



# HAYWARD®

Master



Slave



## AquaRite™ + AU Master and Slave Installation and Setup

For Pools over 150,000 L in Cool Climates and 110,000 L for Tropical Climates

### Additional Resource Manual

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

**PLEASE KEEP THIS MANUAL FOR FUTURE REFERENCE**

#### **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 use of a Master and Slave AquaRite+ AU setup allows the system to better meet the chlorine demand requirements of the pool. It is ideal in pools that exceed 150,000 litres in cool climates and 110,000 litres in tropical climates. By controlling one AquaRite+ AU unit with another, the first unit acts as the Master unit and is installed with the pH and ORP Upgrade Kits, while the second unit acts as the Slave unit and will produce chlorine when instructed to by the Master unit.

In instances where the Master unit cannot keep up with the chlorine demand of the pool, it will signal for the Slave chlorination to be turned on once the ORP level falls to 2% below the ORP/Redox set point. The Slave unit will then begin to produce chlorine until the ORP/Redox set point has been reached.

**NOTE:** Before installing this product as part of a salt water purification system in a pool or spa using natural stone for coping or for immediately adjacent patios/decking, a qualified stone installation specialist should be consulted regarding the appropriate type, installation, sealant (if any) and maintenance of stone used around a saline pool with an electronic chlorine generator in your particular location and circumstances.

**NOTE:** The use of dry acid (sodium bisulfate) to adjust pool pH is discouraged especially in arid regions where pool water is subject to excessive evaporation and is not commonly diluted with fresh water. Dry acid can cause a buildup of by-products that can damage your chlorinator cell.

## COMPONENTS



Master Unit

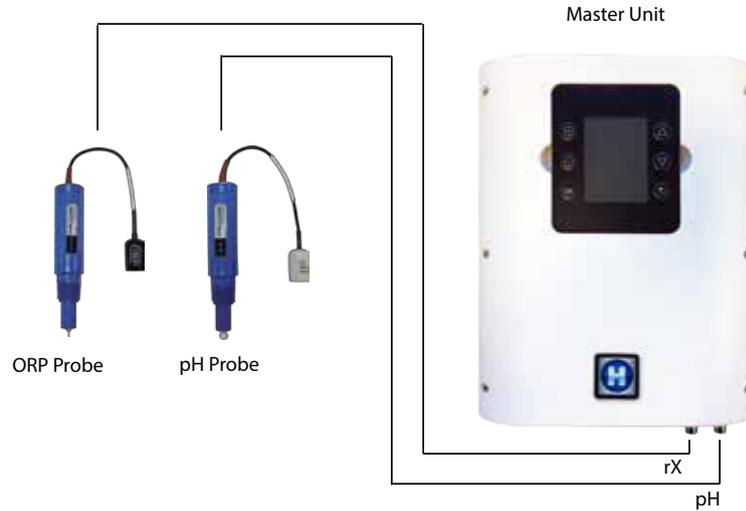


Slave Unit

## INSTALLATION

### Master Unit

The Master unit is to be installed with the pH and ORP Upgrade Kits.



The Slave unit is to be installed next to the Master unit.



