### Pro Logic

**Automation and Chlorination**

**Operation Manual**

for models

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<th>TEST</th>
<th>IDEAL RANGE</th>
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<td><strong>Weekly</strong></td>
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<tr>
<td>Free Chlorine</td>
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<td>1.0 - 3.0 ppm</td>
<td>Raise desired output % to increase, lower desired output % to decrease -OR- increase or decrease pump filtration time.</td>
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| pH    |       | 7.2 - 7.8     | Too high - add muriatic acid  
|       |       |               | Too low - add soda ash. |
| **Monthly** |        |               |                     |
| Alkalinity |  | 80 - 120 ppm  | Add baking soda to increase.  
| Salt  |       | 2700 - 3400 ppm  | Add acid as required to decrease.  |
| **Quarterly** |        |               |                     |
| Stabilizer |  | 60 - 80 ppm   | Add cyanuric acid to increase.  
| Calcium |       | 200 - 400 ppm  | Add calcium to increase.  
| Electrolytic Cell | | inspect & clean | Drain and add water to decrease.  
|       |       |               | Refer to section in manual.  

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IMPORTANT SAFETY INSTRUCTIONS

When using this electrical equipment, basic safety precautions should always be followed, including the following:

• READ AND FOLLOW ALL INSTRUCTIONS

• ☢️ WARNING: Disconnect all AC power during installation.

• ☢️ WARNING: Water in excess of 100 degrees Fahrenheit may be hazardous to your health.

• ☢️ WARNING: To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

• A green colored terminal marked “Grounding” is located inside the wiring compartment. To reduce the risk of electric shock, this terminal must be connected to the grounding means provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors supplying the equipment.

• One bonding lug for US models (two for Canadian models) is provided on the external surface. To reduce the risk of electric shock, connect the local common bonding grid in the area of the swimming pool, spa, or hot tub to these terminals with an insulated or bare copper conductor not smaller than 8 AWG US / 6 AWG Canada.

• All field installed metal components such as rails, ladders, drains, or other similar hardware within 3 meters of the pool, spa or hot tub shall be bonded to the equipment grounding bus with copper conductors not smaller than 8 AWG US / 6 AWG Canada.

• SAVE THESE INSTRUCTIONS

LIMITED WARRANTY (effective 03/01/12)

Hayward warrants its Pro Logic, OnCommand and E-Command pool automation products as well as its Aqua Rite, Aqua Rite Pro, Aqua Plus and SwimPure chlorination products to be free of defects in materials and workmanship, under normal use and service, for a period of three (3) years. Hayward also warrants its Aqua Trol chlorination products to be free of defects in materials and workmanship, under normal use and service for a period of one (1) year. These warranties are applicable from the initial date of purchase on private residential swimming pools in the US and Canada. Installations of product for use on commercial pools in the US and Canada is covered for a period of one (1) year for defects in materials and workmanship. Hayward warrants all accessories and replacement parts for the above-identified pool automation and chlorination products for a period of one (1) year. Accessories also include remotes, actuators, base stations, temperature sensors, flow switches and chemistry probes. Each of these warranties is not transferable and applies only to the original owner.

Hayward shall not be responsible for cartage, removal, repair or installation labor or any other such costs incurred in obtaining warranty replacements or repair.

Proof of purchase is required for warranty service. If written proof of purchase is not provided, the manufacturing date code will be the sole determinant of the date of installation of the product. To obtain warranty service or repair, please contact the place of purchase or the nearest Hayward authorized warranty service center. For more information on authorized service centers please contact the Hayward Technical Service Support Center (61 Whitecap Road, North Kingstown RI, 02852) or visit the Hayward web site at www.hayward.com.

WARRANTY EXCLUSIONS:

1. Material supplied or workmanship performed by others in process of installation.
2. Damage resulting from improper installation including installation on pools larger than the product rating.
3. Problems resulting from failure to install, operate or maintain the product(s) in accordance with the recommendations contained in the owners manual(s).
4. Problems resulting from failure to maintain pool water chemistry in accordance with the recommendations in the owners manual(s).
5. Problems resulting from tampering, accident, abuse, negligence, unauthorized repairs or alternations, fire, flood, lighting, freezing, external water, degradation of natural stone used in or immediately adjacent to a pool or spa, war or acts of God.
6. Use of a non-genuine Hayward replacement salt chlorination cell on any Hayward automation or chlorination product will void the warranty for that product.

The express limited warranty above constitutes the entire warranty of Hayward Pool Products with respect to its products and is in lieu of all other warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose. In no event shall Hayward Pool products be responsible for any consequential, special or incidental damages of any nature. Some states do not allow a limitation on how long an implied warranty lasts, or the exclusion of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.
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System Overview

The Hayward Pro Logic is a multifunction pool controller used to fully manage your pool/spa system. The Pro Logic can control pumps, valves, lighting, heaters, and chlorination. Although the Pro Logic is easy to use, it is important to completely read through this operating manual before attempting to operate the control.

NOTE: This manual assumes that the Pro Logic has been wired and configured according to the Installation Manual. Aspects of the Pro Logic that pertain to system setup are not covered in this manual.

Automation

The PL-PS-4 (-8, -16) can control up to 4 (8, 16) high voltage (120/240V) pieces of equipment, up to 4 (8 for the PS-16) automatic valve actuators, and 2 conventional heaters plus a solar heater. Both manual and automatic (programmed) operation are available. All of the control functions can be programmed at a display/keypad which is part of the main unit (typically located near the pool equipment) or at one or more remote display/keypads.
Chlorination
When the chlorinator function is enabled (requires a chlorinator cell and P-KIT sold separately), the Pro Logic is also an automatic chlorine generation system for pool and/or spa sanitization. If enabled (see Configuration Menu), this operation requires a low concentration of salt (sodium chloride) in the pool/spa water. The Pro Logic automatically converts the salt into free chlorine which kills bacteria and algae in the pool/spa. Chlorine will revert back to sodium chloride after killing bacteria. These reactions will continuously recycle, virtually eliminating the need to add sanitizing chemicals to your pool/spa. The only time you may need to add more salt to the pool/spa is when water is replenished due to backwashing, draining, or splashing (not evaporation).

The Pro Logic is designed to handle the purification needs of most residential swimming pools up to 40,000 gallons (150,000 liters), or the needs of most commercial pools up to 25,000 gallons (95,000 liters). Check local codes for other restrictions. The actual amount of chlorination required to properly sanitize a pool varies due to bather load, rainfall, temperature, and the pool’s cleanliness.

For pools larger than 40,000 gallons, the Pro Logic can control one or more Hayward Aqua Rite chlorinators to supplement chlorine production.

NOTE: Before installing this product as part of a saline 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 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.

Default Display
Turn power on at the main panel and turn the Pro Logic control power circuit breaker on. The keypad will show the default display. The default display alternates between the day/time, air and pool (or spa) temperature, pool/spa sanitizer setting, and salt level. Under certain circumstances, additional displays may be added to the default menu to inform you about system operation. Refer to the Programming Menu Flowchart on page 7 to view all possible displays. The Pro Logic will automatically scroll through all of the available default menu displays or you can press “<” or “>” to manually scroll.
Manual System Operation

While the main objective of the Pro Logic is to automate the operation of your pool/spa system, there may be certain times when you want to override the automatic operation and control the equipment manually. To operate the pool equipment manually while keeping the automation active, perform the following procedures. Note that if you turn a relay on manually, it will remain on until either you turn it off manually, or the next time the programmed automatic operation would normally turn that relay off. Example: the filter pump is programmed to run from 9:00A to 5:00P daily. If you turn the filter pump on manually at 8:00PM, it will run continuously until the next day at 5:00P at which time it will turn off and follow the normal program from then on. Manually turning off a relay works in a similar fashion.

System Off (remote displays) or Service (main unit display)

Output Names

The Pro Logic is shipped from the factory with each output labeled with a generic name (e.g. AUX1, VALVE3, etc.). One of the features in the software (see Configuration Menu, page 17) is that each output can be assigned a new name that is more descriptive of the equipment being controlled. This makes it much easier to operate all of the equipment on your pool without having to memorize what each output controls. Insert name labels are also provided to be placed next to each display pushbutton. Since there is no way to know how your particular system is configured, this manual will use the original generic names for each output.

Pool Filter Pump

The pool filter pump can be manually operated whether in Standard (single pump) or Dual Equipment (separate pumps for both pool and spa) mode. When in Standard mode, the display will refer to the pool filter pump as “FILTER”. When in Dual Equipment mode, the display will read “POOL FILTER”.

Single Speed Filter Pump: If the pump is currently off, press the “FILTER” button to turn on the pump. Pressing the “FILTER” button again will turn off the pump. However, if there is a heater in the system, and it is operating, and the “Heater Coodown” feature is enabled (Configuration Menu) then: when you press the “FILTER” button to turn off the filter, only the heater will turn off, the “FILTER” LED will flash and the display will indicate “Heater Coodown”. At this point the filter pump will automatically turn off after 5 minutes of heater cooldown operation. If you want to override the heater cooldown, simply press the “FILTER” button again to turn off the filter pump.

If you want to override the heater cooldown, simply press the “FILTER” button again to turn off the filter pump. At this point the filter pump will automatically turn off after 5 minutes of heater cooldown operation.
Two Speed Filter Pump: If the pump is currently off, simply press the “FILTER” button to turn on high speed operation of the filter pump. The “FILTER” LED will illuminate continuously. Pressing the “FILTER” button again will switch to low speed operation and the “FILTER” LED will flash. Note that if the pump has been on for more than 30 seconds, it will run at high speed for 3 minutes regardless of selection. This high speed operation helps allow the pump to prime and establish normal water flow.

Variable Speed Filter Pump: If the pump is currently off, press the “FILTER” button to turn the filter pump on to the last speed (1, 2, 3, or 4) that was used. A temporary display is generated indicating the current speed selection (Filter On:Spd 1). Pushing the “+” or “-” button changes the speed selection. If the pump has been on for more than 30 seconds, it will run at the highest speed for 3 minutes regardless of selection. This high speed operation helps allow the pump to prime and establish normal water flow.

Freeze Protection: This function protects the pool, plumbing, and equipment against freeze damage. If Freeze Protection is enabled and the AIR temperature sensor falls below the preset freeze protection temperature (see Filter Configuration), the Pro Logic will turn on the filter pump to circulate the water.

Spa Filter Pump (when using Dual Equipment)

Single Speed Filter Pump: If the pump is currently off, press the “AUX1” button to turn on the pump. Pressing the “AUX1” button again will turn off the pump. However, if there is a heater in the system, and it is operating, and the “Heater Cooldown” feature is enabled, the Pro Logic will turn on the spa filter pump to circulate the water.

Variable Speed Filter Pump: If the pump is currently off, press the “AUX1” button to turn on high speed operation of the filter pump. The “AUX1” LED will illuminate continuously. Pressing the “AUX1” button again will switch to low speed operation and the “AUX1” LED will flash. Note that if the pump has been on for more than 30 seconds, it will run at high speed for 3 minutes regardless of selection. This high speed operation helps allow the pump to prime and establish normal water flow.

Freeze Protection: This function protects the pool, plumbing, and equipment against freeze damage. If Freeze Protection is enabled and the AIR temperature sensor falls below the preset freeze protection temperature (see Filter Configuration), the Pro Logic will turn on the filter pump to circulate the water.

Lights and Aux Outputs

Standard Relay: Manual operation of all relays (LIGHTS, AUX1 and AUX2 for a PS-4 model, LIGHTS, AUX1 - AUX6 for a PS-8 model, or LIGHTS, AUX1 - AUX14 for a PS-16 model) is identical. Assuming that the relay is currently off, simply press the appropriate button to turn on the relay. If the relay does not turn on, it probably is due to the “interlock” feature (which was set up in the Configuration Menu) being activated that requires the filter pump to be running and the valves to be in the pool-only position. This protects pumps and other equipment from possible damage. If the controlled output is on, pressing the appropriate button again will turn off the relay. Manual turn off is disabled if the “Freeze Protection” feature is enabled and the air temperature is less than the selected freeze protection temperature.

Dimmer Relay: If Lights or an Aux output is configured as a dimmer, pressing the corresponding button will generate a temporary display which shows the dimmer output level (Off - On 100%). Pushing the “+” or “-” button changes the level in increments of 20%. When the desired output level is displayed, press the corresponding button again to turn off the display and return to normal operation. When the Lights or Aux output comes on again (either manually or automatically), the dimmer output level will be the same as the last time that it was set.

ColorLogic Relay: This selection will only appear if an optional ColorLogic Network Module (AQL-COLOR-MODHV) is detected at startup. The Network Module allows the Pro Logic to control custom colors and light shows in Hayward Generation 4 or later ColorLogic pool and spa lights. Refer to the AQL-COLOR-MODHV manual for details on how to configure an Aux output for use with these lights. If a ColorLogic Module is detected at power up, the Lights relay is under automatic control and is used to power the ColorLogic lights.
WARNING: pressing the “SYSTEM OFF” button overrides any programmed freeze protection.

Pool/Spa Valves
Pool-only or Spa-only systems: The POOL/SPA/SPILLOVER button has no function.

Standard Pool and Spa systems without spa spillover: In pool-only mode (“POOL” LED illuminated), press the “POOL/SPA/SPILLOVER” button to switch to spa-only operation (“SPA” LED illuminated). Pressing the “POOL/SPA/SPILLOVER” button again will switch back to pool-only. Note that the filter pump will turn off while the pool/spa valves are turning.

Standard Pool and Spa systems with spa spillover: When currently in the pool-only mode (“POOL” LED illuminated), press the “POOL/SPA/SPILLOVER” button to switch to spa-only operation (“SPA” LED illuminated). Pressing the “POOL/SPA/SPILLOVER” button again will switch back to pool-only mode. Note that the filter pump will turn off while the pool/spa valves are turning.

Dual Equipment Pool and Spa systems without spa spillover: The POOL/SPA/SPILLOVER button has no function. The “POOL” LED will always be illuminated.

Dual Equipment Pool and Spa systems with spa spillover: When currently in the separate Pool and Spa loops mode (“POOL” LED illuminated) and the Spa Filter is off, press the POOL/SPA/SPILLOVER button to switch to spa spillover operation (“SPILLOVER” LED illuminated). Press the POOL/SPA/SPILLOVER button again to return to the separate Pool and Spa loops mode of operation. Note that the Pool Filter pump will shut off while the pool/spa return valve is turning. The system will automatically switch out of spillover whenever the spa filter pump is turned on.

NOTE: For Dual Equipment Pool and Spa systems, there is no Spa Only mode.

Heaters
This description applies to Heater 1 and to Heater 2, if programmed (note that the function of the Valve4 button changes to Heater2 when Heater2 is enabled). Pressing the “HEATER” button causes the Pro Logic to switch the heater control output between a “forced off” state and a normal, automatic thermostatic control operating state.

System Off
Each remote display/keypad has a red “SYSTEM OFF” button on the upper left corner of the keypad. Pressing this button will turn all outputs off and they will remain off, regardless of any programmed control logic, until either the “SYSTEM OFF” button (on any remote display/keypad) is pressed again or the “SERVICE” button is pressed on the display/keypad at the main unit. The red “SYSTEM OFF” LED will illuminate to indicate that all outputs and being forced off.

WARNING: pressing the “SYSTEM OFF” button overrides any programmed freeze protection and may cause damage to your system in freezing conditions.

Service
The main unit keypad has a “SERVICE” key. This button is used primarily during servicing of the pool equipment. If you want to completely disable the automatic operation and operate the system manually, you can put the system into Service or Service-Timed mode by pressing the “SERVICE” button. Pressing the “SERVICE” button once will switch the system into service mode which means that all automatic functions are disabled, and the remote display/keypads are disabled (except for manual turn off for emergencies). The red “SERVICE” LED will be illuminated and the Pro Logic will remain in this mode of operation until manually taken out of service mode.

Pressing the “SERVICE” button again will cause the Pro Logic to switch to service-timed mode which is very similar to service mode, except that the Pro Logic will automatically return to normal operation after 3 hours. During service timed operation, the “SERVICE” LED will flash and the time remaining will be displayed on the remote display keypad(s).

Pressing the “SERVICE” button again, will return the Pro Logic to normal (automatic) operation. See Trouble-shooting/Diagnostic Information for more information about the service modes.

- pH Timeout - Check Feeder: If the unit has been dispensing pH for more than the selected timeout without reaching the desired level. Check the chemical supply and the feeder. If both are OK, the timeout may need to be increased. Press the “+” button to reset the alarm and resume dispensing.
- pH Calibration Error: When using the pH Calibration Wizard and the entered test result was different from the measured pH level by ± 1.0 or more. The pH probe may need to be cleaned or replaced.
- ORP Probe Error: If the CSM indicates that there is a problem with the ORP probe.
- ORP Low - Check Chlor: If an ORP level of 350mV or less is detected. Check the chlorinator for proper operation.
- ORP High - Check Chlor: If an ORP level of 950mV or higher is detected. Check the chlorinator for proper operation.
- ORP High - Chlor Off: If an ORP level of 950mV or higher is detected and the chlorine feed mode is ORP Auto Sensing, the chlorinator has been turned off. Check the chlorinator for proper operation.
- ORP Timeout - Chlor Off: If the unit has been chlorinating for more than the selected sanitizer timeout without reaching the desired level, the chlorinator has been turned off. Press the “+” button to reset the alarm and resume chlorination.
- Ambient Sensor: If the Pro Logic internal temperature sensor is either an open or short circuit.

For helpful troubleshooting information on any of these issues, go to the Diagnostic Menu and then scroll through the various items until you see the cause for the “CHECK SYSTEM” LED being illuminated.

Diagnostic Menu
To enter the Diagnostic Menu, press the “Menu” button repeatedly until the display shows “Diagnostic Menu”. At this point, you can use either the “<” or “>” buttons to scroll through the various menu items which are described below:

- +/- 23.45 V is the voltage applied to the chlorinator cell
- +/- 6.75A is the current (amps) through the cell
- 84ºF is the water temperature at the cell
- 3200 PPM is the “instant” salt level at this time

This display will be shown only if the chlorinator is enabled. For the chlorinator to be operating, several other things must be happening: the filter pump must be running, the flow switch must be detecting flow, the chlorinator setpoint must be set greater than 0%, the water temperature at the cell must be between 50ºF and 140ºF, and the salt level must be within the operating range. If any of these conditions are not met, the chlorinator diagnostic display will tell you the reason. It’s possible to have more than one reason, in which case after you rectify what was displayed the first time, a second display will appear.

If the current (amps) display is 0.00A, then the chlorinator is operating normally but is in the off part of its normal operating cycle. Simply press either the “+” or “-” key to start a new cycle.

The Pro Logic periodically reverses the polarity of the voltage applied to the cell in order to automatically clean off any calcium deposits. It is important that you check the chlorinator operation in both polarities. To do this, press either the “+” or “-” buttons and the chlorinator will turn off, wait for 15 seconds and then turn on in the opposite polarity.
Automatic System Operation

The Pro Logic controls most of your pool equipment automatically in order to minimize the time spent working on your pool. Most of the pool equipment can be programmed to operate on a timeclock basis. In addition, the desired pool and spa temperatures and pool and spa chlorinator settings can be programmed. This section will guide you on how to program the automatic operation for each function.

The programming of automatic functions can be performed at either the main display/keypad located at the pool equipment pad or the in-home remote display/keypad.

Using the programming buttons

There are 5 buttons on each keypad that are used for programming (refer to diagram).

