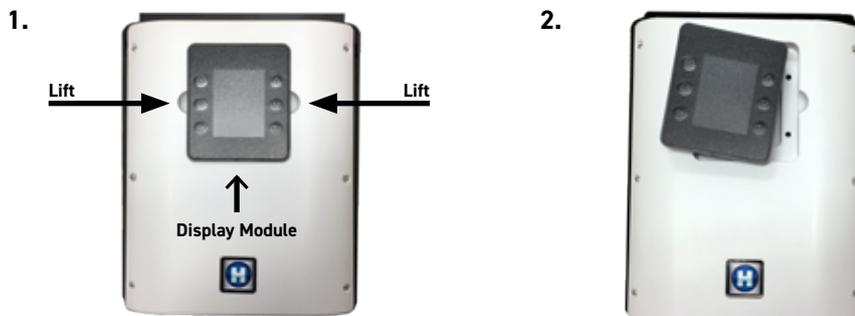
In order to connect the Temperature Probe to the AquaRite+ circuitry, the Dead Front Panel needs to be carefully removed. Follow the instructions below to avoid damaging the device and/or its casing.

Caution - Risk of Electric Shock.

Ensure that the unit has been disconnected from all power supplies before removing the Display and Dead Front Panel. Only a suitably qualified person should remove the Dead Front Panel in accordance with Local/ State/Federal Government regulations and the latest edition of the AS/NZS 3000 Wiring Rules.

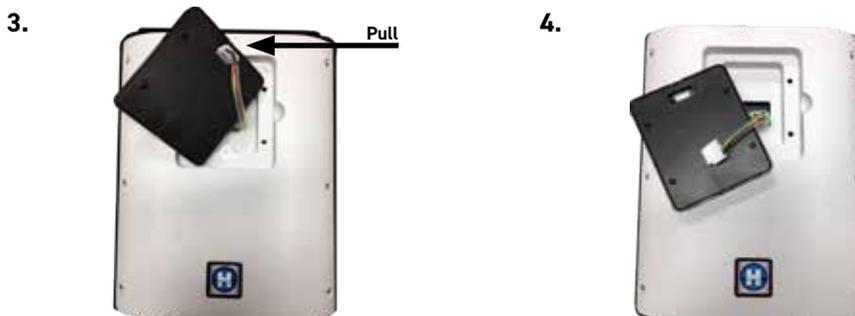
Lift Out Interactive Display Module:

Remove display module from its compartment. Use the grooves on either side to pry it out by hand. Take care to not use excessive force as the module is still wired to the PCB at this stage.



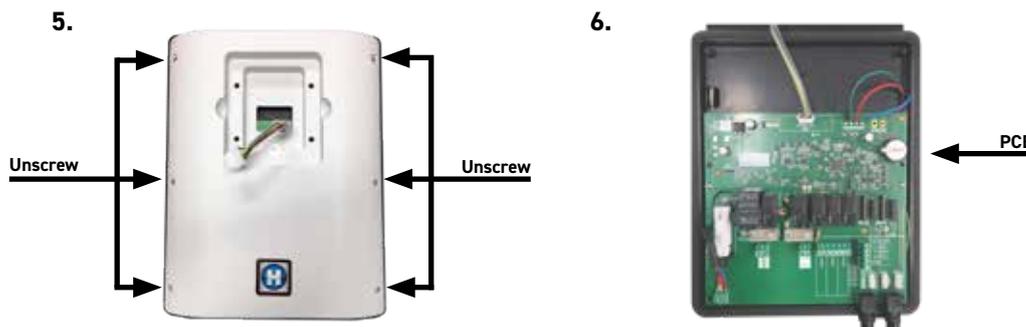
Detach Interactive Display Module:

Turn over the display unit and remove the wired plug from the port on the back of the unit. Store the Display Module where it will not get damaged until it is re-installed.



Unscrew Dead Front Panel:

Remove the six (6) screws fastening the panel to the unit. Once all loose, lift the panel off the unit to access the PCB.