Master Unit

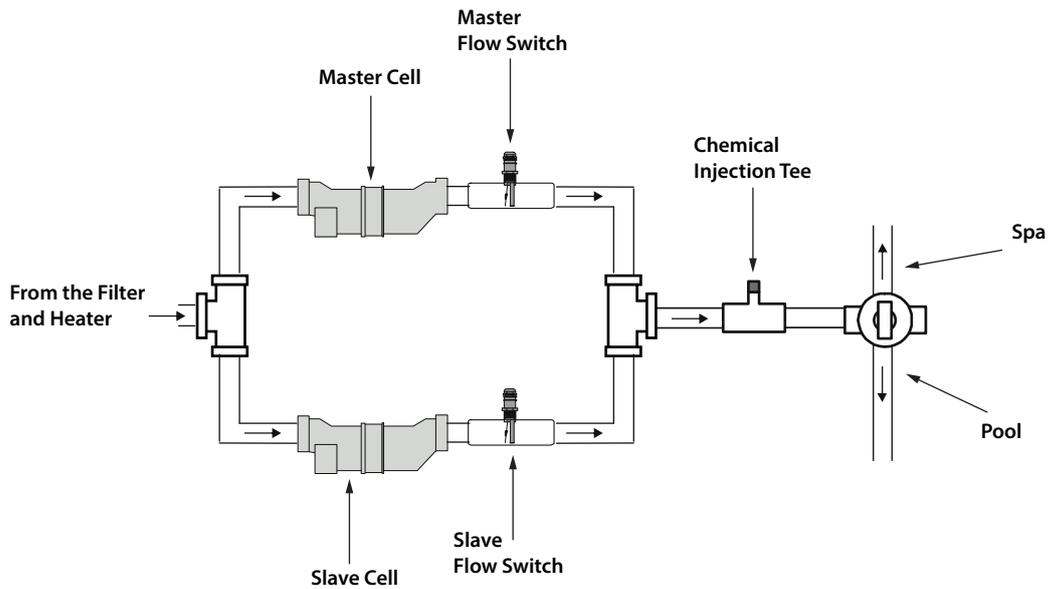


Slave Unit

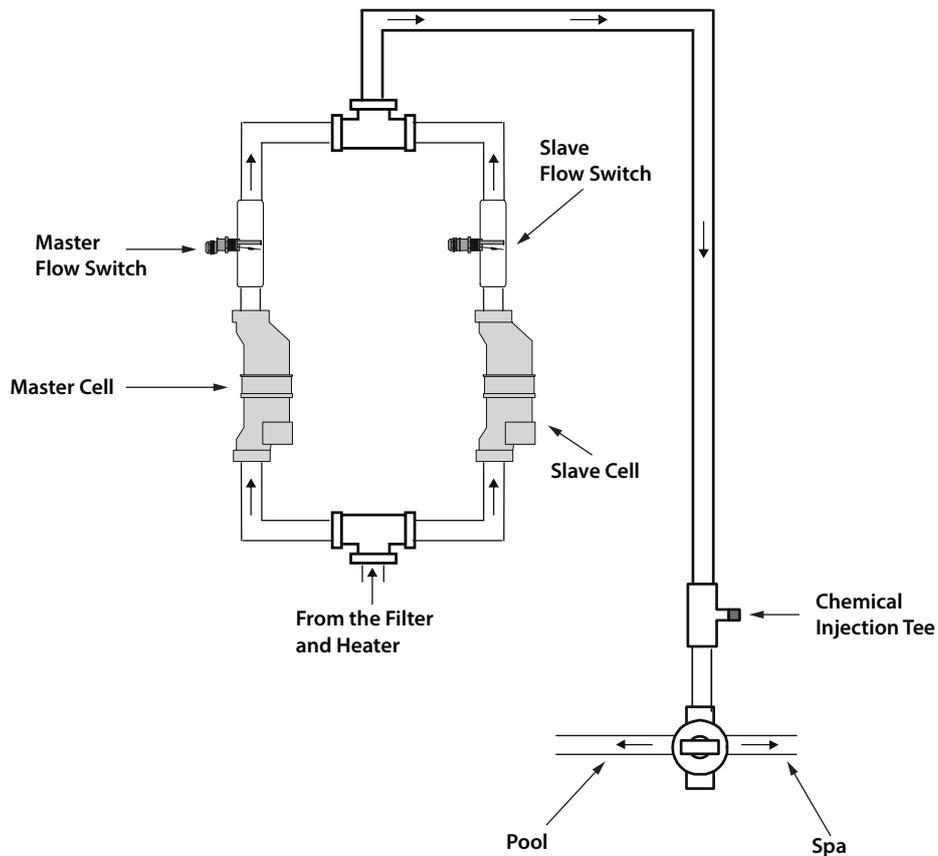
When installing a Master and Slave set up, both units must be installed on the same body of water. They can have separate filtration systems or share a common filter with a singular filtration pump.