1. Press the “MENU” button to get to the desired menu. Multiple pushes of the button will rotate through all 6 menus and return to the starting point.
2. Press either key to scroll through the various items in the selected menu. Multiple pushes of the button will rotate through all menu items and return to the starting point. Only menu items that are applicable to your pool will appear. (Example: if you don’t have a spa, then no spa related menu items will appear).
3. Once a menu item has been selected above, the current setting/selection will appear (flashing) on the display. Use the “+” and/or “-” keys to change this selection. Sometimes “+” and “-” will adjust a value up or down (example: heater temperature setting or timeclock on/off time). In this case, pushing the “+” or “-” button will change the value by one increment and holding the “+” or “-” button in for more than one second will make the values auto scroll. In other cases, the “+” and “-” may toggle between 2 options (example: turning superchlorination ON or OFF).
4. After you have adjusted the item to the desired value, simply move on to the next menu item to “lock in” your new setting. The Pro Logic memory will maintain the setting, even if power is removed for an extended period.
Troubleshooting and Diagnostic Information

The Pro Logic provides 2 different tools to aid in troubleshooting any problems that may occur in your pool and/or spa system. The Service mode will allow you to disable automatic operation and manually control most of the equipment (the heater and general purpose Valve3 output are the exceptions). The Diagnostic Menu will provide some detailed information regarding system operation.

While both of the features are primarily intended for the use of the professional service technician, their function is fully explained below. If you believe your system is not operating properly or have questions regarding the operation, call the Hayward Technical Service Dept. from Monday through Friday, 8AM to 8PM EST at 908-355-7995.

Service Mode

The main unit keypad has a SERVICE button that is used primarily during servicing of the pool equipment.

If you want to completely disable the automatic operation and operate the system manually, you can put the system into Service or Service-Timed mode by pressing the “Service” button. Pressing the “SERVICE” button once will switch the system into service mode which means that all automatic functions are disabled, the optional remote display/keypads are disabled (except for manual turn off for emergencies). The outputs can be manually controlled by pressing the buttons on the local display/keypad. The red “SERVICE” LED will be illuminated and the Pro Logic will remain in this mode of operation until manually taken out of service mode.

Pressing the “SERVICE” button again will cause the Pro Logic to switch to service-timed mode which is very similar to service mode, except that the Pro Logic will automatically return to normal operation after 3 hours. During service timed operation, the “SERVICE” LED will flash and the time remaining will be displayed on the remote display(s).

Pressing the “SERVICE” button again, will return the Pro Logic to normal (automatic) operation.

Check System Indicator

The “CHECK SYSTEM” LED will alert you when the Pro Logic detects any of the following conditions that are abnormal and require attention for optimal operation of your pool.

- The Pro Logic will stop generating chlorine under certain high salt conditions in order to protect the internal electronics from damage. The only way to lower the salt level is to partially drain the pool and add fresh water.
- If the water or pool sensor is either an open or short circuit.
- When the salt is too low the Pro Logic will generate less chlorine and the life of the cell is degraded. Check the cell and clean if necessary before adding salt.
- If the chlorinator function enabled (Configuration Menu/Chlorinator) and the cell sensor is either an open or short circuit.
- If the freeze protection feature is enabled (Configuration Menu/Filter Config.) and the air sensor is either an open or short circuit.
- If Solar is enabled and the solar sensor is either an open or short circuit.
- If dual equipment spa sensor is either an open or short circuit.
- If the chlorinator function enabled (Configuration Menu/Chlorinator) and the cell sensor is either an open or short circuit.

The “CHECK SYSTEM” conditions.

- The Pro Logic will automatically remind you when it is time and display “Inspect Cell, + to reset” as part of the rotating Default Menu. Clean the cell and then press the “+” button during the “Inspect Cell” display to reset the timer.

- Low Salt/Minerals or Very Low Salt/Minerals – When the salt is too low the Pro Logic will generate less chlorine and the life of the cell is degraded. Check the cell and clean if necessary before adding salt.

- High Salt/Amps/Minerals – The Pro Logic will stop generating chlorine under certain high salt conditions in order to protect the internal electronics from damage. The only way to lower the salt level is to partially drain the pool and add fresh water.

- Water/Pool Sensor – If the water or pool (if Dual Equipment) sensor is either an open or short circuit.

- Air sensor – If the freeze protection feature is enabled (Configuration Menu/Filter Config.) and the air sensor is either an open or short circuit.

- Solar sensor – If Solar is enabled and the solar sensor is either an open or short circuit.

- Spa sensor for Dual Equipment – If dual equipment spa sensor is either an open or short circuit.

- Chlorinator Cell sensor – If the chlorinator function enabled (Configuration Menu/Chlorinator) and the cell sensor is either an open or short circuit.
System Maintenance

To maintain maximum performance, it is recommended that you open and visually inspect the cell every 3 months or after cleaning your filter. The Pro Logic will remind you to do this by displaying the message “Inspect/Clean Cell” after approximately 500 hours of operation.

The Pro Logic electrolytic cell has a self cleaning feature incorporated into the electronic control’s logic. In most cases this self cleaning action will keep the cell working at optimum efficiency. In areas where water is hard (high mineral content) or in pools where the water chemistry has been allowed to get “out of balance”, the cell may require periodic cleaning.

Servicing and Cleaning the Turbo Cell

Turn off power to the Pro Logic before removing the electrolytic cell. Once removed, look inside the cell and inspect for scale formation (light colored crusty or flaky deposits) on the plates and on any debris which has passed through the filter and caught on the plates. If no deposits are visible, reinstall. If deposits are seen, use a high pressure garden hose and try to flush the scale off. If this is not successful, use a plastic or wood tool (do not use metal as this will scratch the coating off the plates) and scrape deposits off of plates. Note that a buildup on the cell indicates that there is an unusually high calcium level in the pool (old pool water is usually the cause). If this is not corrected, you may have to to periodically clean the cell. The simplest way to avoid this is to bring the pool chemistry to the recommended levels as specified.

Mild Acid Washing: Use only in severe cases where flushing and scraping will not remove the majority of deposits. To acid wash, turn off power to Pro Logic. Remove cell from piping. In a clean plastic container, mix a 2:1 solution of water to muriatic acid (one gallon of water to two quarts of muriatic acid). ALWAYS ADD ACID TO WATER - NEVER ADD WATER TO ACID. Be sure to wear rubber gloves and appropriate eye protection. The level of the solution in the container should just reach the top of the cell so that the wire harness compartment is NOT submerged. It may be helpful to coil the wiring before immersing the cell. The cell should soak for a few minutes and then rinse with a high pressure garden hose. If any deposits are still visible, repeat soaking and rinsing. Replace cell and inspect again periodically.

Winterizing

The Pro Logic electrolytic cell and flow detection switch will be damaged by freezing water just as your pool plumbing and the freeze protection operation. If you are in an area that only experiences occasional freezing conditions, your Pro Logic system may be set up to drain all water from the pump, filter, and supply and return lines before any freezing conditions occur. The electronic control is capable of withstanding any winter weather and should not be removed.

If you are in an area that only experiences occasional freezing conditions, your Pro Logic system may be set up to circulate the pool water whenever the air sensor drops to the selected freeze temperature threshold. Make sure the air sensor is recording the correct temperature and is NOT located in the direct sunlight to ensure proper freeze protection operation.

Spring Start-up

When first starting the pool in the spring time, it is highly recommended that you temporarily set the pool and spa chlorinator settings (Settings Menu/Pool Sanitizer & Spa Sanitizer) to 0% (off) and then manually shock the pool with any chlorine based shock product and balance the pool water chemistry per the levels indicated in the Chlorinator Operation section. Make sure to check the salt and stabilizer levels and bring them up to the recommended levels. Your local Authorized Hayward Dealer or pool store can recommend the best chemical treatment for your pool. After the water is clear and balanced, then go back and adjust the pool and spa chlorinator settings to the appropriate levels. Test the pool chlorine level weekly and adjust the chlorinator settings up or down accordingly. It is usually a good idea to also inspect the cell and clean if necessary at the start of the season. See instructions above.

The Pro Logic’s six main menus have many items in each that allow you to customize the operation of your pool/spa equipment. The chart on the previous page shows the Pro Logic’s six menus as well as each menu’s specific settings.

The Default Menu is a series of informative displays (temperatures, salt levels, chlorinator settings, etc.) with nothing to set. The Pro Logic will automatically switch to the default menu when no keys have been pressed for 2 minutes and will then scroll through each display.

The Settings Menu and the Timers Menu are the menus you will be using most often to adjust the operation of your pool. The Configuration Menu is used when the system is installed and defines what equipment is connected to each output and the operational logic that will control the equipment. This menu is normally “locked” and should only be used by a pool professional. Details regarding the Configuration menu can be found on page 17.

The “Diagnostic Menu” is primarily intended for the service technician and contains information and details about the system operation that are helpful in troubleshooting, if problems occur.

The “Maintenance Menu” will be displayed only if the optional AQL-CHEM is used and the Sensing System is enabled in the Chemistry Config. Wizard. This menu is used to perform functions relating to the AQL-CHEM ORP and pH sensing kit.

Settings Menu

The Settings Menu allows you to set all system operating parameters except the timeclock and countdown timers which are part of the Timers Menu.

Important: All of the displays shown below use the default generic names for each function or output. The Pro Logic allows more descriptive names to be assigned to each piece of equipment (refer to the section regarding the Configuration Menu for more information).

![Settings Menu]

The Spa Heater setting will only appear if the system has been set up for “pool only” or “pool and spa” operation and the “Heater1” and/or “Heater2” control is enabled. The heater will turn on whenever the pool/spa valves are in the “pool only” position and the water temperature is less than the desired temperature setting. If you have both solar heat and a conventional heater and the solar priority option is selected (Configuration Menu), then the conventional heater will only operate when solar heat is NOT available.

For Pool and Spa dual equipment with separate heaters (“Pool and Spa -Dual” and “Htr1=Spa, Htr2=Pool” selected), Spa Heater 1 is tied to the Spa Filter (AUX1).

For Pool and Spa dual equipment with separate heaters (“Pool and Spa -Dual” and “Htr1=Spa, Htr2=Pool” selected), Pool Heater 2 is tied to the Pool Filter (FILTER).
### Pool/Hardset Speed Settings

- **Spa Filter Speed 1**: Set the desired Spa Filter Speed 1 from the Spa Filter Lowest to Spa Filter Highest.
- **Spa Heater2**: Adjust the desired Spa Heater2 power setting from Off to 100%.

### Pool Solar

- **Priority**: Adjust the desired priority interval (Never, 1 hr, 2 hrs, 3 hrs ... 22 hrs, 23 hrs, Always).
- **Level (ppm)**: Move to previous/next configuration menu.
- **Current**: Adjust the desired pool temperature (Off, 65°F, 66°F, ... 103°F, 104°F, Off).

### Spa Solar

- **Priority**: Adjust the desired spa temperature (Off, 65°F, 66°F, ... 103°F, 104°F, Off).

### Pool Chlorine

- **Super Chlorinate**: Move to previous/next menu item.
- **Priority**: Adjust the desired priority interval (Never, 1 hr, 2 hrs, 3 hrs ... 22 hrs, 23 hrs, Always).
- **Current**: Adjust the desired chlorine level (ppm).

### Spa Chlorine

- **Super Chlorinate**: Move to previous/next menu item.
- **Priority**: Adjust the desired priority interval (Never, 1 hr, 2 hrs, 3 hrs ... 22 hrs, 23 hrs, Always).
- **Current**: Adjust the desired chlorine level (ppm).

### Pool Solar (and Spa-Dual and Spa Filter is Variable Speed)

- **Aux2 Speed**: Only if an output is configured for a variable speed pump.
- **Spa Speed**: Set the desired Spa Speed from the Spa Speed Lowest to Spa Speed Highest.

### Spa Solar (and Pool and Spa-Dual and Spa Filter is Variable Speed)

- **Spa Heater2**: Only if a pump is configured for a variable speed pump.

### Pool/Spa-Dual and Filter is Variable Speed

- **Filter Speed 1**: Set the desired Filter Speed 1 from the Filter Lowest to Filter Highest.
- **Priority**: Adjust the desired priority interval (Never, 1 hr, 2 hrs, 3 hrs ... 22 hrs, 23 hrs, Always).
- **Current**: Adjust the desired pool temperature (Off, 65°F, 66°F, ... 103°F, 104°F, Off).

### Pool/Spa-Dual and Filter is Variable Speed

- **Filter Speed 1**: Set the desired Filter Speed 1 from the Filter Lowest to Filter Highest.
- **Priority**: Adjust the desired priority interval (Never, 1 hr, 2 hrs, 3 hrs ... 22 hrs, 23 hrs, Always).
- **Current**: Adjust the desired pool temperature (Off, 65°F, 66°F, ... 103°F, 104°F, Off).

---

**POUNDS (and Kg) OF STABILIZER (CYANURIC ACID) NEEDED FOR 80 PPM**

<table>
<thead>
<tr>
<th>Current Stabilizer Level (ppm)</th>
<th>8,000</th>
<th>10,000</th>
<th>12,000</th>
<th>14,000</th>
<th>16,000</th>
<th>18,000</th>
<th>20,000</th>
<th>22,000</th>
<th>24,000</th>
<th>26,000</th>
<th>28,000</th>
<th>30,000</th>
<th>32,000</th>
<th>34,000</th>
<th>36,000</th>
<th>38,000</th>
<th>40,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gallons and (Liters) of Pool/Spa water</td>
<td>(30000)</td>
<td>(37500)</td>
<td>(40000)</td>
<td>(45000)</td>
<td>(50000)</td>
<td>(60000)</td>
<td>(67500)</td>
<td>(70000)</td>
<td>(80500)</td>
<td>(90000)</td>
<td>(100000)</td>
<td>(112500)</td>
<td>(120500)</td>
<td>(127500)</td>
<td>(135000)</td>
<td>(143250)</td>
<td>(150000)</td>
</tr>
<tr>
<td>0 ppm</td>
<td>3.3</td>
<td>4.7</td>
<td>5.4</td>
<td>6.1</td>
<td>6.8</td>
<td>7.5</td>
<td>8.3</td>
<td>9.0</td>
<td>9.8</td>
<td>10.5</td>
<td>11.3</td>
<td>12.0</td>
<td>12.7</td>
<td>13.3</td>
<td>14.0</td>
<td>14.7</td>
<td>15.4</td>
</tr>
<tr>
<td>10 ppm</td>
<td>3.3</td>
<td>4.7</td>
<td>5.4</td>
<td>6.1</td>
<td>6.8</td>
<td>7.5</td>
<td>8.3</td>
<td>9.0</td>
<td>9.8</td>
<td>10.5</td>
<td>11.3</td>
<td>12.0</td>
<td>12.7</td>
<td>13.3</td>
<td>14.0</td>
<td>14.7</td>
<td>15.4</td>
</tr>
<tr>
<td>20 ppm</td>
<td>3.3</td>
<td>4.7</td>
<td>5.4</td>
<td>6.1</td>
<td>6.8</td>
<td>7.5</td>
<td>8.3</td>
<td>9.0</td>
<td>9.8</td>
<td>10.5</td>
<td>11.3</td>
<td>12.0</td>
<td>12.7</td>
<td>13.3</td>
<td>14.0</td>
<td>14.7</td>
<td>15.4</td>
</tr>
<tr>
<td>30 ppm</td>
<td>3.3</td>
<td>4.7</td>
<td>5.4</td>
<td>6.1</td>
<td>6.8</td>
<td>7.5</td>
<td>8.3</td>
<td>9.0</td>
<td>9.8</td>
<td>10.5</td>
<td>11.3</td>
<td>12.0</td>
<td>12.7</td>
<td>13.3</td>
<td>14.0</td>
<td>14.7</td>
<td>15.4</td>
</tr>
<tr>
<td>40 ppm</td>
<td>3.3</td>
<td>4.7</td>
<td>5.4</td>
<td>6.1</td>
<td>6.8</td>
<td>7.5</td>
<td>8.3</td>
<td>9.0</td>
<td>9.8</td>
<td>10.5</td>
<td>11.3</td>
<td>12.0</td>
<td>12.7</td>
<td>13.3</td>
<td>14.0</td>
<td>14.7</td>
<td>15.4</td>
</tr>
<tr>
<td>50 ppm</td>
<td>3.3</td>
<td>4.7</td>
<td>5.4</td>
<td>6.1</td>
<td>6.8</td>
<td>7.5</td>
<td>8.3</td>
<td>9.0</td>
<td>9.8</td>
<td>10.5</td>
<td>11.3</td>
<td>12.0</td>
<td>12.7</td>
<td>13.3</td>
<td>14.0</td>
<td>14.7</td>
<td>15.4</td>
</tr>
<tr>
<td>60 ppm</td>
<td>3.3</td>
<td>4.7</td>
<td>5.4</td>
<td>6.1</td>
<td>6.8</td>
<td>7.5</td>
<td>8.3</td>
<td>9.0</td>
<td>9.8</td>
<td>10.5</td>
<td>11.3</td>
<td>12.0</td>
<td>12.7</td>
<td>13.3</td>
<td>14.0</td>
<td>14.7</td>
<td>15.4</td>
</tr>
<tr>
<td>70 ppm</td>
<td>3.3</td>
<td>4.7</td>
<td>5.4</td>
<td>6.1</td>
<td>6.8</td>
<td>7.5</td>
<td>8.3</td>
<td>9.0</td>
<td>9.8</td>
<td>10.5</td>
<td>11.3</td>
<td>12.0</td>
<td>12.7</td>
<td>13.3</td>
<td>14.0</td>
<td>14.7</td>
<td>15.4</td>
</tr>
<tr>
<td>80 ppm</td>
<td>3.3</td>
<td>4.7</td>
<td>5.4</td>
<td>6.1</td>
<td>6.8</td>
<td>7.5</td>
<td>8.3</td>
<td>9.0</td>
<td>9.8</td>
<td>10.5</td>
<td>11.3</td>
<td>12.0</td>
<td>12.7</td>
<td>13.3</td>
<td>14.0</td>
<td>14.7</td>
<td>15.4</td>
</tr>
</tbody>
</table>

---

*Note: The values above are approximate and may vary depending on specific pool conditions and equipment settings.*
null
Use this function to set the current day of the week and time. These values are used for all the automatic timeclock functions of the Pro Logic and are also displayed as part of the default menu.

The Pro Logic is designed to keep the clock running during power outages lasting less than 7 days. If power has been off for longer than 7 days, then the time may have to be reset.

Display Light

On for 60 sec

 Toggle between Always On and On for 60 sec.

 Move to previous/next menu item

This function controls the backlight on the display. If the “On for 60 seconds” option is selected, then the backlight will automatically turn off 60 seconds after the last key is pressed and will stay off until next time a key is pressed.

Note that the Display Light selection only applies to the display keypad that you are currently using. Other display/keypads will not be affected. You need to individually set this option for each display/keypad in the system.

Beeper

 Enabled

 Toggle between Enabled (default) and Disabled Beeper

 Move to previous/next menu item

When “Enabled”, the keypad will beep every time a key is pressed. If this audible indication is not desired, select “Disabled”.

This function only applies to the display/keypad that you are currently using. You need to set this option for each display/keypad in your system.

NOTE: This function is not supported on all display/keypads. If the “Enabled” selection is not blinking, then the current software revision of that particular keypad/display does not support the option and it will default to Beep Enabled.