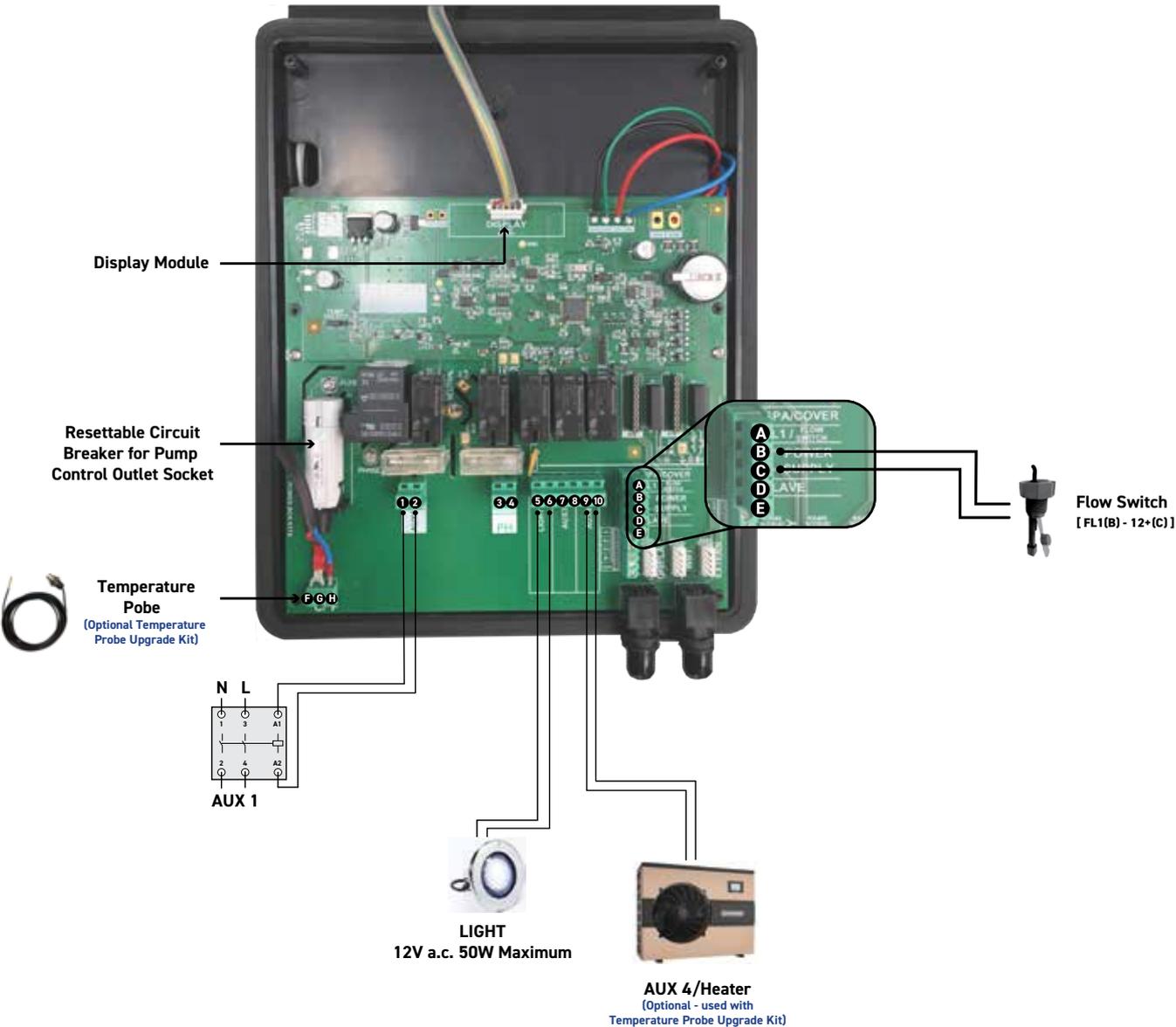


ELECTRICAL CONTINUED

Wiring to the AquaRite+

Connect the AquaRite+ to a GPO with a permanent power supply only.