**Each unit must have its own Flow Switch installed as per the diagrams on pages 5 and 7.**

## SHARED FILTER INSTALLATION (HORIZONTAL)



## SHARED FILTER INSTALLATION (VERTICAL)



**IMPORTANT:** There must be at least 30 cm of straight pipe run before (upstream) the Flow Switch. If mounted before the Flow Switch, the T-Cell can count as the 30 cm of straight pipe.

### Removing the Dead Front Panel

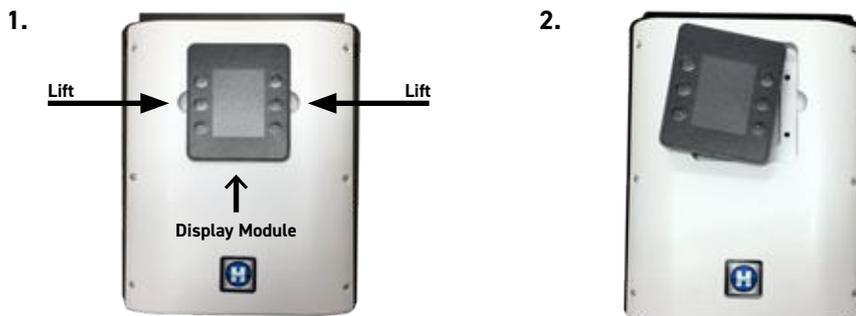
To access the internal circuitry of the AquaRite+ AU, the Dead Front Panel needs to be carefully removed. Follow the instructions below to avoid damaging the device and/or its casing.

#### **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.

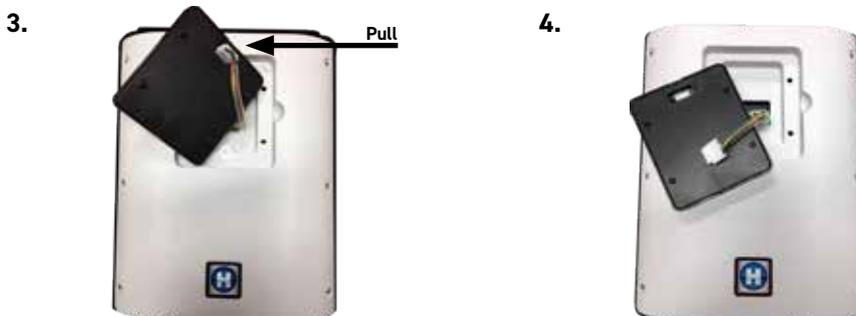
#### **Lift Out Interactive Display Module:**

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.



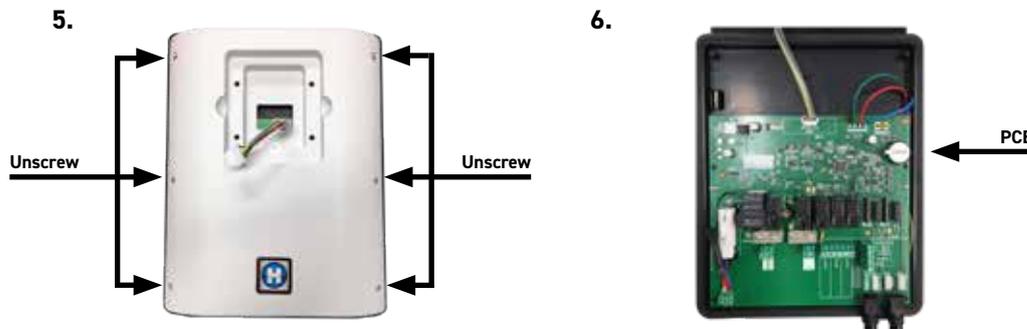
#### **Detach Interactive Display Module:**

Turn over the display module 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.