Teach Wireless

 + to start

 Push to start process

 Move to previous/next menu item

Press any button on wireless remote

 Move to previous/next menu item

This menu will only appear if a wireless base station is connected to the Pro Logic. Perform this procedure each time a wireless remote control is added to the Pro Logic system. During this procedure the wireless remote “learns” and remembers the ID code for the wireless base station connected to this particular Pro Logic unit and will reject messages with any other ID codes. If “Base NOT found” is displayed, then the Pro Logic can not communicate with the transmitter/receiver base station attached to the main unit. If “NOT Successful” is displayed, then the base station did not receive a signal from the remote control. This may be due to the distance between the Base Receiver and the remote device being too great or may be due to interference caused by other RF equipment operating in the neighborhood. Try using the “Change Channel” command and then repeat the “Teach Wireless” command.

The pool’s chemistry must be balanced BEFORE activating the Pro Logic’s optional chlorinator function. NOTE: If the pool does not have new water, add metal remover and non-copper based algacide to the pool, per manufacturer’s instructions. This ensures a quick, troublefree transfer to the Pro Logic system.

Salt Level

When using optional chlorinator function

Use the chart on the following page to determine how much salt in pounds or (Kgs) should be added to reach the recommended levels. Use the equations below (measurements are in feet/gallons and meters/liters) if pool size is unknown.

<table>
<thead>
<tr>
<th>Shape</th>
<th>Gallons (pool size in feet)</th>
<th>Liters (pool size in meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rectangular</td>
<td>Length x Width x Average Depth x 7.5</td>
<td>Length x Width x Average Depth x 1000</td>
</tr>
<tr>
<td>Round</td>
<td>Diameter x Diameter x Average Depth x 5.9</td>
<td>Diameter x Diameter x Average Depth x 785</td>
</tr>
<tr>
<td>Oval</td>
<td>Length x Width x Average Depth x 6.7</td>
<td>Length x Width x Average Depth x 893</td>
</tr>
</tbody>
</table>

The operating salt level is between 2700-3400 PPM (parts per million) with 3200 PPM being optimal. Before adding any salt, test the salt level. This is especially important for retrofit installation to older pools where chlorine added to the pool over time has ended up as salt. If the level is low, determine the number of gallons in the pool and add salt according to the chart below. A low salt level will reduce the efficiency of the sanitization and result in low chlorine production. A high salt level can cause the Pro Logic to stop chlorinating. The salt in your pool/spa is constantly recycled and the loss of salt throughout the swimming season should be minimal. This loss is due primarily to the addition of water because of splashing, backwashing, or draining (because of rain). Salt is not lost due to evaporation.

Type of Salt to Use

It is important to use only sodium chloride (NaCl) salt that is greater than 99.0% pure. This can be found at most pool stores in 40-80 lb. bags labeled “for use in swimming pools”. Alternatively, use common food quality or water softener salt that is at least 99.0% pure. It is also acceptable to use water conditioning salt pellets, however, it will take longer for them to dissolve. Do not use rock salt, or salt with more than 1% of yellow prussiate of soda, salt with anti-caking additives, or iodized salt.

How to Add Salt

For new plaster pools, wait 10-14 days before adding salt to allow the plaster to cure. Turn the circulating pump on and add salt directly into the pool. Brush the salt around to speed up the dissolving process—do not allow salt to pile up on the bottom of the pool. Run the filter pump for 24 hours with the suction coming from the main drain (use pool vacuum if there is no main drain) to allow the salt to evenly disperse throughout the pool. The salt display may take 24 hours to respond to the change in salt concentration.

Always check stabilizer (cyanuric acid), when checking salt. These levels will most likely decline together. Use the chart on page 38 to determine how much stabilizer must be added to raise the level to 80 ppm.
**Chlorinator Operation / Water Chemistry**

**General Water Chemistry**
Salt is required only if you are using the chlorinator features on the Pro Logic Control. If you are NOT using the chlorinator, it is recommended that you follow all of the other chemistry recommendations besides salt. Refer to the description of the Pro Logic configuration menu for information on enabling/disabling the chlorinator (see page 17).

**Water Chemistry**
The table below summarizes the levels that are recommended by the Association of Pool and Spa Professionals (APSP). The only special requirements for the Pro Logic are the salt level and stabilizer.

---

### Chemical Levels

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Ideal Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salt</td>
<td>2700 to 3400 ppm</td>
</tr>
<tr>
<td>Free Chlorine</td>
<td>1.0 to 3.0 ppm</td>
</tr>
<tr>
<td>pH</td>
<td>7.2 to 7.8</td>
</tr>
<tr>
<td>Cyanuric Acid (Stabilizer)</td>
<td>60 to 80 ppm (80 ppm best)</td>
</tr>
<tr>
<td>Total Alkalinity</td>
<td>80 to 120 ppm</td>
</tr>
<tr>
<td>Calcium Hardness</td>
<td>200 to 400 ppm</td>
</tr>
<tr>
<td>Metals</td>
<td>0 ppm</td>
</tr>
<tr>
<td>Saturation Index</td>
<td>-2 to 2 (0 best)</td>
</tr>
</tbody>
</table>

---

### Saturation Index

The saturation index (Si) relates to the calcium and alkalinity in the water and is an indicator of the pool water “balance”. Your water is properly balanced if the Si is 0 ±0.2. If the Si is below -0.2, the water is corrosive and plaster pool walls will be dissolved into the water. If the Si is above +0.2, scaling and staining will occur. Use the chart below to determine the saturation index.

\[
Si = pH + Ti + Cl + Ai - 12.1
\]

<table>
<thead>
<tr>
<th>C</th>
<th>°F</th>
<th>Ti</th>
<th>Calcium</th>
<th>Cl</th>
<th>Total</th>
<th>Ai</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>53</td>
<td>.3</td>
<td>75</td>
<td>1.5</td>
<td>75</td>
<td>1.5</td>
</tr>
<tr>
<td>16</td>
<td>60</td>
<td>.4</td>
<td>100</td>
<td>1.6</td>
<td>100</td>
<td>2.0</td>
</tr>
<tr>
<td>19</td>
<td>66</td>
<td>.5</td>
<td>125</td>
<td>1.7</td>
<td>125</td>
<td>2.1</td>
</tr>
<tr>
<td>24</td>
<td>76</td>
<td>.6</td>
<td>150</td>
<td>1.8</td>
<td>150</td>
<td>2.2</td>
</tr>
<tr>
<td>29</td>
<td>84</td>
<td>.7</td>
<td>200</td>
<td>1.9</td>
<td>200</td>
<td>2.3</td>
</tr>
<tr>
<td>34</td>
<td>94</td>
<td>.8</td>
<td>250</td>
<td>2.0</td>
<td>250</td>
<td>2.4</td>
</tr>
<tr>
<td>39</td>
<td>103</td>
<td>.9</td>
<td>300</td>
<td>2.1</td>
<td>300</td>
<td>2.5</td>
</tr>
<tr>
<td>45</td>
<td>112</td>
<td>1</td>
<td>400</td>
<td>2.2</td>
<td>400</td>
<td>2.6</td>
</tr>
<tr>
<td>50</td>
<td>120</td>
<td>1.1</td>
<td>600</td>
<td>2.4</td>
<td>600</td>
<td>2.8</td>
</tr>
<tr>
<td>55</td>
<td>128</td>
<td>1.2</td>
<td>800</td>
<td>2.5</td>
<td>800</td>
<td>2.9</td>
</tr>
</tbody>
</table>

Note: Al use: Measure pool pH, temperature, calcium hardness, and total alkalinity. Use the chart above to determine Ti, Cl and C1 from your measurements. Insert values of pH, Ti, Cl and Ai into the above equation. If Si equals -2 or less corrosion or irritation may occur.

### Water Quality Chart

- **CORROSIVE**: Si ≤ -2
- **SCALING**: -2 < Si < 2
- **OK**: Si ≥ 2

---

### Important:

**All of the displays shown below use the default generic names for each function or output. The Pro Logic allows more descriptive names to be assigned to each piece of equipment (refer to the section regarding the Configuration Menu for more information).**

---

**Timers Menu**
The Timers Menu allows you to set all timeclock and countdown timers which control the automatic operation of your pool/spa system.

Most timeclocks have a single on/off program per day. All of the timeclocks are setup (Configuration Menu) either as “all days” or “weekends/weekdays”. If “weekends/weekdays” are selected, you will need to program on times for both weekdays and weekends and off times for both weekdays and weekends, even if you want them to be the same. All times are adjusted in 15 minute increments (9:00A, 9:15A, 9:30A, etc.). If you program the on time equal to the off time (“10:00A to 10:00A”) the output will never turn on. If you want to disable a timeclock, you can set the on time equal to the off time and you will notice the times disappear and the display simply shows “OFF”. If, at a later time, you wish to re-activate the timeclock, simply press either the “+” or “-” button to go back to a normal timeclock programming display.

The Countdown timer is programmed in increments of 5 minutes from “Manual On/Off” (0 minutes) to a maximum of “21:00” (3 hours). When “Manual On/Off” is displayed, the countdown timer is disabled and the output will be manually controlled. When a countdown timer is equal or greater than “0:05”, pressing the appropriate output button will turn the output on and start the timer. Pressing the button again will turn the output off or, when the programmed time has elapsed, the output will automatically turn off.

---

### All Channels

- **Change desired wireless channel (1 - 5)**
- **If channel is changed, move to confirmation menu**
- **Push to confirm channel change**
- **Move to previous (Teach Wireless) menu**
- **Confirm Change: + to proceed**
- **Move to previous next menu item**
- **Reteach all wireless units**

---

**Measurement and Analysis**

1. **Important:** If channel is not changed, move to previous/next menu item.
2. **If channel is changed and confirmed, all wireless remote will have to be re-taught. This menu will only appear if a wireless base station is connected to the Pro Logic.**
or

For one speed pumps, this is the second filter timeclock.

For two speed, this time clock will set the normal period for filter pump low speed operation. (the word “Filter T2” in the display will be replaced with “Filter L1”.) If the filter pump is off for more than 30 seconds, the pump will first turn on at high speed for 3 minutes to prime and establish water flow. Afterwards, it will drop down to low speed for the remainder of the programmed low speed time period.

While this time clock will override the high speed timeclock (see above), there are several reasons why the pump will automatically switch to high speed operation during this programmed time period. These include manual operation, spa operation, or heating operation. For a variable speed pump, this setting will be the period of time when the pump will run at the speed selected for speed2 in the settings menu. If there is an overlap in any of the timeclocks, then the lower number timeclock/speed has priority.

NOTE: The third and forth filter timeclocks function similarly to the first and second (respectively). Program these timeclocks in the same manner.

NOTE: The third and forth filter timeclocks function similarly to the first and second (respectively). Program these timeclocks in the same manner.

Set Day and Time
8:00P to 11:00P
6:00P to 9:00P
8:30A to 4:00P
6:00P to 9:00P
8:30A to 4:00P
6:00P to 9:00P
8:30A to 4:00P
6:00P to 9:00P
8:30A to 4:00P

For the two speed pool, this timeclock will set the normal period for the filter pump low speed operation. (the word “Filter T2” in the display will be replaced with “Filter L1”.) If the filter pump is off for more than 30 seconds, the pump will first turn on at high speed for 3 minutes to prime and establish water flow. Afterwards, it will drop down to low speed for the remainder of the programmed low speed time period.

While this time clock will override the high speed timeclock (see above), there are several reasons why the pump will automatically switch to high speed operation during this programmed time period. These include manual operation, spa operation, or heating operation. For a variable speed pump, this setting will be the period of time when the pump will run at the speed selected for speed2 in the settings menu. If there is an overlap in any of the timeclocks, then the lower number timeclock/speed has priority.

NOTE: The third and forth filter timeclocks function similarly to the first and second (respectively). Program these timeclocks in the same manner.

Spa-wkday
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P

Spa-wkend
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P

Spa-all
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P
6:00P to 9:00P

Lights-all
8:00P to 11:00P
8:00P to 11:00P
8:00P to 11:00P
8:00P to 11:00P
8:00P to 11:00P
8:00P to 11:00P
8:00P to 11:00P
8:00P to 11:00P
8:00P to 11:00P

Lights-CountDn
0:20
0:20
0:20
0:20
0:20
0:20
0:20
0:20
0:20

This menu will appear only if the Lights are configured for countdown timer. The lights will turn on and off at the designated times. The only override on this function is manual on/off control by the “Lights” button.

Start/Stop Superchlorination

1. Press the “MENU” button repeatedly until “Settings Menu” is displayed
2. Press the “>” button repeatedly until “Super Chlorinate” is displayed.
3. The display will show whether superchlorination is “on” or “off”.
4. Press “+” or “-” to toggle between “on” and “off”

Note: Once started, superchlorination will run for the programmed number of hours (Timers Menu/Super Chlorinate Hours) or until you manually turn it off. Superchlorination may be temporarily interrupted for a programmed spa operation.

Program a Timeclock

1. Press the “MENU” button repeatedly until “Timers Menu” is displayed
2. Press the “>” button repeatedly until the “xxx—all days” or “xxx—weekends” is displayed.
3. Use the “+” and “-” buttons to set the desired start time, then press “>” to switch to the off time. Use the “+” and “-” buttons to adjust the off time. If you are setting the “weekend” timeclock, press “>” to go to the “weekday” settings.

Note: During the programmed time, there may be other automatic or manual operations that prevent the relay/valve from operating—see a more detailed discussion under Automatic System Operation/Timers Menu/Aux Timeclock or in Troubleshooting/Diagnostic Information.

Program a Countdown Timer

1. Press the “MENU” button repeatedly until “Timers Menu” is displayed
2. Press the “>” button repeatedly until the “xxx—CountDn” is displayed.
3. Use the “+” and “-” buttons to set the desired timer period.

Note: A setting of 0:00 will display as “Manual On/Off.” The countdown automatic turn off function is disabled by manual operation is still permitted. There may be other automatic or manual operations that prevent the relay/valve from operating—see a more detailed discussion under Automatic System Operation/Timers Menu/Aux Timeclock or in Troubleshooting/Diagnostic Information.

Enter/Exit Service (or Service—Timed) Mode

1. Go to Pro Logic main unit (normally mounted near the pool equipment)
2. Pressing the “Service” button rotates through normal operation (red LED off), service mode (red LED on continuously) and service-timed mode (red LED flashing).

Note: This operation can only be performed at the main Pro Logic unit. Both “Service” and “Service-Timed” disable all automatic programmed operations and allow manual operation from the main unit only. The buttons on the remote display/keypads will be still able to turn equipment off in case of an emergency, but will not turn any equipment on. If the system is in “Serviced-Timed” it will automatically switch back to normal operation at the end of the time period.
Quick “How To” Guide

Operate the Spa—Manually
1. Press the “Pool/Spa” button to go to “spa-only” operation (“SPA” LED illuminated). In some cases, this may take more than one press of the button.
2. If the filter pump is not already on, press the “FILTER” button to turn it on.
3. If the spa is below the desired temperature, the heater will turn on automatically when the filter pump is on and the valves are in the spa-only position. If you have not already set the desired temperature for the spa, see “Set Heater Temperature” below.
4. If the spa has a separate jet pump and/or blower, determine if the jet pump/blower is controlled by any Aux or the Lights relay (it should be marked on the label inside the door). Then press the appropriate button to turn on the jets/blower.

Operate the Spa—Automatically
1. Press the “MENU” button repeatedly until “Settings Menu” is displayed.
2. Press the “>” button repeatedly until the “Spa Chlorinator” or “Pool Chlorinator” is displayed.
3. Use the “+” or “-” buttons to adjust the off time. If you are setting the “weekend” time clock, press “>” to go to the “weekend” settings.

Set the Chlorinator Output
1. Press the “MENU” button repeatedly until “Settings Menu” is displayed.
2. Press the “>” button repeatedly until the “Spa Chlorinator” or “Pool Chlorinator” is displayed.
3. Press the “+” or “-” buttons repeatedly to adjust the setting. If you adjust the setting to 0%, the chlorinator will be off all the time.

Set the Heater Temperature (or turn heater permanently off)
1. Press the “MENU” button repeatedly until “Settings Menu” is displayed.
2. Press the “>” button repeatedly until the “Spa Heater” or “Pool Heater” is displayed.
3. Press the “+” or “-” buttons repeatedly to adjust the temperature. If you adjust the temperature below 65°F or above 104°F the display will indicate “off” and the heater will not operate regardless of temperature.

Set the Chlorinator Output
1. Press the “MENU” button repeatedly until “Settings Menu” is displayed.
2. Press the “>” button repeatedly until the “Spa Chlorinator” or “Pool Chlorinator” is displayed.
3. Press the “+” or “-” buttons repeatedly to adjust the setting. If you adjust the setting to 0% the chlorinator will be off all the time.

Note: During the programmed spa time, the valves will automatically switch to the “spa-only” position. The filter pump will turn on, and, if the spa is not up to the desired temperature, the heater will start. This operation is the highest priority and will take precedence over other automatically programmed operations. At the end of the spa period, the Pro Logic will return to its normally programmed operation state.

Operate the Spa—Automatically
1. Press the “MENU” button repeatedly until “Timers Menu” is displayed.
2. Press the “>” button repeatedly until the “Spa Filter” or “Pool Filter” is displayed.
3. Use the “+” and “-” buttons to set the desired start time, then press “>” to switch to the off time. Use the “+” and “-” buttons to adjust the off time. If you are setting the “weekend” time clock, press “>” to go to the “weekend” settings.

Note: Separate temperatures for the pool and spa must be set. If the valves are in the pool-only or spa spillover positions, then the heater will use the pool setting. If the valves are in the spa-only position then the heater will operate according to the spa setting.

For one speed spa pumps, this is the second filter timeclock.

For two speed pumps, this timeclock will set the normal time period for spa filter pump low speed operation (the word “Spa Filter T1” in the display will be replaced with “Spa Filter Hi”). If the filter pump is on for more than 30 seconds, the pump will then turn on at high speed for 3 minutes to prime and establish water flow. Afterwards, it will drop down to low speed for the remainder of the programmed low speed time period. While this time clock will override the high speed timeclock (see above), there are several reasons why the pump will automatically switch to high speed operation during this programmed time period. These include manual operation, spa operation, or heating operation.

For a variable speed pump, this setting will be the period of time when the pump will run at the speed selected for speed2 in the settings menu. If there is an overlap in any of the timeclocks, then the lower number timeclock/speed has priority.

For PS-4, Aux1 and Aux2 configurations are identical. For PS-8 models, Aux1 - Aux6 configurations are identical. For PS-16 models, Aux1 - Aux14 configurations are identical.

For one speed spa pumps, this is the second filter timeclock.

For two speed pumps, this timeclock will set the normal time period for spa filter pump low speed operation (the word “Spa Filter T1” in the display will be replaced with “Spa Filter Hi”). If the filter pump is on for more than 30 seconds, the pump will then turn on at high speed for 3 minutes to prime and establish water flow. Afterwards, it will drop down to low speed for the remainder of the programmed low speed time period. While this time clock will override the high speed timeclock (see above), there are several reasons why the pump will automatically switch to high speed operation during this programmed time period. These include manual operation, spa operation, or heating operation.

For a variable speed pump, this setting will be the period of time when the pump will run at the speed selected for speed2 in the settings menu. If there is an overlap in any of the timeclocks, then the lower number timeclock/speed has priority.

This menu will appear only if the Aux1 is configured for countdown timer. The Aux1 output will turn on and off at the designated times. If the Aux1 relay is off during the programmed on time—note that some pool equipment (example pressure side pool cleaner) can only be operated when the filter pump is running and the pool/spa valves are in the pool-only position—the Pro Logic will keep the relay off until these other conditions are suitable for operation. If the Aux1 relay is on during the programmed off time, it may be because of freeze protection. Also, manual operation overrides the timeclock. Refer to page 12 for general notes regarding timeclock programming.