CAUTION - This circuit must be protected by a residual current device (RCD) with a fixed residual operating current not exceeding 30 mA.



Wiring Schematic

ELECTRICAL CONTINUED

Connecting a Heating System (Aux 4)

The AquaRite+ is compatible with all types of pool heaters such as heat pumps, gas heaters, electric heaters and heat exchangers if they can be turned on and off via a dry contact relay using the heaters own control circuitry power if it is below 30 volts and is classed as SELV.

Connecting to a Hayward heater fitted with remote On/Off control:

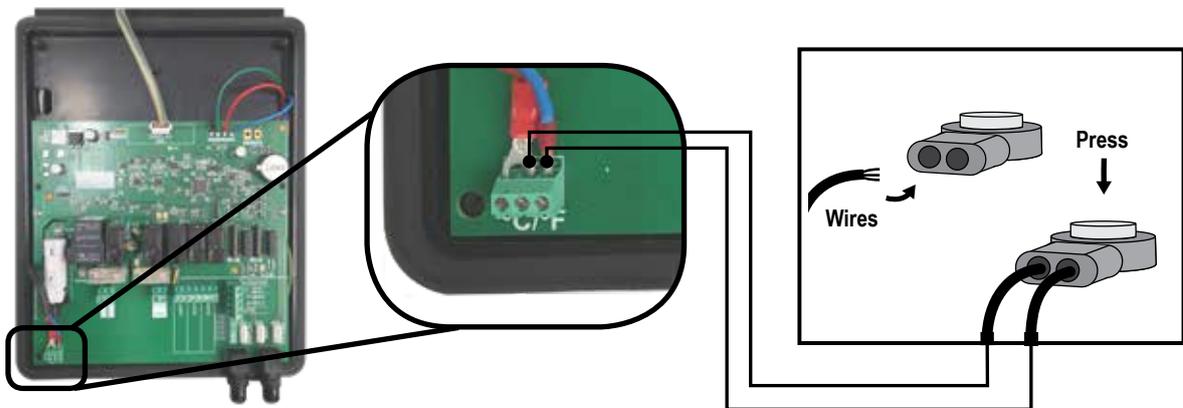
Connect a 2 x 0.75 mm² double insulated electric cable (not supplied) across terminals (9)-(10) of auxiliary contact Aux 4, then refer to the installation operation manual of the heater and follow the instruction on how to connect the heater to the dry contact switch. The set point temperature on the heater needs to be set to the maximum temperature (do not exceed 40°C) for the system to operate correctly. The AquaRite+ will use its own water temperature probe to control the temperature of the water.

Description of Outgoing Relays

Name	Description	Terminals	Type of output	Max Load
Filter Pump	Filtration pump control	Socket Outlet	240 V a.c.	7 A
Aux 1	Auxiliary voltage output (for contactor switching control)	1 - 2	240 V a.c.	1 A
pH	Peristaltic acid pump	3 - 4	SELV 24 V a.c.	1 A
Light	Lighting control (One {1} LED light only)	5 - 6	SELV 12 V a.c.	50 W
Aux 3	Auxiliary dry contact	7 - 8	Dry contact	1 A
Aux 4	Auxiliary dry contact (or heating control).	9 - 10	Dry contact	1 A

Isolating the Existing Wires

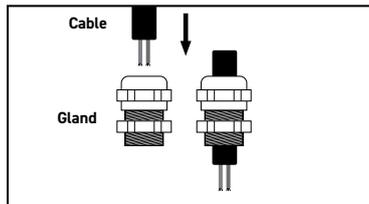
In order to connect the Temperature Probe to the AquaRite+ Chlorinator, the existing temperature sensor wiring that is integral with the T-Cell, needs to be disconnected and isolated. Locate the temperature terminal block pictured below (labelled °C/°F on the PCB, terminal F, G and H on the wiring schematic on page 5) and release the wires. Cut the terminal connectors from the wire ends and insert these wires into the two holes of the Wire Isolator. Use pliers to firmly press the button all the way down, releasing the resin and safely sealing off the wires.