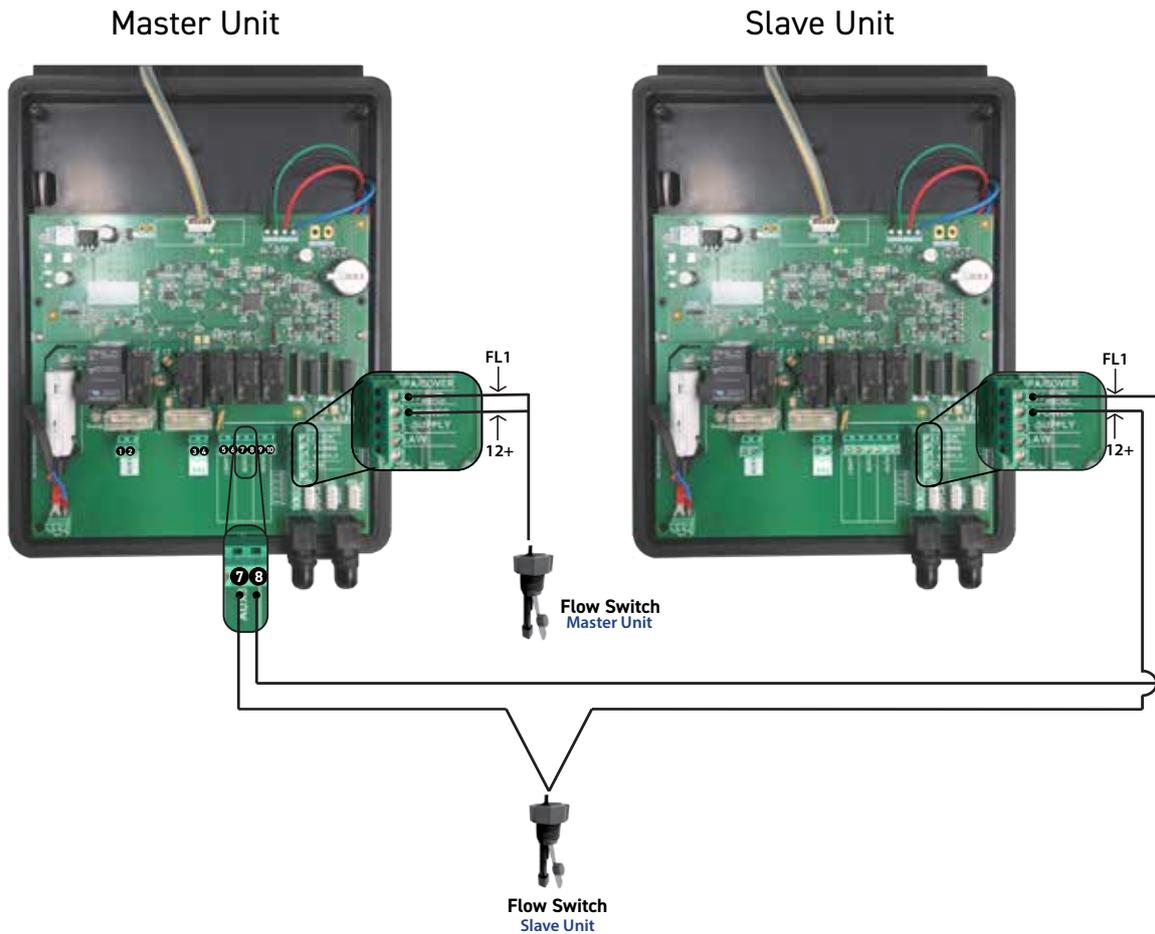


#### **Unscrew Dead Front Panel:**

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 Installation and Wiring



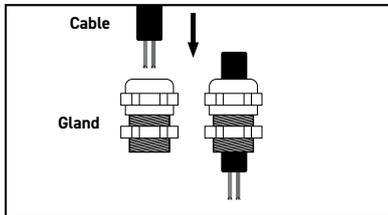
**Wiring Schematic Only**

**NOTE** - Ensure that only 0.5 mm<sup>2</sup> to 0.75 mm<sup>2</sup> double insulated cable is used to bridge between the Master and Slave units. The Slave unit flow switch cable is to be connected/joined to the bridging cable and terminals inside the Slave Control unit.