For PS-4, Aux1 and Aux2 configurations are identical. For PS-8 models, Aux1 - Aux6 configurations are identical. For PS-16 models, Aux1 - Aux14 configurations are identical.
you manually turn on the Aux1 relay until the Pro Logic automatically turns off the relay. You can also manually turn off the relay at an earlier time by pressing the AUX1 button.

NOTE: The configurations for Valve3 and Valve4 are identical. However, if Heater2 was enabled, then the Valve4 configuration will not appear (a single relay is used to implement either the Heater2 function or the Valve4 function—it can not do both).

This menu will appear only if the valve3 is configured for countdown timer. This setting is the time after you manually turn on the valve3 relay until the Pro Logic automatically turns off the relay. You can also manually turn off the valve at an earlier time by pressing the VALVE3 button.

For larger pools or when you have an unusually high bather load, a large amount of rain, a cloudy water condition, or any other condition that requires a large amount of chlorine to be introduced to the pool, may require more hours of Superchlorination. Smaller pools require less hours of Superchlorination.

**Group Function**

The Pro Logic offers the ability to assign a Group function to a particular button. Instead of a button controlling one particular function, the button can be programmed to initiate a sequence of commands that are programmed in the Configuration Menu. For example, instead of the Lights button turning on and off the pool light only, the button can be programmed to turn on the pool light, turn on the bug light, turn off the pool cleaner, turn on and dim the patio lights, turn on the music, etc. all at the same time. This convenient feature is offered on all Aux buttons, both Valve buttons and the Lights button. The Pro Logic can be programmed to control up to four groups. Refer to this section when programming Group commands.

Before assigning and configuring all the desired functions and their control parameters, the group itself must be configured. The options for controlling groups are Manual On/Off, Countdown Timer, and Timeclock. The group will turn on and off based on this selection.

When setting up a Group function in the Configuration Menu, the first menu allows you to select the control parameter (how the group is activated and deactivated) and the second menu allows you to select which Pro Logic functions are to be controlled in the group.
if AQL-SS-D is connected

Digital Spa Config:
+ to view/change

Select Digital Spa A
- to next menu item

Digital A, Button 1
Pool/Spa
- to previous/next menu item

Digital A, Setpoint
Heater 1
- to previous/next menu item or next configuration menu

Select Digital Spa
This menu only appears if more than one AQL-SS-D is detected at power up. Select which of the available remote controls (A, B or C) is to be configured.

Digital A, Button 1
This menu allows the user to map each button of the AQL-SS-D to one of the standard Pro Logic functions. The default selections are: Button 1 - Pool/Spa, Button 2 - Filter, Button 3 - Lights, Button 4 - Heater 1, Button 5 - Valve 3, Button 6 - Valve 4, Button 7 - Aux 1 and Button 8 - Aux 2.

Digital A, Setpoint
If more than one heater is installed, select the spa heater you wish to control. If no heaters are installed, “Heaters Disabled” will be displayed.

Remote Menus
Enabled

- to previous/next configuration menu

- to previous/next configuration menu

- to previous/next configuration menu

- to previous/next configuration menu

- to previous/next configuration menu

- to previous/next configuration menu

- to previous/next configuration menu

All Timeclocks
7-day

- to previous/next configuration menu

This selection affects ALL of the timeclock logic in the Pro Logic. If “7-day” is selected, each timeclock will have one set of turn-on/turn-off settings that operate every day of the week. If “Weekend/Weekday” option is selected then the user can enter only one set of turn-on/turn-off times for the weekend (fixed as Saturday/Sunday) and another set of turn-on/turn-off times for weekdays (Monday through Friday).

Units:
°F and RPM

- to previous/next configuration menu

VSP Speed
‰

- to previous/next configuration menu

This is the unit of measure for displaying the speed of the variable speed pump. Select % of your pump’s maximum speed or revolutions per minute (RPM).

A table of functions and their corresponding control parameters are listed below.

<table>
<thead>
<tr>
<th>Function</th>
<th>Control Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pool/Spa</td>
<td>Unaffected, Pool only, Spa only, or Spillover</td>
</tr>
<tr>
<td>Pool Filter</td>
<td>Unaffected, Off, On, High, Low, On (Lowest to Highest)</td>
</tr>
<tr>
<td>Lights (standard relay)</td>
<td>Unaffected, Off, or On</td>
</tr>
<tr>
<td>Lights (VSP relay)</td>
<td>Unaffected, Off, On (100%, 80%, 60%, 40%, or 20%)</td>
</tr>
<tr>
<td>Lights (dimmer relay)</td>
<td>Unaffected, Off or On (10% to 100%)</td>
</tr>
<tr>
<td>Spa Filter</td>
<td>Unaffected, Off, On, High, Low, On (Lowest to Highest)</td>
</tr>
<tr>
<td>Aux 1-4 (VSP relay)</td>
<td>Unaffected, Off or On (100%, 80%, 60%, 40%, or 20%)</td>
</tr>
<tr>
<td>Aux 1-4 (dimmer relay)</td>
<td>Unaffected, Off or On (10% to 100%)</td>
</tr>
<tr>
<td>Valve 3, 4</td>
<td>Unaffected, Off or On</td>
</tr>
<tr>
<td>Spa Htr 1 Set</td>
<td>Unaffected, Off, 65°-104°F</td>
</tr>
<tr>
<td>Pool Htr 1 Set</td>
<td>Unaffected, Off, 65°-104°F</td>
</tr>
<tr>
<td>Spa Htr 2 Set</td>
<td>Unaffected, Off, 65°-104°F</td>
</tr>
<tr>
<td>Pool Htr 2 Set</td>
<td>Unaffected, Off, 65°-104°F</td>
</tr>
<tr>
<td>Spa Solar Set</td>
<td>Unaffected, Off, 65°-104°F</td>
</tr>
<tr>
<td>Pool Solar Set</td>
<td>Unaffected, Off, 65°-104°F</td>
</tr>
<tr>
<td>SuperChlr</td>
<td>Unaffected, Off, On</td>
</tr>
</tbody>
</table>

Note that all functions in the table may not be offered. The available functions are dependent on how the Pro Logic is configured. For example, if the Pro Logic is configured for a single heater, “Heater 2” will not be available as an option in the Group menu. Also, under some circumstances, functions will be displayed but can’t be changed. Note that the function whose menu you are in, will not be displayed as an option and will automatically turn on when the group is activated. For example, if programming a Group function under the Lights menu, the Lights function will not be offered as an option and the Lights function will automatically turn on with the group.

The available control parameters vary with each function. All functions offer “Unaffected”, which should be selected if you do not wish to control that particular function within the group. All other parameters will depend on the particular function selected.

When activating Group functions, be aware that the most recent Group function that you activate will override any previous Group functions.

Heater Setpoints in Groups

The Pro Logic can be programmed to use alternate heater setpoints (conventional and/or solar) while running group commands. This allows the heater to be set to a higher or lower temperature than normal, while the group is activated. When the group stops, the setpoint will return to its normal setting.

Changing the setpoint while the Group is running will make the Group release the alternate setpoint control and revert back to the normal heater setting. Any changes that are made at that point will affect the normal heater setting. The next time the Group is activated, the temperature will return to the group setpoint that was originally programmed in the Configuration Menu. To change the setpoint while the Group is running, go to the Settings menu and press the +/- button while “Group Control” is displayed. The setpoint will change and be retained as the new normal heater setpoint.
Super Chlorinate
The Pro Logic can be programmed to Super Chlorinate the pool or spa while running a group command. When the Group starts, the Super Chlorinate cycle will begin. Super Chlorinate will continue until the preset time expires (see Timers Menu/Super Chlorinate Hours) or until the Group turns off. Changing the Super Chlorinate state using the Settings Menu, the Aquapod Pool Super Chlorinate button, or a Super Chlorinate assigned Aux/Lights/Valve button will temporarily cancel the Group’s control of Super Chlorinate until the next time the Group is activated.

Variable Speed in Groups
The Pro Logic can be programmed to use alternate pump speeds while running group commands. This allows the pump(s) to be set to a higher or lower speed than normal, while the group is activated. When the group stops, the speed will return to its normal setting.

Changing the speed setting while the group is running will make the group release the alternate speed setting and revert back to the normal speed setting. Any changes that are made at that point will affect the normal speed setting. The next time the group is activated, the speed will return to the group speed setting that was originally programmed in the Configuration Menu. To change the speed setting while the group is running, go to the Settings menu and press the +/- button while “Group Control” is displayed. The speed setting will change to the normal speed setting.

PS-8 and PS-16 Virtual Models
Pro Logic Virtual models are similar to standard PS models, but offer additional auxiliary outputs with limited functionality. The PL-PS-8-V is similar to the PL-PS-4 with 4 additional Aux outputs. The PL-PS-16-V is similar to the PL-PS-8 with 8 additional outputs. The additional aux outputs on virtual models can only be assigned to the Super Chlorinate function (if the Chlorinator is enabled) or to a Group function. Refer to the following programming information when assigning functions to the virtual auxiliary outputs.

Configuration Menus
Each item needs to be programmed and may contain additional sub-menu items. Refer to the following pages for information on programming.

Chlorinator
Requires the use of a chlorinator cell and P-KIT sold separately. If the chlorinator is enabled, then the cell and flow switch must also be installed and the Pro Logic will automatically chlorinate both the pool and spa according to the desired output setting (see Settings Menu in the Operation manual). If disabled (default), all displays relating to the chlorinator will be suppressed. When the chlorinator is enabled, the Pro Logic will automatically detect and control any Aqua Rite(s) that is installed in the system.

Display
Allows for the display of salt (default) or mineral values.

Cell Type Selection
The Cell Type Menu appears after “Display Salt/Minerals” in the Chlorinator Configuration Menu. The options are T-CELL-15 (default), T-CELL-9, T-CELL-5 or T-CELL-3. Make the proper selection based on the chlorinator cell that is used in your system. Refer to the information below.

<table>
<thead>
<tr>
<th>Cell Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-CELL-3’</td>
<td>T-CELL-3, GLX-CELL-3-W</td>
</tr>
<tr>
<td>T-CELL-5’</td>
<td>GLX-CELL-5, GLX-CELL-5-W</td>
</tr>
<tr>
<td>T-CELL-9’</td>
<td>GLX-CELL-9, GLX-CELL-9-W</td>
</tr>
</tbody>
</table>

Chlorinator Config. - to view/change
[ ] Push to access Chlorinator option
[ ] Move to next configuration menu

Chlorinator Enabled
[ ] Toggle between Chlorinator Enabled and Disabled (default)
[ ] Move to next menu item

Display Salt
[ ] Toggle between Display Salt (default) and Minerals
[ ] Move to previous/next configuration menu

Cell Type
[ ] Rotates between available Cell types
[ ] Move to next menu item

Valve3 Freeze Protection
This function protects the pool and plumbed equipment against freeze damage. If Freeze Protection is enabled and the AQL temperature falls sensor fails below the selected freeze protection temperature, the Pro Logic will turn on the valve to allow circulation of the water. IMPORTANT: this only enables operation of the valve 3 output during freeze—see the “Filter Pump Config.” menu to enable freeze protection for the main circulation system. Freeze protection is not available for group or super chlorinate functions.

Valve3 Pump Speed
This is the speed of the pump when the Valve 3 output is on. The default selection is “Settings Menu”. This is the speed of the pump that has been selected in the Settings Menu for normal filter operation. If an alternate speed is desired when the Valve 3 output is on, press “+” or “-” and select from “Filter Lowest” to “Filter Highest” in 5% increments.

Valve3 Interlock
When Valve 3 External Input Interlock is enabled, the Valve 3 output will be forced off when the external input is active. This will have precedence over freeze protection. Valve 3 External Input Interlock is not available for solar, group, and super chlorinate functions.

Valve3 External Input Interlock
When Valve 3 External Input Interlock is enabled, the Valve 3 output will be forced off when the external input is active. This will have precedence over freeze protection. Valve 3 External Input Interlock is not available for solar, group, and super chlorinate functions.

Valve3 Group
The Valve 3 Group function allows the user to perform multiple tasks with a single push of the Valve 3 button. When setting up a Group function, refer to page 15 for specific programming information. There are two Group menus; the first menu determines how the group command will be initiated (Manual On/Off, Countdown Timer, or Timetick) and the second menu selects the desired functions and their respective control parameters.

When activating Group functions, be aware that the most recent Group function that is initiated will override any previous Group function.

Valve3 External Input
This menu allows the user to map each button of the AQL-SS-6B to one of the standard Pro Logic functions. The default selections are: Button 1 - Pool/Spa, Button 2 - Filter, Button 3 - Lights, Button 4 - Heater1, Button 5 - Aux1 and Button 6 - Aux2. This menu only appears if more than one AQL-SS-6B is detected at power up. Select which of the available remote controls (A, B or C) is to be configured.

Valve3 External Input
This menu allows the user to map each button of the AQL-SS-6B to one of the standard Pro Logic functions. The default selections are: Button 1 - Pool/Spa, Button 2 - Filter, Button 3 - Lights, Button 4 - Heater1, Button 5 - Aux1 and Button 6 - Aux2.
NOTE: The configuration for Valve3 and Valve4 are identical. However, if Heater2 was enabled, then the Valve4 configuration will not appear (a single relay is used to implement either the Heater2 function or the Valve4 function—it can not do both). For PS-16, see the Logic on page 27 for control of Valve3, 7, 8, 9 and 10.

Valve3 Config.
- Push to access Valve3 options
  - Move to previous/next configuration menu

Valve3 Name
- Waterfall
  - Rotate between Manual On/Off (default), Countdown Timer, Solar, Filter, and Super Chlorinate
- Solar
  - Move to previous/next menu item

Valve3 Function
- Toggle between Enabled and Disabled (default)
- Interlock
- Freeze
- Timeclock
- Solar
  - Move to previous/next menu item

Valve3 Interlock
- Disabled
  - Move to previous menu item

Valve3 Group
- Manual
  - Rotate between Manual On/Off (default), Countdown Timer, Solar, Filter, and Super Chlorinate
- Timer
  - Move to previous/next menu item

Valve3 Ext Input
- Disabled
  - Move to previous/next menu item

Waterfall
- Disabled
  - Move to previous/next menu item

In-Floor Cleaner
- Move to previous/next configuration menu

Valve3 Freeze
- Disabled
  - Move to previous/next configuration menu

Valve3 Pump Spd
- Settings Menu
  - Select Settings Menu (default) or desired pump speed (Filter Lowest to Highest)
  - Move to previous/next configuration menu

Valve3 Name
The Pro Logic allows you to assign any one of a number of names (e.g., “Cleaner Valve, Waterfall Valve, Solar Valve, etc.) to each of the valve output control function. This will make the Pro Logic much more user friendly to the homeowner when they want to turn various valves on or off or program the timeclocks. A sheet of small name labels is included with the Pro Logic main unit and each remote display/keypad so that the “Valve3” and “Valve4” pushbutton can be labeled the same as the name that you have assigned.

Valve3 Function
Manual On/Off (default) – the valve3 relay will alternate between turning on and off when the Valve3 button is pressed. There is no automatic control logic. The Valve3 button can also be used to turn the valve output on or off.

Countdown Timer – the valve3 relay will turn on when the Valve3 button is pressed and then will turn off automatically after a programmed time (see Timers Menu in the Operations Manual). The Valve3 button can also be used to turn the output on or off.

Timeclock – the valve turns on/off at the times set for the valve3 timer in the Timers Menu (see Operations Manual). The valve3 button can also be used to turn the valve output on or off.

Solar – the valve operates when the filter pump is running and solar heat is available and the water is less than the desired temperature setting. Solar heating must be enabled in the “Solar Config. menu for proper operation to occur.

In-Floor Cleaner – the valve switches the water returning to the pool between the in-floor cleaner and the normal return jets which facilitate efficient surface skimming. The valve will operate the in-floor cleaner for the first half of each clock hour and then switch to the jets/skimming for the last half of the hour.

Group – the valve operates when the Group function is initiated and shuts off when the Group
Filter Operation
If “Spa Spillover” is selected, the Pro Logic will automatically switch the pool/spa suction and return valves to “spillover” at the start of the programmed pool filtering time period or when the super-chlorinate period is turned on. The valves will remain in this position for the remainder of the super-chlorinate period. This option is usually preferable because both the pool and spa water will be filtered and sanitized.

If “Pool Only” is selected, then the Pro Logic will switch the pool/spa valves to the “pool only” position at the start of the programmed pool filtering time period or when the super-chlorinate function is turned on. This may be desirable on some systems with in-floor cleaners because it allows the cleaner to operate all the time the pool is being filtered and/or the super chlorinate is running.

V1=Aux1, V2=Aux2
This menu appears only if the Pool/Spa Setup is “Pool Only” or “Spa Only”. When enabled, Valve 1 (return) will follow the Aux 1 output and Valve 2 (suction) will follow the Aux 2 output. When disabled (default), the return and suction pool/spa valves function normally.

Freeze Temp
Adjust the desired freeze protection temperature (33ºF - 42ºF)

Lowest Speed
100%  
Adjust the lowest speed desired for variable speed operation

Highest Speed
100%  
Adjust the highest speed desired for variable speed operation

Flow Monitor
Disabled
Toggle between Enabled and Disabled (default) Flow Monitor

Freeze Protect
Enabled
Toggle between Enabled (default) and Disabled Freeze Protection

Freeze Protect Speed
50%  
Select the desired Freeze Protection speed from Filter Lowest to Filter Highest speed

Freeze Protect Temp
35ºF - 42ºF  
Adjust the desired freeze protection temperature

External Input
Disabled
Toggle between Enabled and Disabled (default)
more user friendly to the homeowner when they want to turn various aux equipment on or off or program the timers. A sheet of small name labels is included with the Pro Logic main unit and each remote display keypad so that the “Aux” pushbutton can be labeled the same as the name that you have assigned. At this time it is also a good idea to make sure that the relay in the control box is also labeled (hand written) with the same name as a help to technicians who may service this system at a later date.

**Aux1 Function**

**Manual On/Off (default)—** the aux relay will alternate between turning on and off when the aux button is pressed. There is no automatic control logic.

**Countdown Timer—** the aux relay will turn on when the AUX button is pressed and then will turn off automatically after a programmed time (see Timers Menu in the Operations Manual). The AUX button can also be used to turn the output on/off.

**Low Speed of a 2-speed Filter Pump—** the Pro Logic will operate the aux relay whenever the low speed operation of the filter pump is required. It is very important that the “2-speed” filter pump option be selected under the “Filter Config.” menu for proper operation.

**Timeclock—** the aux relay will turn-on and turn-off at the times set for the aux timeclock in the Timers Menu (see Operations Manual). The AUX button can also be used to turn the output on and off.

**Solar—** the aux relay operates a solar booster pump which will turn on when the filter pump is running and solar heat is available and the water is less than the desired temperature setting. It is important to note that “Solar” must be enabled in the “Solar Config.” menu for proper operation to occur.

**Low Speed of a 2-Speed Spa Filter Pump—** the Pro Logic will turn on the aux relay whenever the low speed operation of the Dual Equipment Spa filter pump is required. “Pool and Spa-Dual” (located in Pool/Spa Setup menu) and “2-Speed” (located in Spa Filter Config. menu) must be selected for proper operation.

**Group—** the aux relay operates when the Group function is initiated and shuts off when the Group function is terminated. See Aux1 Group section for operation information for the Group function.