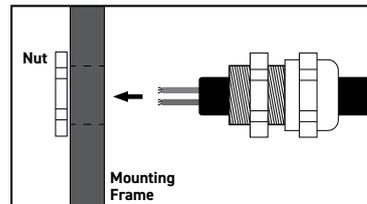
ELECTRICAL CONTINUED

Cable Gland Installation

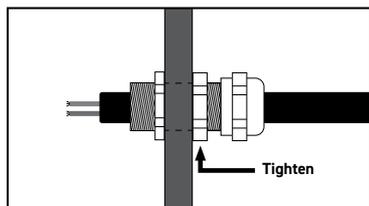
In order to ensure watertight wire connections to the PCB through the AquaRite+ housing, wire cables are to be secured with the black cable glands supplied. The cable glands supplied with the Remote Temperature Kit are for the Temperature Probe and Heater connections.



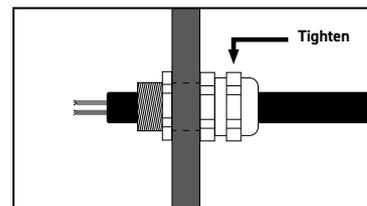
1. Insert the cable into the domed end of the gland and pull through.



2. Hold the nut against the hole on the inside of the mounting frame. Push the cable and gland into the hole whilst simultaneously rotating to screw the nut on to the thread.



3. Tighten gland with a spanner whilst still holding the nut to secure the gland in place.

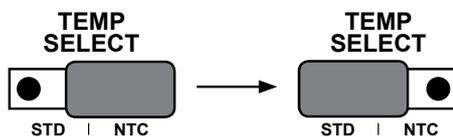


4. Pull the cord through the gland until the intended input point can be reached. Secure and seal the cord in place by fastening the domed cap with a spanner until firm.

Note: Use the gland location holes in the bottom of the unit before the sides to ensure all cables are pointing downward.

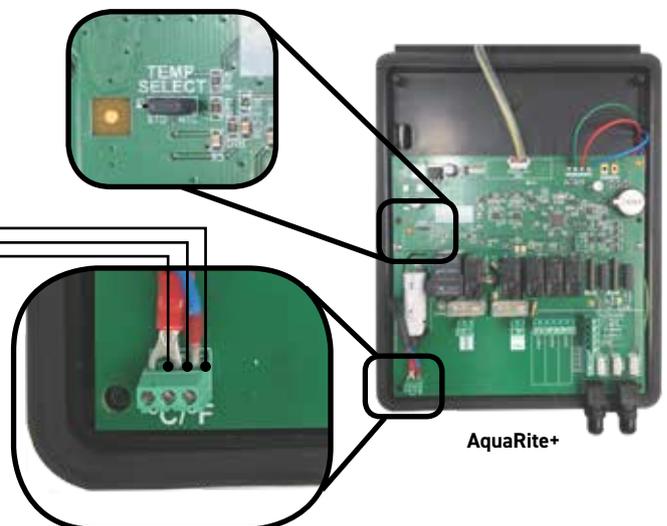
Wiring the Temperature Probe

Once the Cable Gland installation is complete, the Temperature Probe can be wired to its corresponding terminal block. Beforehand, move the 'TEMP SELECT' jumper from NTC to STD. If the Temperature Probe wires aren't already stripped back, do so. Insert the wires into the terminal block ensuring the colour wire corresponds to the location as per the table below and firm up the fixing screws.



Temperature Probe

Terminal (As labelled on PCB)	Terminal (As labelled on Wiring Schematic)	Wire Colour
+	F	RED
MT	G	YELLOW
-	H	BLACK