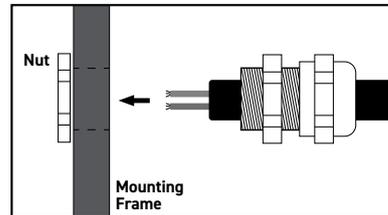
The above diagram is a schematic only, and the flow switch wire is not to be pulled apart into separate single insulated conductors further than what is required to make the joins/connections inside the Slave unit housing.

### Cable Gland Installation

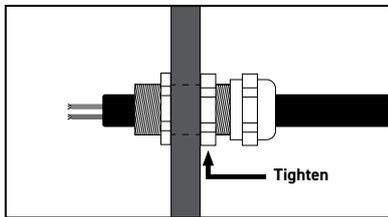
In order to ensure watertight wire connections to the PCB through the AquaRite+ AU enclosure, wire cables are to be secured with the black cable glands supplied. The two (2) cable glands supplied with the chlorinator are for the Cell Flow Switch and any Light connections or Master/Slave requirements.



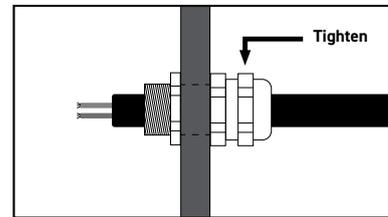
**1.**  
Insert the cable into the domed end of the gland and pull it through.



**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 the 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.

### Power Supply

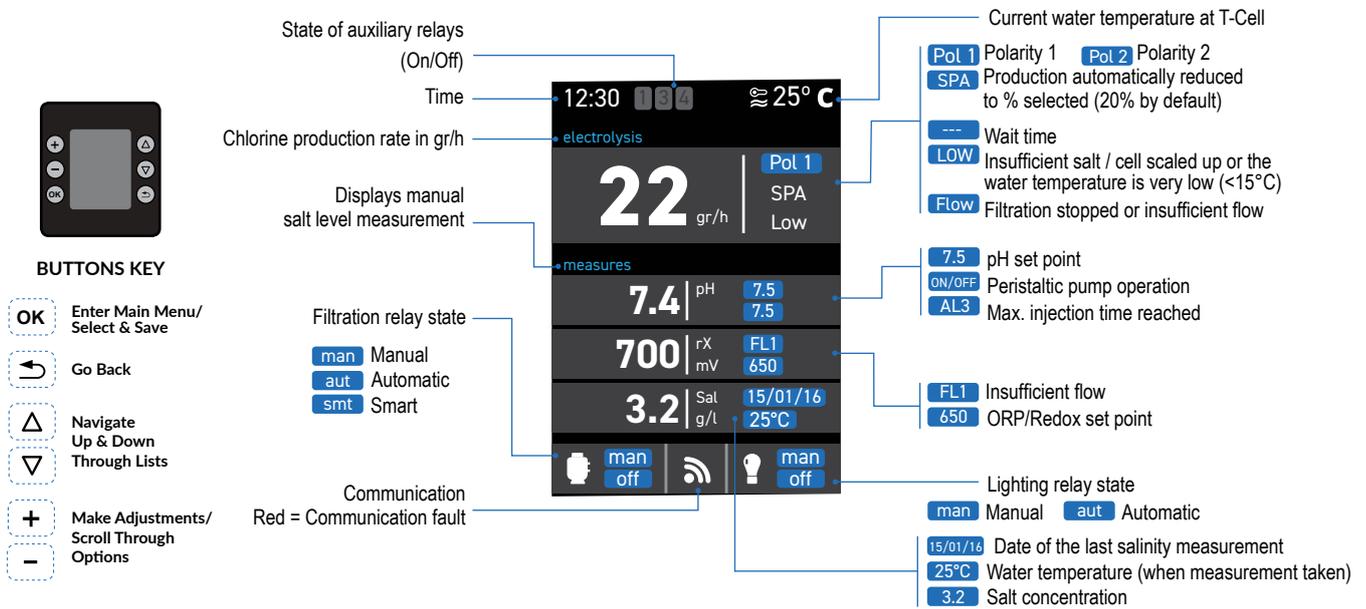
The AquaRite+ AU is to be connected to a GPO with a **permanent power supply only**.