**Super Chlorinate—** The Super Chlorinate function can be assigned to any Aux, Lights or Valve button. This allows the user to simply hit a button to start a Super Chlorinate cycle, rather than using the Settings Menu. Note that only one button can be assigned to this function.

**pH Dispense—** When Chemistry Sensing is enabled and pH Reduction Control is NOT disabled, the Pro Logic will turn on the Aux relay when there is a need to energize the pH dispensing device. The pH Dispense function can be assigned to any Aux or the Lights output. Once programmed for pH Dispense, the Aux button will have no function. Requires the use of the AQL-CHEM sensing kit.

**Aux1 Relay**

This feature allows the user to select either “Standard” (default), “Dimmer”, “ColorLogic” or “VSP” type relay for the Aux1 output. The optional AQL-DIM dimmer kit must be installed if “Dimmer” is desired. The AQL-COLOR-MODHV ColorLogic Network Module must be installed if “ColorLogic” is desired.

When “Dimmer” is selected, and the Aux1 output is manually turned on, the “+” and “-” buttons adjust the level from 20% to 100% (default). The level is saved for the next time the Aux1 output is turned on and off.

If “ColorLogic” is selected (Network Module must be detected at startup for this option to appear), additional menus will prompt you for configuration information. Refer to the AQL-COLOR-MODHV manual for details on how to configure an Aux output for use with Generation 3 or later ColorLogic lights.

If “VSP” is selected, the Aux relay is used to supply power to a Hayward Variable Speed Pump (VSP). The relay will be on when the Aux output is on and off when the output is off. On, off and speed are controlled by commands sent to the VSP. Note: Up to 6 Lights/Aux outputs can be configured as VSP relays.

**Aux1 Interlock**

If “Enabled”, this feature will override the function (Manual On/Off, Countdown Timer, Timeclock), selected above and turn the aux off when: filter pump is off, first 3 minutes of filter pump operation (allows the pump to prime and get water flowing), when the pool/spa suction return valves are in any position other than “pool only”, or for the first 3 minutes after solar turns on (allows air in the solar panels to be purged). Interlock is not available for solar, low speed filter pump relay, dimmer, group, super chlorinate or pH dispense functions.

**Filter Pump**

For 2-speed pumps: When a 2-speed pump is configured, one of the AUX relays must also be configured to control the low speed motor winding on the pump. Refer to the appropriate sections in the Installation manual for specific information regarding the control logic for 2-speed and variable speed pump operation.

For the Hayward variable speed pump: The Filter relay is used to supply input power to the pump. The relay will be on when the filter pump output is on. When the filter pump output is off, the relay will be off. On, off and speed is controlled by commands sent to the pump.

**Lowest Speed**

This is the lowest speed that the variable speed pump is allowed to run at. It is used as the lower limit in the Low Speed Settings Menu. Set lowest speed from 10% (default) to 50%.

**Highest Speed**

This is the highest speed that the variable speed pump is allowed to run at. It is used as the upper limit in the High Speed Settings Menu. Also, this is the speed that the pump will run at during the first 3 minutes of operation anytime the pump has been off for more than 30 seconds. Set highest speed from 20% to 100% (default).

**Flow Monitor**

This feature will help protect the filter pump from damage due to flow. When used with a Hayward flow switch, the Pro Logic monitors the state of water flow when the filter pump is run. If no flow is detected for more than 15 minutes, the Pro Logic will shut down the pool pump and the “Check System” LED will indicate an error. The error will be cleared the next time the pump is turned on.

**Freeze Protection**

Freeze protection is used to protect the pool and plumbed equipment against freeze damage. If freeze protection is enabled and the AIR temperature sensor falls below the freeze threshold (see below), the Pro Logic will turn off the aux relay to circulate the water. If “Pool and Spa” is selected in the Pool/Spa sub-menu (see page 18), the valves will also alternate between the pool and spa every 30 minutes and the filter pump will turn off while the valves are turning. The chlorinator will not operate if freeze protection is the only reason the pump is running.

**Freeze Protection Speed**

This menu only appears if freeze protection is enabled and the pump is configured for 2-speed or variable speed pump operation. If the pump turns on due to freeze protection only, the pump will run at this speed.

- 2-Speed pumps: Select high (default) or low speed operation.
- Variable Speed pumps: Select the desired speed (from Filter Lowest to Filter Highest speed).

**Freeze Protection Temperature**

Select the temperature to be used for freeze protection. Temperature is adjustable from 33ºF-42ºF (1ºC-6ºC). 38ºF (3ºC) is default. This threshold will be used for all outputs that have freeze protection enabled.

**External Input Interlock**

When enabled, the filter pump will be forced off when the external input is active. Note that freeze protection will have precedence over this feature.
WARNING: Do not use the Pro Logic to control an automatic pool cover. Swimmers and "Variable Speed" is selected if "Freeze Protect" is enabled and "2-speed Filter" is selected if "Variable Speed" is selected.

Spa Filter Config.

- Push to access Spa Filter options
- Move to previous/next configuration menu item

Spa Filter Pump

For 2-speed pumps: When a 2-speed pump is configured, one of the AUX relays must also be configured to control the low speed motor winding on the pump. Refer to the appropriate sections in the Installation manual for specific information regarding the control logic for 2-speed and variable speed pump operation.

For the Hayward variable speed pump: The Spa Filter (Aux1) relay is used to supply input power to the pump. The relay will be on when the filter pump output is on. When the filter pump output is off, the relay will be off. On, Off and speed is controlled by commands sent to the pump.

Lowest Speed
This is the lowest speed that the variable speed pump is allowed to run at. It is used as the lower limit in the Spa Low Speed Settings Menu. Set lowest speed from 10% (default) to 50%.

Highest Speed
This is the highest speed that the variable speed pump is allowed to run at. It is used as the upper limit in the Spa High Speed Settings Menu. Also, this is the speed that the pump will run during the first 3 minutes of operation anytime the pump has been off for more than 30 seconds. Set highest speed from 20% to 100% (default).

Freeze Protection
Freeze protection is used to protect the spa and plumbing equipment against freeze damage. If freeze protection is enabled and the AIR temperature sensor falls below the freeze threshold, the Pro Logic will turn on the spa filter pump to circulate the water.

Freeze Protection Speed
This menu only appears if freeze protection is enabled and the pump is configured for 2-speed or variable speed pump operation. If the pump turns on due to freeze protection only, the pump will run at this speed.

2-Speed pumps: Select high (default) or low speed operation.

Variable Speed pumps: Select the desired speed (from Filter Lowest to Filter Highest speed).

External Input
When enabled, the filter pump will be forced off when the external input is active. Note that freeze protection will have precedence over this feature.

Spa Filter Pump

For 2-speed pumps: When a 2-speed pump is configured, one of the AUX relays must also be configured to control the low speed motor winding on the pump. Refer to the appropriate sections in the Installation manual for specific information regarding the control logic for 2-speed and variable speed pump operation.

For the Hayward variable speed pump: The Spa Filter (Aux1) relay is used to supply input power to the pump. The relay will be on when the filter pump output is on. When the filter pump output is off, the relay will be off. On, Off and speed is controlled by commands sent to the pump.

Lowest Speed
This is the lowest speed that the variable speed pump is allowed to run at. It is used as the lower limit in the Spa Low Speed Settings Menu. Set lowest speed from 10% (default) to 50%.

Highest Speed
This is the highest speed that the variable speed pump is allowed to run at. It is used as the upper limit in the Spa High Speed Settings Menu. Also, this is the speed that the pump will run during the first 3 minutes of operation anytime the pump has been off for more than 30 seconds. Set highest speed from 20% to 100% (default).

Freeze Protection
Freeze protection is used to protect the spa and plumbing equipment against freeze damage. If freeze protection is enabled and the AIR temperature sensor falls below the freeze threshold, the Pro Logic will turn on the spa filter pump to circulate the water.

Freeze Protection Speed
This menu only appears if freeze protection is enabled and the pump is configured for 2-speed or variable speed pump operation. If the pump turns on due to freeze protection only, the pump will run at this speed.

2-Speed pumps: Select high (default) or low speed operation.

Variable Speed pumps: Select the desired speed (from Filter Lowest to Filter Highest speed).

External Input
When enabled, the filter pump will be forced off when the external input is active. Note that freeze protection will have precedence over this feature.

WARNING: Do not use the Pro Logic to control an automatic pool cover. Swimmers may become entrapped underneath the cover.

NOTE: If “Pool and Spa-Dual” is selected, Aux1 is dedicated to use as the Spa filter. Its Name is set to Spa Filter, the Function is set to Timeclock and Interlock is set to Disabled. These can’t be changed.

Aux1 Name
The Pro Logic allows you to assign any one of a number of names (e.g. “Cleaner Pump, Waterfall, Gazebo Light, etc.) to each of the Aux outputs control function. This will make the Pro Logic much easier to control and manage.
be disabled. If no pool lights are used, the lights relay can be used to control other pool devices that may require these options. The function of each option is shown below.

Manual On/Off—the lights relay will alternate between turning on and off when the LIGHTS button is pressed. There is no automatic control logic.

Countdown Timer—the lights relay will turn on when the LIGHTS button is pressed. The lights relay will turn off automatically after a programmed time (see Timers Menu). The LIGHTS button can also be used to turn the output off.

Low Speed of a 2-speed Filter Pump—the Pro Logic will turn on the lights relay whenever the slow speed operation of the filter pump is required. It is very important that the “2-speed” filter pump option be selected under the “Filter Config.” menu for proper operation.

Timeclock—the lights relay will turn on and turn off at the times set for the lights timeclock in the Settings Menu (see Settings Menu). The LIGHTS button can also be used to turn the output on and off.

Solar—the lights relay can operate a solar booster pump which will turn on when the filter pump is running and solar heat is available and the water is less than the desired temperature setting. Note that “Solar” must be enabled in the “Solar Config.” menu for proper operation to occur.

Lights Relay

This feature allows the user to select either “Standard” (default), “Dimmer” or “VSP” type relay for the Lights output. The optional AQL-DIM dimmer kit must be installed if “Dimmer” is desired.

When “Dimmer” is selected, the Lights output is manually turned on, the “+” and “-” buttons adjust the level from 20% to 100% (default). The level is saved for the next time the lights are turned from off to on.

If “VSP” is selected, the Lights relay is used to supply power to a Hayward Variable Speed Pump (VSP). The relay will be on when the LIGHTS button is pressed. On, off and speed are controlled by commands sent to the VSP. Note: Up to 6 Lights/Aux outputs can be programmed as VSP relays.

Lights Interlock

If enabled, this feature will override the function (Manual On/Off, Countdown Timer, Timeclock) selected above and turn the lights relay off when: filter pump is off, first 3 minutes of filter pump operation (allows the pump to prime and get water flowing), when the pool/spa suction return valves are in any position other than “pool only”, or for the first 3 minutes after solar turns on (allows air in the solar panels to be purged). Interlock is not available for solar, low speed filter pump, dimmer, group, super chlorinate, or pH dispense functions.

Lights Group

The Lights Group function allows the user to perform multiple tasks with a single push of the “Lights” button. When setting up a Group function, refer to page 15 for specific programming information. There are two Group menus; the first menu determines how the group command will be initiated (Manual On/Off, Countdown Timer, Timeclock) and the second menu selects the desired functions and their respective control parameters.

When activating Group functions, be aware that the most recent Group function that is initiated will override any previous Group function.
For a Pool/Spa Setup selection of “Pool Only”, “Spa Only” or “Pool and Spa-Sid”, Heater1 and/or Heater2 will keep the filter pump running. For “Pool and Spa-Dual”, Heater1 will keep the spa filter pump running and Heater2 will keep the pool filter running.

**Allow Low Speed**
This menu only appears if the filter is configured for 2-speed operation. During default operation, high speed mode is used whenever the heater is on. If Allow Low Speed is enabled, low speed will be allowed even if the heater is on.

**Minimum Speed**
This menu only appears if the filter is configured for variable speed operation. This is the minimum speed the pump will run at when the heater is on. The selection is from Filter Lowest to Filter Highest speed.

**Heater2 is Heat pump**
This menu appears in the Heater2 configuration menu if Heater2 is enabled. If set to “Yes”, Heater2 will only be allowed to be on if the Air Temperature is > 50°F. Also, two new menus, the Heater2 Priority and Pool Heater2 Priority, will appear in the Settings Menu. Refer to the Settings Menu for more information on these new menus.

**Solar**
The Solar configuration menu will **NOT** appear if “Pool and Spa - Dual” has been selected in the Pool/Spa setup menu. If the solar control logic is “Enabled”, several additional steps must be taken to ensure proper operation of the solar heating system. If the solar is operated by a valve, then a valve (Valve1 or Valve1 output) must be set for solar logic (page 29). If the solar is operated by a pump, then one of the AUX relays must be set up for solar logic (page 27). Also, the “solar” temperature sensor must be installed. This sensor is typically mounted near the collector array and is used to sense whether sufficient solar heat is available.

If solar is “Enabled”, the valve or solar pump relay will turn on when the water temperature is less than the desired temperature setting and the solar sensor is hotter than the water by at least 8°F. The desired temperature setting is in the “Settings Menu”. If applicable, the homeowner will be prompted to enter separate pool and spa desired temperature settings. Depending on the position of the pool/spa suction valve, the proper temperature setting will be used.

**Solar Extend**
If “Enabled”, the filter extend logic keeps the filter pump running beyond the normal turn-off time if solar heat is still available. When solar heat is no longer available, both the solar valve/pump and filter pump will turn off simultaneously. Solar extend will **NOT** cause the filter pump to turn on, it will only delay the turn off time when solar is operating.

**Solar Priority**
If both “Solar Control” and “Heater Control” are enabled, the Solar Priority feature will keep the conventional heater of the heater that has the highest priority. This provides the most cost effective way of heating the pool. When solar heat is not available, the conventional heater will operate normally.

**Allow Low Speed**
This menu only appears if the pool filter is configured for 2-speed operation. During default operation, high speed mode is used whenever the solar heater is on. If Allow Low Speed is enabled, low speed pump operation will be allowed during solar heating except for the first 3 minutes after solar heat turns on.
For a Pool/Spa Setup selection of “Pool Only”, “Spa Only” or “Pool and Spa-Sid”, Heater1 and/or Heater2 will keep the filter pump running. For “Pool and Spa-Dual”, Heater1 will keep the spa filter running and Heater2 will keep the pool filter running.

Allow Low Speed
This menu only appears if the filter is configured for 2-speed operation. During default operation, high speed mode is used whenever the heater is on. If Allow Low Speed is enabled, low speed will be allowed even if the heater is on.

Minimum Speed
This menu only appears if the filter is configured for variable speed operation. This is the minimum speed the pump will run at when the heater is on. The selection is from Filter Lowest to Filter Highest speed.

Heater2 is Heatpump
This menu appears in the Heater2 configuration menu if Heater2 is enabled. If set to “Yes”, Heater2 will only be allowed to be on if the Air Temperature is > 50°F. Also, two new menus, the Heater2 Priority and Pool Heater2 Priority, will appear in the Settings Menu. Refer to the Settings Menu for more information on these new menus.

Solar
The Solar configuration menu will NOT appear if “Pool and Spa - Dual” has been selected in the Pool/Spa setup menu. If the solar control logic is “Enabled”, several additional steps must be taken to ensure proper operation of the solar heating system. If the solar is operated by a valve, then a valve (Valve1 or Valve2) output must be setup for solar logic (page 29). If the solar is operated by a pump, then one of the AUX relays must be set up for solar logic (page 27). Also, the “solar” temperature sensor must be installed. This sensor is typically mounted near the collector array and is used to sense whether sufficient solar heat is available.

If solar is “Enabled”, the valve or solar pump relay will turn on when the water temperature is less than the desired temperature setting AND the solar sensor is hotter than the water by at least 8°F. The desired temperature setting is in the “Settings Menu”. If applicable, the homeowner will be prompted to enter separate pool and spa desired temperature settings. Depending on the position of the pool/spa suction valve, the proper temperature setting will be used.

Solar Extend
If “Enabled”, the filter extend logic keeps the filter pump running beyond the normal turn-off time if solar heat is still available. When solar heat is no longer available, both the solar valve/pump and filter pump will turn off simultaneously. Solar extend will NOT cause the filter pump to turn on, it will only delay the turn off time when solar is operating.

Solar Priority
If both “Solar Control” and “Heater Control” are enabled, the Solar Priority feature will keep the conventional heater off whenever solar heat is available. This provides the most cost effective way of heating the pool. When solar heat is not available, the conventional heater will operate normally.

Allow Low Speed
This menu only appears if the pool filter is configured for 2-speed operation. During default operation, high speed mode is used whenever the solar heater is on. If Allow Low Speed is enabled, low speed pump operation will be allowed during solar heating except for the first 3 minutes after solar heat turns on.

NOTE: If an AGCL-COLOR-MODHV ColorLogic Network Module is detected at startup, only the Lights Name menu will appear under Lights Configuration. Refer to the AQL-COLOR-MODHV manual for more information.
be disabled. If no pool lights are used, the lights relay can be used to control other pool devices that may require these options. The function of each option is shown below.

Manual On/Off—the lights relay will alternate between turning on and off when the LIGHTS button is pressed. There is no automatic control logic.

Countdown Timer—the lights relay will turn on when the LIGHTS button is pressed. The lights relay will turn off automatically after a programmed time (see Timers Menu). The LIGHTS button can also be used to turn the output off.

Low Speed of a 2-speed Filter Pump—the Pro Logic will turn on the lights relay whenever the low speed operation of the filter pump is required. It is very important that the “2-speed” filter pump option be selected under the “Filter Config.” menu for proper operation.

Timeclock—the lights relay will turn on and turn off at the times set for the lights timeclock in the Settings Menu (see Settings Menu). The LIGHTS button can also be used to turn the output on and off.

Solar—the lights relay can operate a solar booster pump which will turn on when the filter pump is running and solar heat is available and the water is less than the desired temperature setting. Note that “Solar” must be enabled in the “Solar Config.” menu for proper operation to occur.

Low Speed of a 2-Speed Spa Filter Pump—the Pro Logic will turn on the lights relay whenever the low speed operation of the Dual Equipment Spa filter pump is required. “Pool and Spa-Dual” (located in Pool/Spa Setup menu) and “2-Speed” (located in Spa Filter Config. menu) must be selected for proper operation.

Group—the lights relay operates when the Group function is initiated and shuts off when the Group function is terminated. See Lights Group section for operation information for the Group function.

Super Chlorinate—The Super Chlorinate function can be assigned to any Aux, Lights or Valve button. This allows the user to simply hit a button to start a Super Chlorinate cycle, rather than using the Settings Menu. Note that only one button can be assigned to this function.

pH Dispense—When Chemistry Sensing is enabled and pH Reduction Control is NOT disabled, the Pro Logic will turn on the Lights relay when there is a need to energize the pH dispensing device. The pH Dispense function can be assigned to any Aux or the Lights output. Once programmed for pH Dispense, the Lights button will have no function. Requires the use of the AQL-CHEM sensing kit.

Lights Relay

This feature allows the user to select either “Standard” (default), “Dimmer” or “VSP” type relay for the Lights output. The optional AQL-DIM dimmer kit must be installed if “Dimmer” is desired.

When “Dimmer” is selected, and the Lights output is manually turned on, the “+” and “-” buttons adjust the level from 20% to 100% (default). The level is saved for the next time the lights are turned on/off.