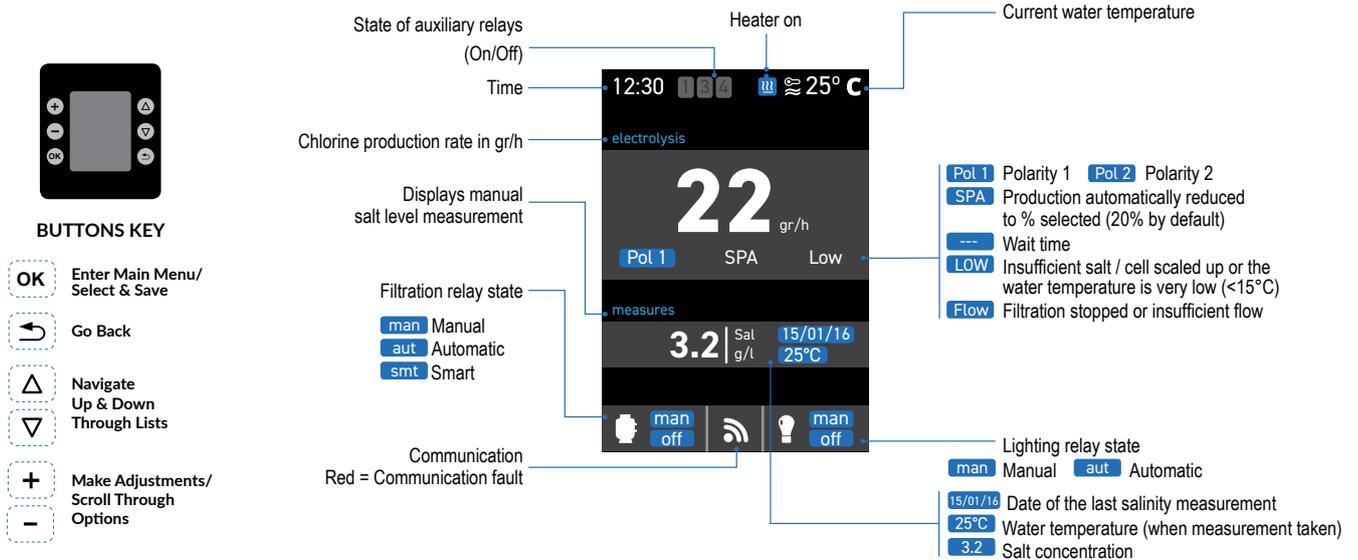


AquaRite+

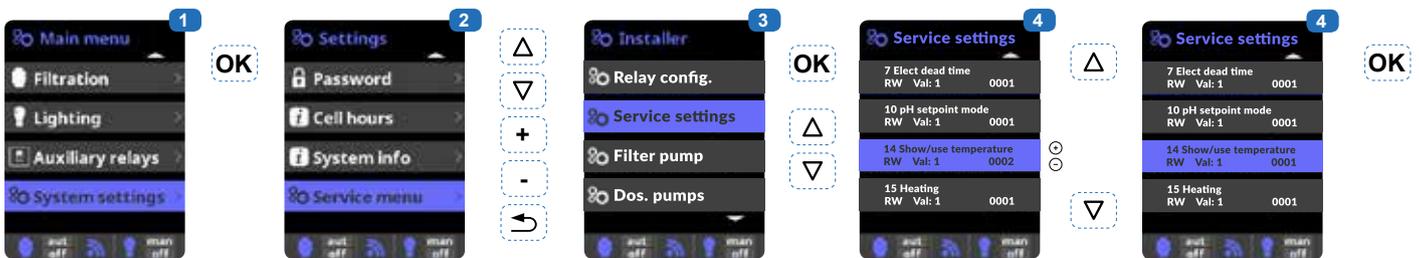
OPERATION

The below information advises how to configure the AquaRite+ for it to be able to use the temperature probe to measure the water temperature. The existing set-up instructions detailed in the AquaRite+ Owner's Manual are still the same.

Home Screen Configuration



Update Temperature Display

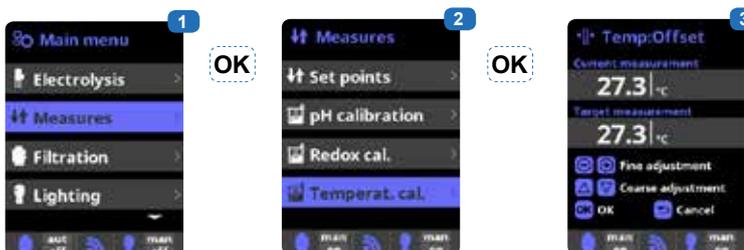


1 Updating Temperature Display
The temperature given on the home screen will not be accurate until the program knows where to find the information, so select System settings in the Main Menu.