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

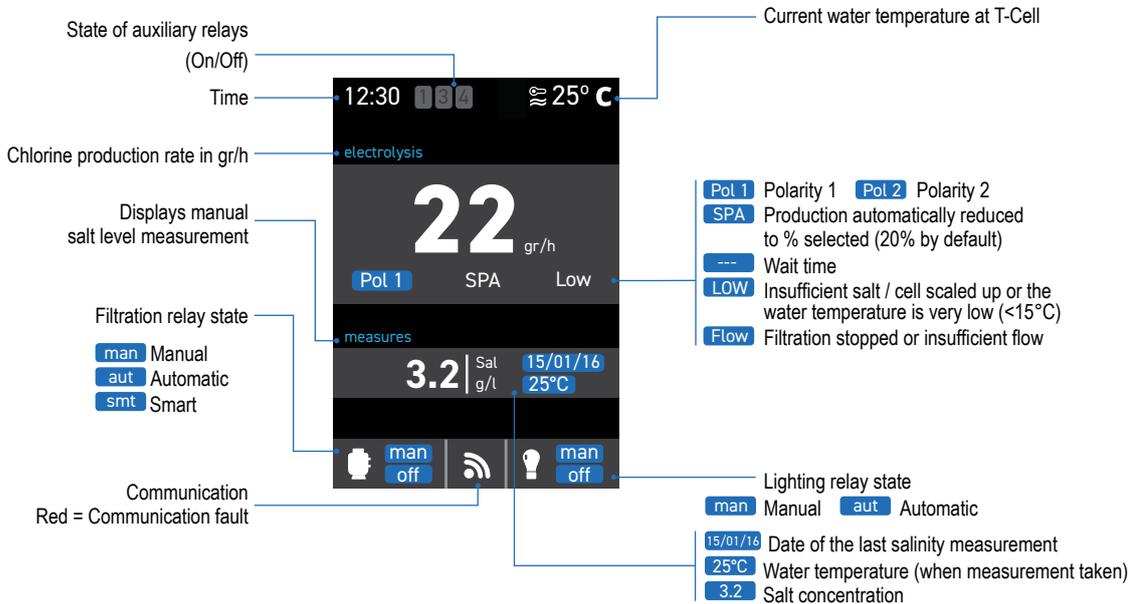
# OPERATION

## Home Screen Display

### MASTER



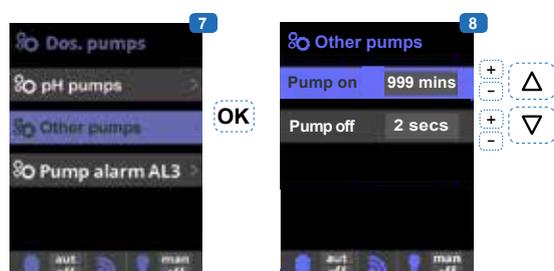
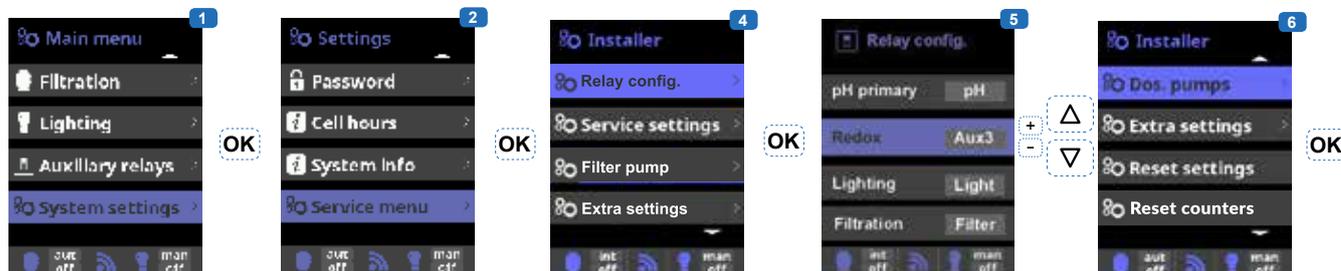
### SLAVE