If “VSP” is selected, the Lights relay is used to supply power to a Hayward Variable Speed Pump (VSP). The relay will be on when the Lights output is on and off when the output is off. On, off and speed are controlled by commands sent to the VSP. Note: Up to 6 Lights/Aux outputs can be configured as VSP relays.

Lights Interlock

If enabled, this feature will override the function (Manual On/Off, Countdown Timer, Timeclock) selected above and turn the lights relay off when: filter pump is off, first 3 minutes of filter pump operation (allows the pump to prime and get water flowing), when the pool/spa suction return valves are in any position other than “pool only”, or for the first 3 minutes after solar turns on (allows act in the solar panels to be purged). Interlock is not available for solar, low speed filter pump, dimmer, group, super chlorinate, or pH dispense functions.

Lights Group

The Lights Group function allows the user to perform multiple tasks with a single push of the “Lights” button. When setting up a Group function, refer to page 15 for specific programming information. There are two Group menus; the first menu determines how the group command will be initiated (Manual On/Off, Countdown Timer, or Timeclock) and the second menu selects the desired functions and their respective control parameters.

When activating Group functions, be aware that the most recent Group function that is initiated will override any previous Group function.

NOTE: Heater1 and Heater2 configuration are identical. If Heater2 is enabled then Valve4 will automatically be disabled due to the fact that they use the same output relay and only 1 function can be assigned to that relay.
WARNING: Do not use the Pro Logic to control an automatic pool cover. Swimmers may become entrapped underneath the cover.

NOTE: If “Pool & Spa-Dual” is selected, Aux 1 is dedicated to use as the spa filter. Its Name is set to Spa Filter, the Function may become entrapped underneath the cover.
Dispense function can be assigned to any Aux or the Lights output. Once programmed for pH Pro Logic will turn on the Aux relay when there is a need to energize the pH dispensing device. The pH function is terminated. See Aux1 Group section for operation information for the Group function.

**Group**

- Speed operation of the Dual Equipment Spa filter pump is required. “Pool and Spa-Dual” (located in chlorinate or pH dispense functions.

**Aux1 Interlock**

- Note that “Solar” must be enabled in the “Solar Config.” menu for proper operation to occur. When Chemistry Sensing is enabled and pH Reduction Control is NOT disabled, the Pro Logic will operate the aux relay whenever the low speed operation of the filter pump is required. It is very important that the “2-speed” filter pump option be selected under the “Filter Config.” menu for proper operation.

**Timeclock**

- The Pro Logic will turn on the aux relay whenever the low speed operation of the filter pump is required. (located in Pool and Spa-Dual) (located in Spa Filter Config. menu) must be selected for proper operation.

**Group**

- The aux relay operates when the Group function is initiated and shuts off when the Group function is terminated. See Aux1 Group section for operation information for the Group function.

**Super Chlorinate**

- The Super Chlorinate function can be assigned to any Aux, Lights or Valve button. This allows the user to simply hit a button to start a Super Chlorinate cycle, rather than using the Settings Menu. Note that only one button can be assigned to this function.

**pH Dispense**

- When Chemistry Sensing is enabled and pH Reduction Control is NOT disabled, the Pro Logic will turn on the Aux relay when there is a need to energize the pH dispensing device. The pH Dispense function can be assigned to any Aux or the Lights output. Once programmed for pH Dispense, the Aux button will have no function. Requires the use of the AQL-CHEM sensing kit.

**Aux1 Relay**

- This feature allows the user to select either “Standard” (default), “Dimmer”, “ColorLogic” or “VSP” type relay for the Aux1 output. The optional AQL-DIM dimmer kit must be installed if “Dimmer” is desired. The AQL-COLOR-MODHV ColorLogic Network Module must be installed if “ColorLogic” is desired.

When “Dimmer” is selected, and the Aux1 output is manually turned on, the “+” and “-” buttons adjust the level from 20% to 100% (default). The level is saved for the next time the aux1 output is turned on or off.

If “ColorLogic” is selected (Network Module must be detected at startup for this option to appear), additional menus will prompt you for configuration information. Refer to the AQL-COLOR-MODHV manual for details on how to configure an Aux output for use with Generation 3 or later ColorLogic lights.

If “VSP” is selected, the Aux relay is used to supply power to a Hayward Variable Speed Pump (VSP). The relay will be on when the Aux output is on and off when the output is off. On, off and speed are controlled by commands sent to the VSP. Note: Up to 6 Lights/Aux outputs can be configured as VSP relays.

**Aux1 Interlock**

- When “Enabled”, this feature will override the function (Manual On/Off, Countdown Timer, Timeclock), selected above and turn the aux1 off when: filter pump is off, first 3 minutes of filter pump operation (allows the pump to prime and get water flowing), when the pool/spa suction return valves are in any position other than “pool only”, or for the first 3 minutes after solar turns on (allows air in the solar panels to be purged). Interlock is not available for solar, low speed filter pump, dimmer, group, super chlorinate or pH dispense functions.
Filter Operation

If “Spa Spillover” is selected, the Pro Logic will automatically switch the pool/spa suction and return valves to “spillover” at the start of the programmed pool filtering time period or when the super-chlorinate function is turned on. The valves will remain in this position for the remainder of the super-chlorinate period. This option is usually preferable because both the pool and spa water will be filtered and sanitized.

If “Pool Only” is selected, then the Pro Logic will switch the pool/spa valves to the “pool only” position at the start of the programmed pool filtering time period or when the super-chlorinate function is turned on. This may be desirable on some systems with in-floor cleaners because it allows the cleaner to operate all the time the pool is being filtered and/or the super chlorinate is running.

V1=Aux1, V2=Aux2

This menu appears only if the Pool/Spa Setup is “Pool Only” or “Spa Only”. When enabled, Valve 1 (return) will follow the Aux 1 output and Valve 2 (suction) will follow the Aux 2 output. When disabled (default), the return and suction pool/spa valves function normally.

Filter Off Valve Change

This menu appears only if Pool/Spa setup is set to “Pool and Spa”. When enabled (default), the filter pump will shut off for 35 seconds whenever the Pool/Spa valves are turning. The pump will NOT shut off when the heater has Cooldown enabled and is either on or in the Heater Cooldown mode.

Aux1 Group

The Aux1 Group function allows the user to perform multiple tasks with a single push of the “Aux1” button. When setting up a Group function, refer to page 15 for specific programming information. There are two Group menus; the first menu determines how the group command will be initiated (Manual On/Off, Countdown Timer, or Timeclock) and the second menu selects the desired functions and their respective control parameters.

When activating Group functions, be aware that the most recent Group function that is initiated will override any previous Group function.

Aux1 External Input Interlock

When Aux1 External Input Interlock is enabled, the Aux1 output will be forced off when the external input is active. This will have precedence over freeze protection. Aux1 External Input Interlock is not available for solar, low speed filter pump, dimmer, group, super chlorinate, or pH dispense functions.

Aux1 Freeze Protection

This function protects the pool, plumbing, and equipment against freeze damage. If Freeze Protection is enabled and the AIR temperature sensor falls below the selected freeze protection temperature, the Pro Logic will turn on the aux relay to circulate the water. IMPORTANT: this only enables operation of the AUX output during freeze--see the “Filter Pump Config.” menu to enable freeze protection for the main circulation system. Freeze Protection is not available for low speed filter pump, dimmer, group, super chlorinate or pH dispense functions.

Aux1 Pump Speed

This is the speed of the filter pump when the Aux1 output is on. The default selection is “Settings Menu”. This is the speed of the pump that has been selected in the Settings Menu for normal filter operation. If an alternate speed is desired when the Aux1 output is on, push “+” or “-” and select from “Lowest” to “Highest” in 5% increments.

Filter Config.

† Push to access pump options
→ Move to previous/next configuration menu

Filter Name

Pool Filter

† Rotates between all available names
→ Move to next menu item

Filter Pump

1 Speed

† Rotates between 1-speed (default), 2-speed and variable speed options
→ Move to next menu item

Lowest Speed

10%h

If “Variable Speed” is selected

† Adjust the lowest speed desired for variable speed operation
→ Move to next menu item

Highest Speed

100%

If “Variable Speed” is selected

† Adjust the highest speed desired for variable speed operation
→ Move to next menu item

Flow Monitor

Disabled

† Toggle between Enabled and Disabled (default) Flow Monitor
→ Move to next menu item

Freeze Protect

Enabled

If “Freeze Protect” is enabled and “2-speed Filter” is selected

† Toggle between high speed (default) and low speed
→ Move to next menu item

Freeze Protect Speed

- Filter Lowest to Filter Highest speed

† Select the desired Freeze Protection speed from Filter Lowest to Filter Highest speed
→ Move to next menu item

Freeze Protect Speed

50%

If “Freeze Protect” is enabled and “Variable Speed” is selected

† Select the desired Freeze Protection speed from Filter Lowest to Filter Highest speed
→ Move to next menu item

Freeze Temp

SB°F

† Adjust the desired freeze protection temperature (33°F - 42°F)
→ Move to next menu item

External Input

Disabled

† Toggle between Enabled and Disabled (default)
→ Move to previous/next configuration menu

Filter Operation

The Pro Logic allows you to assign any one of a number of names (e.g. “Filter Pump, Pool Filter, Spa Filter, etc.) to the filter relay. This will make the Pro Logic more user friendly to the homeowner when they want to control the filter equipment. A sheet of small name labels is included with the Pro Logic main unit and each remote display/keypad so that appropriate pushbuttons can be labeled the same as the name that you have assigned.

For more information on the Group function, refer to page 15. If neither Super Chlorinate, ColorLogic or a Group can be assigned to a Virtual Aux button, the following will be displayed:
Valve3 Name
The Pro Logic allows you to assign any one of a number of names (e.g. "Cleaner Valve, Waterfall Valve, Solar Valve, etc.) to each of the valve output control function. This will make the Pro Logic much more user friendly to the homeowner when they want to turn various valves on or off or program the timeclocks. A sheet of small name labels is included with the Pro Logic main unit and each remote display/keypad so that the “Valve3” (and “Valve4”) pushbutton can be labeled the same as the name that you have assigned.

Valve3 Function
Manual On/Off (default) – the valve3 relay will alternate between turning on and off when the Valve3 button is pressed. There is no automatic control logic. The VALVE3 button can also be used to turn the valve output on or off.

Countdown Timer – the valve3 relay will turn on when the VALVE3 button is pressed and then will turn off automatically after a programmed time (see Timers Menu in the Operations Manual). The VALVE3 button can also be used to turn the output on or off.

Timeclock – the valve turns on/off at the times set for the valve3 timeclock in the Timers Menu (see Operations Manual). The valve3 button can also be used to turn the valve output on or off.

Solar – the valve operates when the filter pump is running and solar heat is available and the water is less than the desired temperature setting. Solar heating must be enabled in the “Solar Config. menu for proper operation to occur.

In-Floor Cleaner – the valve switches the water returning to the pool between the in-floor cleaner and the normal return jets which facilitate efficient surface skimming. The valve will operate the in-floor cleaner for the first half of each clock hour and then switch to the jets/skimming for the last half of the hour.

Group – the valve operates when the Group function is initiated and shuts off when the Group

Valve3 Interlock
Disabled

Valve3 Function
for all functions except solar, group or super chlorinate

Valve3 Interlock
Disabled

Valve3 Function
for group function only

Valve3 Group
Options available depend on the function that is selected

Valve3 Filter
Options available depend on the function that is selected

Valve3 Freeze
Disabled

Settings Menu
for all functions except group and super chlorinate

Valve3 Pump Spd
Select Settings Menu (default) or desired pump speed (Filter Lowest to Highest)

Valve3 Config.
Push to access Valve3 options

Valve Name
Waterfall

Valve3 Function
Solar

Valve3 Options

Valve3 Config.
+ to view/change

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options

Valve3 Options
**Super Chlorinate**

The Pro Logic can be programmed to Super Chlorinate the pool or spa while running a group command. When the Group starts, the Super Chlorinate cycle will begin. Super Chlorinate will continue until the preset time expires (see Timers Menu/Super Chlorinate Hours) or until the Group turns off. Changing the Super Chlorinate state using the Settings Menu, the Aqua Pod Super Chlorinate button, or a Super Chlorinate assigned Aux/Lights/Valve button will temporarily cancel the Group’s control of Super Chlorinate until the next time the Group is activated.

**Variable Speed in Groups**

The Pro Logic can be programmed to use alternate pump speeds while running group commands. This allows the pump(s) to be set to a higher or lower speed than normal, while the group is activated. When the group stops, the speed will return to its normal setting.

Changing the speed setting while the group is running will make the group release the alternate speed setting and revert back to the normal speed setting. Any changes that are made at that point will affect the normal speed setting. The next time the group is activated, the speed setting will return to the group speed setting that was originally programmed in the Configuration Menu. To change the speed setting while the group is running, go to the Settings menu and press the +/- button while “Group Control” is displayed. The speed setting will change to the normal speed setting.

**PS-8 and PS-16 Virtual Models**

Pro Logic Virtual models are similar to standard PS models, but offer additional auxiliary outputs with limited functionality. The PL-PS-8-V is similar to the PL-PS-4 with 4 additional Aux outputs. The PL-PS-16-V is similar to the PL-PS-8 with 8 additional outputs. The additional aux outputs on virtual models can only be assigned to the Super Chlorinate function (if the Chlorinator is enabled) or to a Group function. Refer to the following programming information when assigning functions to the virtual auxiliary outputs.

**Configuration Menus**

Each item needs to be programmed and may contain additional sub-menu items. Refer to the following pages for information on programming.

- **Chlor. Config.**
  - Push to access Chlorinator option
  - Move to next configuration menu

- **Chlorinator Enabled**
  - Toggle between Chlorinator Enabled and Disabled (default)
  - Move to next menu item

- **Display**
  - Salt
  - Type
  - T-CELL-15
  - Move to next menu item

Chlorinator

Requires the use of a chlorinator cell and P-KIT sold separately. If the chlorinator is enabled, then the Pro Logic will automatically chlorinate both the pool and spa according to the desired output setting (see Settings Menu in the Operation manual). If disabled (default), all displays relating to the chlorinator will be suppressed.

When the chlorinator is enabled, the Pro Logic will automatically detect and control any Aqua Rite(s) that is installed in the system.

**Display**

Allows for the display of salt (default) or mineral values.

**Cell Type Selection**

The Cell Type Menu appears after “Display Salt/Minerals” in the Chlorinator Configuration Menu. The options are T-CELL-15 (default), T-CELL-9, T-CELL-5 or T-CELL-3. Make the proper selection based on the chlorinator cell that is used in your system. Refer to the information below.

**Valve3 Interlock**

If “Enabled”, this feature will override the function (timer, manual on/off, countdown timer or in-floor cleaner) selected above and turn the valve off whenever the filter pump is off or the pool/spa suction/return valves are set to “spa only” or “spillover” operation. Interlock is not available with solar, group or super chlorinate.

**Valve3 Group**

The valve3 menu allows the user to perform multiple tasks with a single push of the VALVE3 button. When setting up a Group function, refer to page 15 for specific programming information. There are two Group menus; the first menu determines how the group command will be initiated (Manual On/Off, Countdown Timer, or Timedelay) and the second menu selects the desired functions and their respective control parameters.

When activating Group functions, be aware that the most recent Group function that is initiated will override any previous Group function.

**Valve3 External Input Interlock**

When Valve3 External Input Interlock is enabled, the Valve3 output will be forced off when the external input is active. This will have precedence over freeze protection. Valve3 External Input Interlock is not available for solar, group, and super chlorinate.

**Valve3 Freeze Protection**

This function protects the pool and plumbed equipment against freeze damage. If Freeze Protection is enabled and the AIR temperature sensors fall below the selected freeze protection temperature, the Pro Logic will turn on the valve to allow circulation of the water. IMPORTANT: this only enables operation of the valve3 output during freeze—see the “Filter Pump Config.” menu to enable freeze protection for the main circulation system. Freeze protection is not available for group or super chlorinate functions.

**Valve3 Pump Speed**

This is the speed of the pump when the Valve3 output is on. The default selection is “Settings Menu”. This is the speed of the pump that has been selected in the Settings Menu for normal filter operation. If an alternate speed is desired when the Valve3 output is on, push “+” or “-” and select from “Filter Lowest” to “Filter Highest” in 5% increments.

**Valve4 and all available Aux outputs**

- Move to previous/next menu item
- Move to previous/next configuration menu

**Valve3 Interlock**

Requires the use of a chlorinator cell and P-KIT sold separately. If the chlorinator is enabled, then the Pro Logic will automatically chlorinate both the pool and spa according to the desired output setting (see Settings Menu in the Operation manual). If disabled (default), all displays relating to the chlorinator will be suppressed.

When the chlorinator is enabled, the Pro Logic will automatically detect and control any Aqua Rite(s) that is installed in the system.

**Display**

Allows for the display of salt (default) or mineral values.

**Cell Type Selection**

The Cell Type Menu appears after “Display Salt/Minerals” in the Chlorinator Configuration Menu. The options are T-CELL-15 (default), T-CELL-9, T-CELL-5 or T-CELL-3. Make the proper selection based on the chlorinator cell that is used in your system. Refer to the information below.

**Valve3 Interlock**

If “Enabled”, this feature will override the function (timer, manual on/off, countdown timer or in-floor cleaner) selected above and turn the valve off whenever the filter pump is off or the pool/spa suction/return valves are set to “spa only” or “spillover” operation. Interlock is not available with solar, group or super chlorinate.

**Valve3 Group**

The valve3 menu allows the user to perform multiple tasks with a single push of the VALVE3 button. When setting up a Group function, refer to page 15 for specific programming information. There are two Group menus; the first menu determines how the group command will be initiated (Manual On/Off, Countdown Timer, or Timedelay) and the second menu selects the desired functions and their respective control parameters.

When activating Group functions, be aware that the most recent Group function that is initiated will override any previous Group function.

**Valve3 External Input Interlock**

When Valve3 External Input Interlock is enabled, the Valve3 output will be forced off when the external input is active. This will have precedence over freeze protection. Valve3 External Input Interlock is not available for solar, group, and super chlorinate.

**Valve3 Freeze Protection**

This function protects the pool and plumbed equipment against freeze damage. If Freeze Protection is enabled and the AIR temperature sensors fall below the selected freeze protection temperature, the Pro Logic will turn on the valve to allow circulation of the water. IMPORTANT: this only enables operation of the valve3 output during freeze—see the “Filter Pump Config.” menu to enable freeze protection for the main circulation system. Freeze protection is not available for group or super chlorinate functions.

**Valve3 Pump Speed**

This is the speed of the pump when the Valve3 output is on. The default selection is “Settings Menu”. This is the speed of the pump that has been selected in the Settings Menu for normal filter operation. If an alternate speed is desired when the Valve3 output is on, push “+” or “-” and select from “Filter Lowest” to “Filter Highest” in 5% increments.

**Valve4 and all available Aux outputs**

- Move to previous/next menu item
- Move to previous/next configuration menu
if AQL-SS-D is connected

Digital Spa Config.
+ to view/change

Select Digital Spa
A

Digital A, Button 1
Pool/Spa

Digital A, Setpoint
Heater-1

Push to access the Digital Spa Side Remote options

→ Move to previous/next configuration menu

Select Digital Spa
A

Digital A, Button 1
Pool/Spa

Digital A, Setpoint
Heater-1

Select which of the available remote controls (A, B or C) is to be configured.

Digital A, Button 1
This menu allows the user to map each button of the AQL-SS-D to one of the standard Pro Logic functions. The default selections are: Button 1 - Pool/Spa, Button 2 - Filter, Button 3 - Lights, Button 4 - Heater1, Button 5 - Valve3, Button 6 - Valve4, Button 7 - Aux1 and Button 8 - Aux2.