2 Select the "Service menu" then enter the password: △ ▽ ⊕ ⊖ ↶
3 Select the "Service settings" menu.

4 Change Val:1: Scroll to menu 14 "Show/use temperature". Change the value from "0002" to "0001" using the ⊕ ⊖ button. Press OK to save selection.

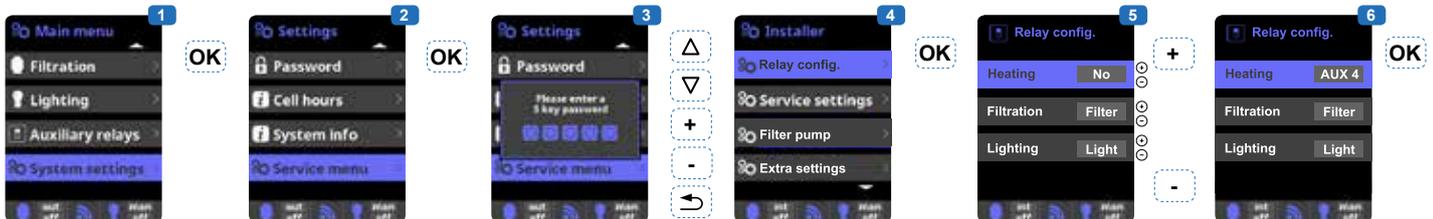
Calibrate Temperature Probe



2 Temperature probe calibration: Allows you to set the probe to 1 point.
3 Without removing the probe from the water, use the + / - keys to adjust the reading to your reference value (thermometer) then press OK to save the adjustment.

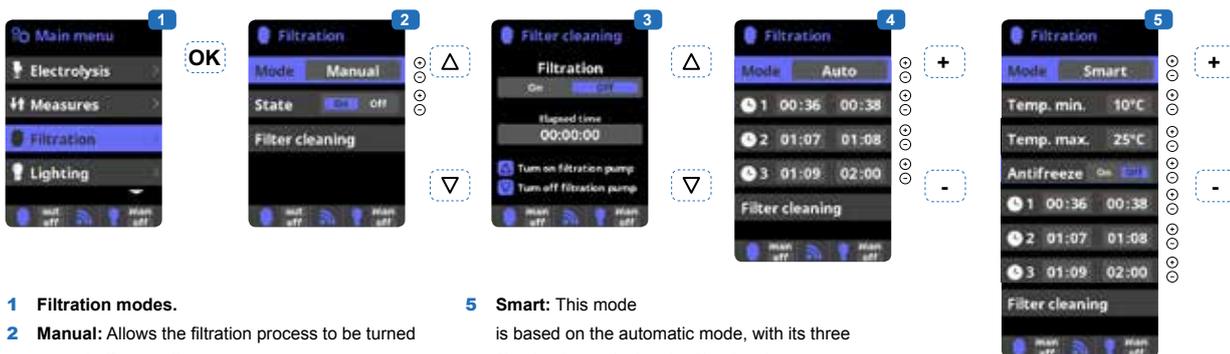
OPERATION CONTINUED

Assigning Relays



- 1 Enter System Settings menu from the Main Menu
- 2 Enter the Service Menu from the configuration menu
- 3 Enter the password: $\Delta \nabla \odot \ominus \rightarrow$
- 4 Select the Relay Config. tab
- 5 Highlight the Heating tab and then using the \oplus or \ominus button select AUX4. This is the recommended dry contact relay that the heater control is to be connected to.