**If the Master unit does not want the Slave unit to produce chlorine, the slave unit will display "FLOW" alert on the display until it is called into action at which point it will display Pol 1 or Pol 2.**

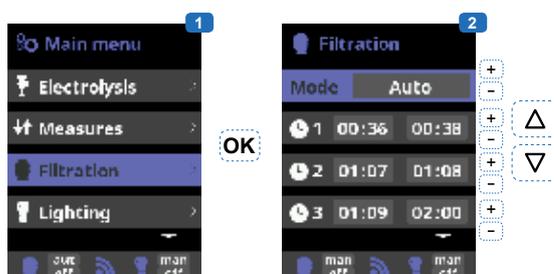
## OPERATION CONTINUED

### Configuring Master Unit



1. Enter System settings from the Main Menu.
2. Enter the Service menu from the System Settings.
3. Enter the Password:
4. Select the Relay config. tab.
5. Scroll down to Redox and select Aux 3.
6. Exit the Relay config. menu and select the Dos. pumps tab in the Service menu.
7. Select Other pumps.
8. Change the "Pump On" time to 999 minutes and the "Pump Off" time to 2 seconds.

### Filtration Settings for Master and Slave Units



#### Master

1. Enter Filtration from the Main Menu.
2. Either select the Auto or Smart Mode if the Master unit is not controlling a heater and if it is, then Heating or Intelligent Modes can be selected.
3. Set the desired daily run times and schedules for all modes apart from Intelligent mode that is based on a 24 hour schedule.

#### Slave

1. Enter Filtration from the Main Menu.
2. Set the Slave unit to run in Auto Mode ONLY.
3. If the Master unit is set to operate in Auto, Smart, or Heating modes, set the time schedules on the Slave unit to mirror those of the Master unit.
4. If the Master unit is set to operate in Intelligent mode, set the time schedule of the Slave unit to turn on at 00:01 and off at 23:59 (In this scenario the Slave unit will run a filter pump if connected, for 24 hours per day). The reason to have the Slave unit standing by ready to chlorinate for 24 hours, is because the Intelligent Mode that the Master unit is running, is based on automatic on and off times and depending on the water temperature, the run times will vary.

#### NOTE:

- It is recommended that the salinity level for each unit is calibrated to read the same value to limit confusion.
- The temperature reading on each unit should be calibrated to read the same value to limit confusion. If the Master unit is controlling a heater, ensure that the heater is not running when calibrating the two temperature readings to be the same. When the heater will be running there will be a differential reading between the two units due to the different points of measurement in the plumbing.

## OPERATION CONTINUED

With the Master and Slave units both turned on and operating, the Master unit will be trying to keep the ORP level of the pool on the set point. If the Master unit cannot keep up with the chlorine demand it will call for the Slave chlorinator to be turned on by closing the Aux 3 relay once the ORP level reaches 2% below the ORP set point. Once the Aux 3 relay closes, and if the Flow Switch for the Slave unit is also closed, the Slave unit will begin to produce chlorine.

This is evident because on the Master unit display, there will be an "ON" next to the Redox level, and on the Slave unit the display will change from a FLOW ALERT to a Polarity Informative Display (Pol 1 or Pol 2) with the actual chlorine production rate being shown on the display.

Once the ORP/Redox set point has been met on the Master unit, it will then turn off the Slave unit by opening the Aux 3 relay.

The Slave unit is effectively a Master unit just being controlled differently so the chlorine output for this unit can still be adjusted between 1-30 gr/hr as per the Owner's Manual supplied with the unit.

If a Master/Slave configuration is being installed on a pool/spa combo; using the Spa Flow Switch on the Master unit will still allow for the chlorine output to automatically reduce to the set percentage. In this situation the Slave unit would still be called to come on if the ORP/Redox level fell below 2% of the set point but would only be for a very short period of time.



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