Digital A, Setpoint
If more than one heater is installed, select the spa heater you wish to control. If no heaters are installed, “Heaters Disabled” will be displayed.

Remote Menus
Enabled

This feature will prevent unauthorized access to the Settings, Timers, and Configuration menus from any of the Pro Logic’s remote display/keypads. When disabled, the remote display/keypads will only show the default menu and allow on/off control via the pushbuttons. Note that the function of the Pro Logic’s built-in display/keypad is unchanged by this selection. Once disabled, the only way to enable “Remote Menus” is to use the local display/keypad.

All Timeclocks
7-day

This selection affects ALL of the timeclock logic in the Pro Logic. If “7-day” is selected, each timeclock will have one set of turn-on/turn-off settings that operate every day of the week. If “Weekend/Weekdays” option is selected then the user can enter one set of turn-on/turn-off times for the weekend (fixed as Saturday/Sunday) and another set of turn-on/turn-off times for weekdays (Monday through Friday).

Time Format
12 hour AM/PM

→ Move to previous/next configuration menu

Units
°F and RPM

→ Move to previous/next configuration menu

If any output is configured as a variable speed pump
VSP Speed
%d

→ Move to previous/next configuration menu

This is the unit of measure for displaying the speed of the variable speed pump. Select % of your pump’s maximum speed or revolutions per minute (RPM).

A table of functions and their corresponding control parameters are listed below.

<table>
<thead>
<tr>
<th>Function</th>
<th>Control Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pool/Spa</td>
<td>Unaffected, Pool only, Spa only, or Spillover</td>
</tr>
<tr>
<td>Pool Filter</td>
<td>Unaffected, Off, On, High, Low, On (Lowest to Highest)</td>
</tr>
<tr>
<td>Spa Filter</td>
<td>Unaffected, Off, On, High, Low, On (Lowest to Highest)</td>
</tr>
<tr>
<td>Valve3</td>
<td>Unaffected, Off or On</td>
</tr>
<tr>
<td>Valve4</td>
<td>Unaffected, Off or On</td>
</tr>
<tr>
<td>Spa Htr1 Set</td>
<td>Unaffected, Off, 65°-104°F</td>
</tr>
<tr>
<td>Pool Htr1 Set</td>
<td>Unaffected, Off, 65°-104°F</td>
</tr>
<tr>
<td>Spa Htr2 Set</td>
<td>Unaffected, Off, 65°-104°F</td>
</tr>
<tr>
<td>Pool Htr2 Set</td>
<td>Unaffected, Off, 65°-104°F</td>
</tr>
<tr>
<td>Spa Solar Set</td>
<td>Unaffected, Off, 65°-104°F</td>
</tr>
<tr>
<td>Pool Solar Set</td>
<td>Unaffected, Off, 65°-104°F</td>
</tr>
<tr>
<td>SuperChlr</td>
<td>Unaffected, Off, On</td>
</tr>
</tbody>
</table>

Note that all functions in the table may not be offered. The available functions are dependent on how the Pro Logic is configured. For example, if the Pro Logic is configured for a single heater, “Heater2” will not be available as an option in the Group menu. Also, under some circumstances, functions will be displayed but can’t be changed. Note that the function whose menu you are in, will not be displayed as an option and will automatically turn on when the group is activated. For example, if programming a Group function under the Lights menu, the Lights function will not be offered as an option and the Lights function will automatically turn on with the group.

The available control parameters vary with each function. All functions offer “Unaffected”, which should be selected if you do not wish to control that particular function within the group. All other parameters will depend on the particular function selected.

When activating Group functions, be aware that the most recent Group function that you activate will override any previous Group functions.

**Heater Setpoints in Groups**

The Pro Logic can be programmed to use alternate heater setpoints (conventional and/or solar) while running group commands. This allows the heater to be set to a higher or lower temperature than normal, while the group is activated. When the group stops, the setpoint will revert to its normal setting.

Changing the setpoint while the Group is running will make the Group release the alternate setpoint control and revert back to the normal heater setting. Any changes that are made at that point will affect the normal heater setting. The next time the Group is activated, the temperature will return to the group setpoint that was originally programmed in the Configuration Menu. To change the setpoint while the Group is running, go to the Settings menu and press the +/- button while “Group Control” is displayed. The setpoint will change and be retained as the new normal heater setpoint.
you manually turn on the Aux1 relay until the Pro Logic automatically turns off the relay. You can also manually turn off the relay at an earlier time by pressing the AUX1 button.

NOTE: The configurations for Valve3 and Valve4 are identical. However, if Heater2 was enabled, then the Valve4 configuration will not appear (a single relay is used to implement either the Heater2 function or the Valve4 function—it can not do both).

This menu will appear only if Valve3 is configured for timeclock. The valve will rotate on and off at the designated times.

This menu will appear only if the valve3 is configured for countdown timer. This setting is the time after you manually turn on the valve3 relay until the Pro Logic automatically turns off the relay. You can also manually turn off the valve at an earlier time by pressing the VALVE3 button.

For larger pools or when you have an unusually high bather load, a large amount of rain, a cloudy water condition, or any other condition that requires a large amount of chlorine to be introduced to the pool, may require more hours of Superchlorination. Smaller pools require less hours of Superchlorination.

Group Function

The Pro Logic offers the ability to assign a Group function to a particular button. Instead of a button controlling one particular function, the button can be programmed to initiate a sequence of commands that are programmed in the Configuration Menu. For example, instead of the Lights button turning on and off the pool light only, the button can be programmed to turn on the pool light, turn on the bug light, turn off the pool cleaner, turn on and dim the patio lights, turn on the music, etc. All at the same time. This convenient feature is offered on all Aux buttons, both Valve buttons and the Lights button. The Pro Logic can be programmed to control up to four groups. Refer to this section when programming Group commands.

Before assigning and configuring all the desired functions and their control parameters, the group itself must be configured. The options for controlling groups are Manual On/Off, Countdown Timer, and Timeclock. Refer to this section when programming Group commands.

When setting up a Group function in the Configuration Menu, the first menu allows you to select the control parameter (how the group is activated and de-activated) and the second menu allows you to select which Pro Logic functions are to be controlled in the group.
Quick “How To” Guide

Operate the Spa—Manually
1. Press the “Pool/Spa” button to go to “spa-only” operation (“SPA” LED illuminated). In some cases, this may take more than one press of the button.
2. If the filter pump is not already on, press the “FILTER” button to turn it on.
3. If the spa is below the desired temperature, the heater will turn on automatically when the filter pump is on and the valves are in the spa-only position. If you have not already set the desired temperature for the spa, see “Set Heater Temperature” below.
4. If the spa has a separate jet pump and/or blower, determine if the jet pump/blower is controlled by any Aux or the Lights relay (it should be marked on the label inside the door). Then press the appropriate button to turn on the jets/blower.

Operate the Spa—Automatically
1. Press the “MENU” button repeatedly until “Settings Menu” is displayed.
2. Press the “>” button repeatedly until the “Spa Chlorinator” or “Pool Chlorinator” is displayed.
3. Press the “+” or “-” buttons to adjust the off time. If you are setting the “weekend” timeclock, press “>” to go to the “weekday” settings.

Note: During the programmed spa time, the valves will automatically switch to the “spa-only” position, the filter pump will turn on, and, if the spa is not up to the desired temperature, the heater will start. This operation is the highest priority and will take precedence over other automatically programmed operations. At the end of the spa period, the Pro Logic will return to its normally programmed operation state.

Set the Heater Temperature (or/and timer) permanently off
1. Press the “MENU” button repeatedly until “Settings Menu” is displayed.
2. Press the “>” button repeatedly until the “Spa Heater” or “Pool Heater” is displayed.
3. Press the “+” or “-” buttons repeatedly to adjust the temperature. If you adjust the temperature below 65°F or above 104°F the display will indicate “off” and the heater will not operate regardless of the temperature.

Note: Separate temperatures for the pool and spa must be set. If the valves are in the pool-only or spa spillover positions, the heater will use the pool setting. If the valves are in the spa-only position then the heater will operate according to the spa setting.

Set the Chlorinator Output
1. Press the “MENU” button repeatedly until “Settings Menu” is displayed.
2. Press the “>” button repeatedly until the “Spa Chlorinator” or “Pool Chlorinator” is displayed.
3. Press the “+” or “-” buttons repeatedly to adjust the setting. If you adjust the setting to 0%, the chlorinator will be off all the time.

NOTE: After the ideal “Desired Output %” setting has been found, you may need to raise the setting when the pool water temperature increases significantly, when there is higher than normal bather load or when your chlorinator cell ages. You may need to lower the setting when the pool water temperature decreases significantly or there are long periods of inactivity.

For PS-4, Aux1 and Aux2 configurations are identical. For PS-8 models, Aux1 - Aux14 configurations are identical. For PS-16 models, Aux1 - Aux14 configurations are identical.
or

For one speed pumps, this is the second filter timeclock.

For two speed pumps, this timeclock will set the normal time period for filter pump low speed operation (the word “Filter T2” in the display will be replaced with “Filter L”) If the filter pump is off for more than 30 seconds, the pump will first turn on at high speed for 3 minutes to prime and establish water flow. Afterwards, it will drop down to low speed for the remainder of the programmed low speed time period. While this time clock will override the high speed timeclock (see above), there are several reasons why the pump will automatically switch to high speed operation during this programmed time period. These include manual operation, spa operation, or heating operation.

For a variable speed pump, this setting will be the period of time when the pump will run at the speed selected for speed2 in the settings menu. If there is an overlap in any of the timeclocks, then the lower number timeclock/speed has priority.

NOTE: The third and forth filter timeclocks function similarly to the first and second (respectively). Program these timeclocks in the same manner.

NOTE: The third and forth filter timeclocks function similarly to the first and second (respectively). Program these timeclocks in the same manner.

Set Day and Time

Lights-CountDn

Move between start and stop times & to previous/next menu item

Adjust time setting (Manual On/Off, 0:05, 0:10, 0:015...)

Move to previous/next menu item

Adjust time setting

Move between start and stop times & to previous/next menu item

Adjust time setting

Move between start and stop times & to previous/next menu item

Adjust time setting

Move between start and stop times & to previous/next menu item

NOTE: The third and forth filter timeclocks function similarly to the first and second (respectively). Program these timeclocks in the same manner.

Program a Timeclock

Start/Stop Superchlorination

Program a Countdown Timer

Enter/Exit Service (or Service—Timed) Mode

For one speed pumps, this is the second filter timeclock.

For two speed pumps, this timeclock will set the normal time period for filter pump low speed operation (the word “Filter T2” in the display will be replaced with “Filter L”) If the filter pump is off for more than 30 seconds, the pump will first turn on at high speed for 3 minutes to prime and establish water flow. Afterwards, it will drop down to low speed for the remainder of the programmed low speed time period. While this time clock will override the high speed timeclock (see above), there are several reasons why the pump will automatically switch to high speed operation during this programmed time period. These include manual operation, spa operation, or heating operation.

For a variable speed pump, this setting will be the period of time when the pump will run at the speed selected for speed2 in the settings menu. If there is an overlap in any of the timeclocks, then the lower number timeclock/speed has priority.

NOTE: The third and forth filter timeclocks function similarly to the first and second (respectively). Program these timeclocks in the same manner.

Set Day and Time

Lights-CountDn

Move between start and stop times & to previous/next menu item

Adjust time setting (Manual On/Off, 0:05, 0:10, 0:015...)

Move to previous/next menu item

Adjust time setting

Move between start and stop times & to previous/next menu item

Adjust time setting

Move between start and stop times & to previous/next menu item

Adjust time setting

Move between start and stop times & to previous/next menu item

NOTE: The third and forth filter timeclocks function similarly to the first and second (respectively). Program these timeclocks in the same manner.

Program a Timeclock

Start/Stop Superchlorination

Program a Countdown Timer

Enter/Exit Service (or Service—Timed) Mode

For one speed pumps, this is the second filter timeclock.

For two speed pumps, this timeclock will set the normal time period for filter pump low speed operation (the word “Filter T2” in the display will be replaced with “Filter L”) If the filter pump is off for more than 30 seconds, the pump will first turn on at high speed for 3 minutes to prime and establish water flow. Afterwards, it will drop down to low speed for the remainder of the programmed low speed time period. While this time clock will override the high speed timeclock (see above), there are several reasons why the pump will automatically switch to high speed operation during this programmed time period. These include manual operation, spa operation, or heating operation.

For a variable speed pump, this setting will be the period of time when the pump will run at the speed selected for speed2 in the settings menu. If there is an overlap in any of the timeclocks, then the lower number timeclock/speed has priority.

NOTE: The third and forth filter timeclocks function similarly to the first and second (respectively). Program these timeclocks in the same manner.

Set Day and Time

Lights-CountDn

Move between start and stop times & to previous/next menu item

Adjust time setting (Manual On/Off, 0:05, 0:10, 0:015...)

Move to previous/next menu item

Adjust time setting

Move between start and stop times & to previous/next menu item

Adjust time setting

Move between start and stop times & to previous/next menu item

Adjust time setting

Move between start and stop times & to previous/next menu item

NOTE: The third and forth filter timeclocks function similarly to the first and second (respectively). Program these timeclocks in the same manner.

Program a Timeclock

Start/Stop Superchlorination

Program a Countdown Timer

Enter/Exit Service (or Service—Timed) Mode
Saturation index

The saturation index (Si) relates to the calcium and alkalinity in the water and is an indicator of the pool water "balance". Your water is properly balanced if the Si is 0 ±0.2. If the Si is above +0.2, scaling and staining may occur. If Si equals -.2 or less corrosion or irritation may occur.

\[ Si = pH + Ti + Ci + Ai - 12.1 \]

### General Water Chemistry

Salt is required only if you are using the chlorinator features on the Pro Logic Control. If you are NOT using the chlorinator, it is recommended that you follow all of the other chemistry recommendations besides salt. Refer to the description of the Pro Logic configuration menu for information on enabling/disabling the chlorinator (see page 17).

### Water Chemistry

The table below summarizes the levels that are recommended by the Association of Pool and Spa Professionals (APSP). The only special requirements for the Pro Logic are the salt level and stabilizer.

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Ideal Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salt</td>
<td>2700 to 3400 ppm</td>
</tr>
<tr>
<td>Free Chlorine</td>
<td>1.0 to 3.0 ppm</td>
</tr>
<tr>
<td>pH</td>
<td>7.2 to 7.8</td>
</tr>
<tr>
<td>Cyanuric Acid</td>
<td>60 to 80 ppm (80 ppm best)</td>
</tr>
<tr>
<td>Total Alkalinity</td>
<td>80 to 120 ppm</td>
</tr>
<tr>
<td>Calcium Hardness</td>
<td>200 to 400 ppm</td>
</tr>
<tr>
<td>Metals</td>
<td>0 ppm</td>
</tr>
<tr>
<td>Saturation Index</td>
<td>-2 to 2 (0 best)</td>
</tr>
</tbody>
</table>

### Saturation Index

Insert values of pH, Ti, Ci and Ai into the above equation. If Si equals 2 or more, scaling and staining may start. If Si equals -2 or less corrosion or irritation may occur.

For one speed pumps, this is the first filter timeclock and will determine the normal hours of filtration for the pool. For pool/spa combination systems with spillover enabled and filter operation set to "spillover", the valves will automatically switch to spillover mode at the start of the filtration period. For pool/spa combination systems with spillover enabled and filter operation set to "pool only", the valves will switch to the pool-only position.

For variable speed pumps, this will be the period of time when the pump runs at high speed (the word "Filter T1" in the display will be replaced with "Filter HI"). There is a separate timeclock for the low speed operation which will be programmed next. If the high speed and low speed periods overlap, the valves will switch to the pool-only position.

For two speed pumps, this setting will be the period of time when the pump runs at high speed (the word "Filter T1" in the display will be replaced with "Filter H1"). There is a separate timeclock for the low speed operation which will be programmed next. If the high speed and low speed periods overlap, the valves will switch to the pool-only position.

For one speed pumps, this is the first filter timeclock and will determine the normal hours of filtration for the pool. For pool/spa combination systems with spillover enabled and filter operation set to "spillover", the valves will automatically switch to spillover mode at the start of the filtration period. For pool/spa combination systems with spillover enabled and filter operation set to "pool only", the valves will switch to the pool-only position.

For variable speed pumps, this will be the period of time when the pump runs at high speed (the word "Filter T1" in the display will be replaced with "Filter HI"). There is a separate timeclock for the low speed operation which will be programmed next. If the high speed and low speed periods overlap, the valves will switch to the pool-only position.

For variable speed pumps, this will be the period of time when the pump runs at high speed (the word "Filter T1" in the display will be replaced with "Filter HI"). There is a separate timeclock for the low speed operation which will be programmed next. If the high speed and low speed periods overlap, the valves will switch to the pool-only position.

For variable speed pumps, this will be the period of time when the pump runs at high speed (the word "Filter T1" in the display will be replaced with "Filter HI"). There is a separate timeclock for the low speed operation which will be programmed next. If the high speed and low speed periods overlap, the valves will switch to the pool-only position.

For variable speed pumps, this will be the period of time when the pump runs at high speed (the word "Filter T1" in the display will be replaced with "Filter HI"). There is a separate timeclock for the low speed operation which will be programmed next. If the high speed and low speed periods overlap, the valves will switch to the pool-only position.

For variable speed pumps, this will be the period of time when the pump runs at high speed (the word "Filter T1" in the display will be replaced with "Filter HI"). There is a separate timeclock for the low speed operation which will be programmed next. If the high speed and low speed periods overlap, the valves will switch to the pool-only position.

For variable speed pumps, this will be the period of time when the pump runs at high speed (the word "Filter T1" in the display will be replaced with "Filter HI"). There is a separate timeclock for the low speed operation which will be programmed next. If the high speed and low speed periods overlap, the valves will switch to the pool-only position.

For variable speed pumps, this will be the period of time when the pump runs at high speed (the word "Filter T1" in the display will be replaced with "Filter HI"). There is a separate timeclock for the low speed operation which will be programmed next. If the high speed and low speed periods overlap, the valves will switch to the pool-only position.

For variable speed pumps, this will be the period of time when the pump runs at high speed (the word "Filter T1" in the display will be replaced with "Filter HI"). There is a separate timeclock for the low speed operation which will be programmed next. If the high speed and low speed periods overlap, the valves will switch to the pool-only position.

For variable speed pumps, this will be the period of time when the pump runs at high speed (the word "Filter T1" in the display will be replaced with "Filter HI"). There is a separate timeclock for the low speed operation which will be programmed next. If the high speed and low speed periods overlap, the valves will switch to the pool-only position.
Use this function to set the current day of the week and time. These values are used for all the automatic timeclock functions of the Pro Logic and are also displayed as part of the default menu.

The Pro Logic is designed to keep the clock running during power outages lasting less than 7 days. If power has been off for longer than 7 days, then the time may have to be reset.

Press and hold wireless button

Teach Wireless 

Teach Wireless NOT Successful

Teach Wireless Base NOT Found

This menu will only appear if a wireless base station is connected to the Pro Logic. Perform this procedure each time a wireless remote control is added to the Pro Logic system. During this procedure the wireless remote “learns” and remembers the ID code for the wireless base station connected to this particular Pro Logic unit and will reject messages with any other ID codes. If “Base NOT found” is displayed, then the Pro Logic can not communicate with the transmitter/receiver base station attached to the main unit. If “NOT Successful” is displayed, then the base station did not receive a signal from the remote control. This may be due to the distance between the Base Receiver and the remote device being too great or may be due to interference caused by other RF equipment operating in the neighborhood. Try using the “Change Channel” command and then repeat the “Teach Wireless” command.