Filtration



- 1 **Filtration modes.**
- 2 **Manual:** Allows the filtration process to be turned on and off manually.
- 3 **Filter cleaning:** This mode is used to backwash the filter.
- 4 **Automatic:** In this mode, filtration is turned on according to the start and end times set in the time schedules. The time schedules always operate on a daily basis.
- 5 **Smart:** This mode is based on the automatic mode, with its three filtration intervals, but the filtration times are adjusted according to the water temperature. This is done by setting two temperature parameters: the maximum temperature, above which the filtration times will be determined by the time schedules, and the minimum temperature, below which filtration will be reduced to five minutes, the minimum operation period. Between these two temperatures, the filtration times will increase linearly. The antifreeze mode can be activated to turn the filtration on if the water temperature falls below 2°C.



NOTE: Heating and Intelligent mode options only appear when 'Heating' is assigned a relay. See Assigning Relays above for instructions.

- 6 **Heating:** This mode acts in the same way as the automatic mode. The set point temperature is determined in this menu and the system operates with a differential of one degree (for example: if the set point temperature is 23°C, the heater will start up when the temperature falls below 22°C and shut down only when it rises above 23°C).
Heating control (Clima) OFF: The heating operates only during the filtration periods configured.
Heating control (Clima) ON: Keeps the filtration pump on after the filtration period has expired if the temperature is below the set point temperature. When the setpoint temperature is reached, the filtration pump and heater turn off and only turn on again when the next programmed filtration period begins.

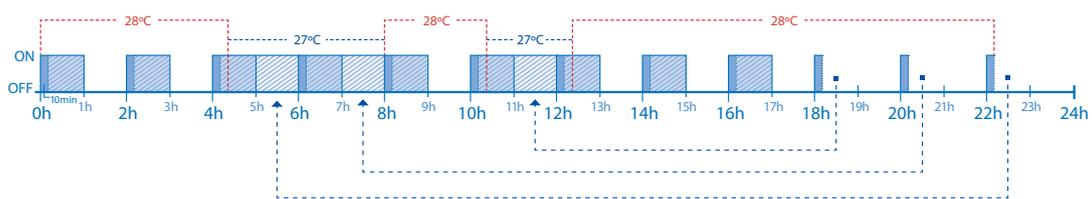
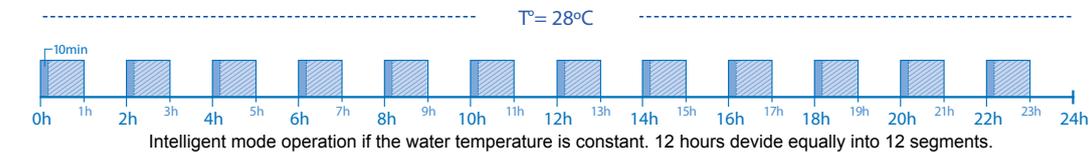
OPERATION CONTINUED



- 7 Intelligent:** In this mode, the user has two operating parameters: Select the required water temperature and the minimum filtration time (minimum two hours and maximum 24 hours). The AQR+ divides the minimum filtration time into 12 equal fragments over a 24 hour period which start up every 2 hours for a minimum period of 10 minutes each. If one of these periods finishes without the set point temperature being reached, the filtration & heating continue to run until the set point temperature is achieved. To keep filtration running costs to a minimum, the additional filtration running time to achieve the set point temperature is subtracted from the following fragments of the minimum filtration time. However the first 10 minute period of each fragment will not be subtracted. The two below example time line diagrams is of a 12 hour filtration time with a 28°C set point temperature.

Setting Time Schedules: When setting the time periods for any schedule, use the up and down arrows to highlight the schedule to be adjusted and then press either the + or - button to enter the schedule (will change to a lighter highlight) and adjust the on time hour position. Use the up arrow to move to the right and the down arrow to move left in the schedule. When the schedule is set, press the 'OK' button once to fully highlight the schedule again and then using the up and down arrows select another schedule. Once all of the schedules are set to your liking press the 'OK' button twice to save.

Intelligent mode



WARRANTY

STANDARD CONDITIONS - Australia and New Zealand Hayward Pool Products (Australia) Pty Ltd (ABN 66 083 413 414) ("Hayward Pool Products (Australia)") distributes Hayward Pool Products in Australia and New Zealand and provides the following warranties:

STATUTORY RIGHTS

1. The benefits to the consumer under this warranty are in addition to other rights and remedies of the consumer under the laws in relation to the goods and services to which the warranty relates; and
2. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You may be entitled to a replacement or refund for a major failure and for compensation for any other loss or damage. You are also entitled to have the goods repaired if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

LIMITED WARRANTY

Hayward Pool Products (Australia) warrants that its products are free from defects in materials and manufacture for 12 months from date of supply by Hayward Pool Products (Australia) plus 90 days to allow for installation and supply (unless otherwise specified). Hayward Pool Products (Australia) will at its discretion, except in the circumstances described below, either repair or replace any product proven to be defective during the warranty period for either materials of manufacture or alternatively pay the cost of repair or replacement within 90 days of the receipt of the defective product, barring unforeseen delays. This warranty is for domestic installation only, is personal to the original purchaser and does not pass to any subsequent purchaser(s).

- To the extent permitted by law, Hayward Pool Products (Australia) will not be liable for products which fail or become defective during the warranty period as a result of freezing, accident, negligence, improper installation, water chemistry, misuse, tampering or lack of care.

WARRANTY CONTINUED

- To the extent permitted by law, except as set out in this Warranty, Hayward Pool Products (Australia) excludes all statutory or implied conditions and warranties and any other liability it may have to the Customer (including liability for indirect consequential loss) that may arise under statute or at law including without limitation for breach of contract, in tort (including negligence) or under any other cause of action.
- To the extent permitted by law, except as set out in this Warranty, Hayward Pool Products (Australia) limits its liability under any condition or warranty which cannot be legally excluded in relation to the supply of Goods and Services to:
 1. Repairing the Goods;
 2. Replacing the Goods or supplying equivalent Goods or Services again;
 3. Paying the cost of replacing the Goods or of supplying equivalent Goods or Services again; or
 4. Paying the costs of repairing the Goods.

Claims made for warranty, labour or infield support will not be accepted by Hayward Pool Products unless evidence is provided that installation has been completed in accordance with standard warranty conditions. Please refer to specific program document for details.

WHAT TO DO IF YOU HAVE A WARRANTY CLAIM

The faulty product is to be returned to the place of purchase, or where installed by an approved agent to an authorised warranty agent. No returns will be received directly from end consumers by Hayward Pool Products (Australia). You are responsible for arranging removal of the defective product and arranging installation of the repaired or replacement product, all transportation (and any applicable insurance costs) of transporting the product to the supplier and transporting the replaced or repaired product from the supplier. All returns are subject to Hayward Pool Products (Australia)'s written approval and must be accompanied by either:

1. A Field Inspection Report authorised by the Local Customer Service Manager or Authorised Agent; or
2. A "Return Goods Authorisation" form obtained from Hayward Pool Products (Australia) prior to shipment.

UNAUTHORISED RETURNS WILL NOT BE ACCEPTED

- All Hayward Pool Products (Australia) warranty parts taken as an across the counter warranty exchange must be held for inspection authorisation has been given by the Local Branch Customer Service Manager to dispose of them. Hayward Pool Products (Australia) reserves the right to provide replacement or credit for any items authorised under this warranty program.
- All claims must be accompanied by a copy of original purchase receipt, clearly stating date of purchase. All serial numbers must place the product within the warranty period or a proof of purchase is required. No claims in respect of the product can be made after the expiration of the warranty period.

Warranty service requests can be faxed to:
Hayward Pool Products (Australia) Pty Ltd.
Fax: 1300 POOLS2 (1300 766571)
Or submitted to your local Hayward Pool Products (Australia)
Branch Office.

A standard form is available to request warranty service. We will require:

- Installation contact information including address, daytime telephone numbers, home phone number, email etc.
- Complete model and serial number
- Proof of purchase (if the serial number was manufactured > 1 year ago).
- Evidence that purchase and Installation was completed in one transaction, by the one business or organisation.
- Nature of problem including specific faults and error codes

To determine if you are eligible for an extended warranty register your Hayward pool products online today at:
www.hayward-pool.com.au



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