The pool’s chemistry must be balanced BEFORE activating the Pro Logic’s optional chlorinator function. NOTE: If the pool does not have new water, add metal remover and non-copper based algaeicide to the pool, per manufacturer’s instructions. This ensures a quick, troublefree transfer to the Pro Logic system.

### Salt Level (When using optional chlorinator function)

Use the chart on the following page to determine how much salt in pounds or (Kgs) should be added to reach the recommended levels. Use the equations below (measurements are in feet/gallons and meters/liters) if pool size is unknown.

<table>
<thead>
<tr>
<th>Salt Level (When using optional chlorinator function)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use the chart on the following page to determine how much salt in pounds or (Kgs) should be added to reach the recommended levels. Use the equations below (measurements are in feet/gallons and meters/liters) if pool size is unknown.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gallons (pool size in feet)</th>
<th>Liters (pool size in meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rectangular</strong></td>
<td></td>
</tr>
<tr>
<td>Length x Width x Average Depth x 7.5</td>
<td>Length x Width x Average Depth x 1000</td>
</tr>
<tr>
<td><strong>Round</strong></td>
<td></td>
</tr>
<tr>
<td>Diameter x Diameter x Average Depth x 5.9</td>
<td>Diameter x Diameter x Average Depth x 785</td>
</tr>
<tr>
<td><strong>Oval</strong></td>
<td></td>
</tr>
<tr>
<td>Length x Width x Average Depth x 6.7</td>
<td>Length x Width x Average Depth x 893</td>
</tr>
</tbody>
</table>

The operating salt level is between 2700-3400 PPM (parts per million) with 3200 PPM being optimal. Before adding any salt, test the salt level. This is especially important for retrofit installation to older pools where chlorine added to the pool over time has ended up as salt. If the level is low, determine the number of gallons in the pool and add salt according to the chart below. A low salt level will reduce the efficiency of the sanitization and result in low chlorine production. A high salt level can cause the Pro Logic to stop chlorinating. The salt in your pool/spa is constantly recycled and the loss of salt throughout the swimming season should be minimal. This loss is due primarily to the addition of water because of splashing, backwashing, or draining (because of rain). Salt is not lost due to evaporation.

### Type of Salt to Use

It is important to use only sodium chloride (NaCl) salt that is greater than 99.0% pure. This can be found at most pool stores in 40-80 lb. bags labeled “for use in swimming pools”. Alternatively, use common food quality or water softener salt that is at least 99.0% pure. It is also acceptable to use water conditioning salt pellets, however, it will take longer for them to dissolve. Do not use rock salt, or salt with more than 1% of yellow prussiate of soda, salt with anti-caking additives, or iodized salt.

### How to Add Salt

For new plaster pools, wait 10-14 days before adding salt to allow the plaster to cure. Turn the circulating pump on and add salt directly into the pool. Brush the salt around to speed up the dissolving process—do not allow salt to pile up on the bottom of the pool. Run the filter pump for 24 hours with the suction coming from the main drain (use pool vacuum if there is no main drain) to allow the salt to evenly disperse throughout the pool. The salt display may take 24 hours to respond to the change in salt concentration. Always check stabilizer (cyanuric acid), when checking salt. These levels will most likely decline together. Use the chart on page 38 to determine how much stabilizer must be added to raise the level to 80 ppm.
When you have an unusually high bather load, a large amount of rain, a cloudy water condition, or any other condition that requires a large amount of chlorine to be introduced to the pool, activate the Pro Logic Super Chlorinate function. The Pro Logic will turn on the filter pump, set the pool/spa valves to the correct position, and set the chlorine generator to maximum output. The superchlorinate function will continue for the programmed number of hours (see Times/Super Chlorinate Hours) overriding the normal filter pump timelock settings. At the end of the super chlorinate period, the pool will return to normal operation.

If you manually turn off the filter pump (using the “FILTER” button on any display/keypad), the super chlorinate function terminates. When you turn the filter pump back on, super chlorinate will resume for the balance of the programmed number of hours.

<table>
<thead>
<tr>
<th>Spa Chlorinator</th>
<th>Adjust the desired chlorinator output for spa (0, 1.23...9, 10, 15, 20...95, 100%)</th>
<th>Move to previous/next menu item</th>
</tr>
</thead>
</table>

This setting will appear only if the chlorinator function is enabled and system has been setup for “spa only” or “pool and spa-std”. If an AQL-CHEM is being used, super chlorinate will not be available if chemical sensing is enabled and ORP is in Auto Sensing (see AQL-CHEM manual). It will determine the chlorinator output when the system is operating in spa-only mode. The actual amount of chlorine introduced into the spa is determined by: this setting, the amount of time the pool operates in spa-only mode, the water temperature, and the amount of salt in the water. If the filter pump is running due to the freeze protection feature, then the chlorinator will not operate during this time.

<table>
<thead>
<tr>
<th>Pool Chlorinator</th>
<th>Adjust the desired chlorinator output for pool (0, 1.23...9, 10, 15, 20...95, 100%)</th>
<th>Move to previous/next menu item</th>
</tr>
</thead>
</table>

This setting will appear only if the chlorinator function is enabled and system has been setup for “pool only” or “pool and spa”. If an AQL-CHEM is being used, super chlorinate will not be available if chemical sensing is enabled and ORP is in Auto Sensing (see AQL-CHEM manual). It will determine the chlorinator output when the system is operating in pool-only or spa spillover modes. The actual amount of chlorine introduced into the pool is determined by: this setting, the amount of time the filter pump is running, the water temperature, and the amount of salt in the water. If the filter pump is running due to the freeze protection feature, then the chlorinator will not operate during this time.

<table>
<thead>
<tr>
<th>Pool High Speed</th>
<th>Adjust the desired high speed for variable speed operation</th>
<th>Move to previous/next menu item</th>
</tr>
</thead>
</table>

This setting will appear if “spa only” is not selected and variable speed filter pump is enabled. This setting determines the speed of the pump during high speed pool or spillover operation. This value can be set from 20% to “Highest Speed” in 5% increments. “Highest Speed” is default.

For PS models using dual equipment, this is the pool filter high speed.

<table>
<thead>
<tr>
<th>Pool Low Speed</th>
<th>Adjust the desired low speed for variable speed operation</th>
<th>Move to previous/next menu item</th>
</tr>
</thead>
</table>

This setting will appear if “spa only” is not selected and variable speed filter pump is enabled. This setting determines the speed of the pump during low speed pool or spillover operation. This value can be set from “Lowest Speed” to 50% in 5% increments. 50% is default.

For PS models using dual equipment, this is the pool filter low speed.

---

*If Aux is configured as "ColorLogic"*  
[Push to access ColorLogic settings](#)  
[Move to previous/next menu item](#)

This menu will appear if an aux has been configured as “ColorLogic”. Use this menu to select custom colors and lightshows for your networked ColorLogic lights. Refer to the AQL-COLOR-MODHV manual for specific information on these settings.
VSP Speed Settings

- Adjust the desired priority interval (Never, 1hr, 2hrs, 3hrs ...22hrs, 23hrs, Always)
- Move to previous/next menu item

The priority setting will only appear if the system has been setup for a variable speed pump. If an interval is selected, only VSP will run when there is a call for heat. After the interval expires, both heaters will be allowed to operate until the desired temperature has been reached.

Pool Solar

- Adjust the desired pool temperature (Off, 65°F, 66°F, ...103°F, 104°F, Off)
- Move to previous/next menu item

The pool solar setting will only appear if the system has been setup for "pool only" or "pool and spa" and if priority has been enabled for Pool Heater2. Choose "Never", "Always" or a selectable time interval. If an interval is selected, only Pool Heater2 will run when there is a call for heat. After the interval expires, both heaters will be allowed to operate until the desired temperature has been reached.

Spa Solar

- Adjust the desired spa temperature (Off, 65°F, 66°F, ...103°F, 104°F, Off)
- Move to previous/next menu item

The spa solar setting will only appear if the system has been setup for "pool only" or "pool and spa" and if priority has been enabled for Spa Heater2. Choose "Never", "Always" or a selectable time interval. If an interval is selected, only Spa Heater2 will run when there is a call for heat. After the interval expires, both heaters will be allowed to operate until the desired temperature has been reached.

Pool Heater2

- Adjust the desired priority interval (Never, 1hr, 2hrs, 3hrs ...22hrs, 23hrs, Always)
- Move to previous/next menu item

The pool heater priority setting will only appear if the system has been setup for "pool only" or "pool and spa" and if priority has been enabled for Pool Heater2. Choose "Never", "Always" or a selectable time interval. If an interval is selected, only Pool Heater2 will run when there is a call for heat. After the interval expires, both heaters will be allowed to operate until the desired temperature has been reached.

Spa Heater2

- Adjust the desired priority interval (Never, 1hr, 2hrs, 3hrs ...22hrs, 23hrs, Always)
- Move to previous/next menu item

The spa heater priority setting will only appear if the system has been setup for "spa only" or "pool and spa" and if priority has been enabled for Spa Heater2. Choose "Never", "Always" or a selectable time interval. If an interval is selected, only Spa Heater2 will run when there is a call for heat. After the interval expires, both heaters will be allowed to operate until the desired temperature has been reached.

Pool and Spa-Std

- Adjust the desired priority interval (Never, 1hr, 2hrs, 3hrs ...22hrs, 23hrs, Always)
- Move to previous/next menu item

The pool and spa setting will only appear if the system has been setup for "pool only" or "pool and spa" and if priority has been enabled for Pool Heater2 and Spa Heater2. Choose "Never", "Always" or a selectable time interval. If an interval is selected, only Pool Heater2 and Spa Heater2 will run when there is a call for heat. After the interval expires, both heaters will be allowed to operate until the desired temperature has been reached.

**Chemical Sensing**

- Adjust the desired priority interval (Never, 1hr, 2hrs, 3hrs ...22hrs, 23hrs, Always)
- Move to previous/next menu item

The chemical sensing setting will only appear if the system has been setup for "pool only" or "pool and spa" and if priority has been enabled for Pool Heater2 and Spa Heater2. Choose "Never", "Always" or a selectable time interval. If an interval is selected, only Pool Heater2 and Spa Heater2 will run when there is a call for heat. After the interval expires, both heaters will be allowed to operate until the desired temperature has been reached.

**Pounds and Pounds of Stabilizer (Chlorine/ACID) Needed For 80 ppm**

<table>
<thead>
<tr>
<th>Level (ppm)</th>
<th>10 ppm</th>
<th>30 ppm</th>
<th>60 ppm</th>
<th>100 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gallons</td>
<td>Pounds</td>
<td>Pounds</td>
<td>Pounds</td>
<td>Pounds</td>
</tr>
<tr>
<td>10,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>20,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>30,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>40,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>50,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>60,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>70,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>80,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>90,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>100,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>110,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>120,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>130,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>140,000</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

This display only appears if the chlorinator function is enabled. If an AQL-CHEM is being used, super chlorinate will not be available if chemical sensing is enabled and ORP is in Auto Sensing (see AQL-CHEM manual).
**System Maintenance**

To maintain maximum performance, it is recommended that you open and visually inspect the cell every 3 months or after cleaning your filter. The Pro Logic will remind you to do this by displaying the message “Inspect/Clean Cell” after approximately 500 hours of operation.

The Pro Logic electrolytic cell has a self-cleaning feature incorporated into the electronic control’s logic. In most cases this self-cleaning action will keep the cell working at optimum efficiency. In areas where water is hard (high mineral content) or in pools where the water chemistry has been allowed to get “out of balance”, the cell may require periodic cleaning.

**Servicing and Cleaning the Turbo Cell**

Turn off power to the Pro Logic before removing the electrolytic cell. Once removed, look inside the cell and inspect for scale formation (light colored crusty or flaky deposits) on the plates and on any debris which has passed through the filter and caught on the plates. If no deposits are visible, reinstall. If deposits are seen, use a high pressure garden hose and try to flush the scale off. If this is not successful, use a plastic or wood tool (do not use metal as this will scratch the coating off the plates) and scrape deposits off of plates. Note that a buildup on the cell indicates that there is an unusually high calcium level in the pool (old pool water is usually the cause). If this is not corrected, you may have to periodically clean the cell. The simplest way to avoid this is to bring the pool chemistry to the recommended levels as specified.

**Mild Acid Washing**: Use only in severe cases where flushing and scraping will not remove the majority of deposits. To acid wash, turn off power to Pro Logic. Remove cell from piping. In a clean plastic container, mix a 2:1 solution of water to muriatic acid (one gallon of water to two quarts of muriatic acid). ALWAYS ADD ACID TO WATER - NEVER ADD WATER TO ACID. Be sure to wear rubber gloves and appropriate eye protection. The level of the solution in the container should just reach the top of the cell so that the wire harness compartment is NOT submerged. It may be helpful to coil the wiring before immersing the cell. The cell should soak for a few minutes and then rinse with a high pressure garden hose. If any deposits are still visible, repeat soaking and rinsing. Replace cell and inspect again periodically.

**Winterizing**

The Pro Logic electrolytic cell and flow detection switch will be damaged by freezing water just as your pool plumbing would. In areas of the country which experience severe or extended periods of freezing temperatures, be sure to drain all water from the pump, filter, and supply and return lines before any freezing conditions occur. The electronic control is capable of withstanding any winter weather and should not be removed.

If you are in an area that only experiences occasional freezing conditions, your Pro Logic system may be set up to circulate the pool water whenever the air sensor drops to the selected freeze temperature threshold. Make sure the air sensor is recording the correct temperature and is NOT located in the direct sunlight to ensure proper freeze protection operation.

**Spring Start-up**

When first starting the pool in the spring time, it is highly recommended that you temporarily set the pool and spa chlorinator settings (Settings Menu/Pool Sanitizer & Spa Sanitizer) to 0% (off) and then manually shock the pool with any chlorine based shock product and balance the pool water chemistry per the levels indicated in the Chlorinator Operation section. Make sure to check the salt and stabilizer levels and bring them up to the recommended levels. Your local Authorized Hayward Dealer or pool store can recommend the best chemical treatment for your pool. After the water is clear and balanced, then go back and adjust the pool and spa chlorinator settings to the appropriate levels. Test the pool chlorine level weekly and adjust the chlorinator settings up or down accordingly.

It is usually a good idea to also inspect the cell and clean if necessary at the start of the season. See instructions above.

The Pro Logic’s six main menus have many items in each that allow you to customize the operation of your pool/spa equipment. The chart on the previous page shows the Pro Logic’s six menus as well as each menu’s specific settings.

The Default Menu is a series of informative displays (temperatures, salt levels, chlorinator settings, etc.) with nothing to set. The Pro Logic will automatically switch to the default menu when no keys have been pressed for 2 minutes and will then scroll through each display.

The Settings Menu and the Timers Menu are the menus you will be using most often to adjust the operation of your pool. The Configuration Menu is used when the system is installed and defines what equipment is connected to each output and the operational logic that will control the equipment. This menu is normally “locked” and should only be used by a pool professional. Details regarding the Configuration menu can be found on page 17.

The “Diagnostic Menu” is primarily intended for the service technician and contains information and details about the system operation that are helpful in troubleshooting, if problems occur.

The “Maintenance Menu” will be displayed only if the optional AQL-CHEM is used and the Sensing System is enabled in the Chemistry Config. Wizard. This menu is used to perform functions relating to the AQL-CHEM ORP and pH sensing kit.

**Settings Menu**

The Settings Menu allows you to set all system operating parameters except the timeclock and countdown timers which are part of the Timers Menu.

**Important**: All of the displays shown below use the default generic names for each function or output. The Pro Logic allows more descriptive names to be assigned to each piece of equipment (refer to the section regarding the Configuration Menu for more information).

- **Pool Heater 1**
  - **Adjust the desired pool temperature**
  - **Move to previous/next menu item**

- **Spa Heater 1**
  - **Adjust the desired spa temperature**
  - **Move to previous/next menu item**

- **Pool Filter**
  - **Adjust the desired spa temperature**
  - **Move to previous/next menu item**

- **Spa Filter**
  - **Adjust the desired pool temperature**
  - **Move to previous/next menu item**

The spa heater setting will only appear if the system has been setup for “spa only” or “pool and spa” operation and the “Heater1” and/or “Heater2” control is enabled. The heater will turn on whenever the pool/spa valves are in the “spa only” position and the filter pump is running and the spa water temperature is less than the desired temperature setting. If you have both solar heat and a conventional heater and the solar priority option is selected (Configuration Menu), then the conventional heater will only operate when solar heat is NOT available.

For Pool and Spa dual equipment with separate heaters (“Pool and Spa -Dual” and “Htr1=Spa, Htr2=Pool” selected), Spa Heater 1 is tied to the Spa Filter (AUX1).

- **Pool Filter**
  - **Adjust the desired pool temperature**
  - **Move to previous/next menu item**

- **Spa Filter**
  - **Adjust the desired spa temperature**
  - **Move to previous/next menu item**

The pool heater setting will only appear if the system has been setup for “pool only” or “pool and spa” operation and the “Heater1” and/or “Heater2” control is enabled. The heater will turn on whenever the pool/spa valves are in the “pool only” or “spa spillover” position and the filter pump is running and the pool water temperature is less than the desired temperature setting. If you have both solar heat and a conventional heater and the solar priority option is selected (Configuration Menu), then the conventional heater will only operate when solar heat is NOT available.

For Pool and Spa dual equipment with separate heaters (“Pool and Spa - Dual” and “Htr1=Spa, Htr2=Pool” selected), Pool Heater 2 is tied to the Pool Filter (FILTER).
Troubleshooting and Diagnostic Information

The Pro Logic provides 2 different tools to aid in troubleshooting any problems that may occur in your pool and/or spa system. The Service mode will allow you to disable automatic operation and manually control most of the equipment (the heater and general purpose Valve3 output are the exceptions). The Diagnostic Menu will provide some detailed information regarding system operation.

While both of the features are primarily intended for the use of the professional service technician, their function is fully explained below. If you believe your system is not operating properly or have questions regarding the operation, call the Hayward Technical Service Dept. from Monday through Friday, 8AM to 8PM EST at 908-355-7995.

Service Mode

The main unit keypad has a SERVICE button that is used primarily during servicing of the pool equipment.

If you want to completely disable the automatic operation and operate the system manually, you can put the system into Service or Service-Timed mode by pressing the “Service” button. Pressing the “SERVICE” button once will switch the system into service mode which means that all automatic functions are disabled, the optional remote display/keypads are disabled (except for manual turn off for emergencies). The outputs can be manually controlled by pressing the buttons on the local display/keypad. The red “SERVICE” LED will be illuminated and the Pro Logic will remain in this mode of operation until manually taken out of service mode.

Pressing the “SERVICE” button again will cause the Pro Logic to switch to service-timed mode which is very similar to service mode, except that the Pro Logic will automatically return to normal operation after 3 hours. During service timed operation, the “SERVICE” LED will flash and the time remaining will be displayed on the remote display(s).

Pressing the “SERVICE” button again, will return the Pro Logic to normal (automatic) operation.

Check System Indicator

The “CHECK SYSTEM” LED will alert you when the Pro Logic detects any of the following conditions that are abnormal and require attention for optimal operation of your pool. Press “<” or “>” to view all of the existing “Check System” conditions.

- Inspect Cell -- For optimum operation, you will need to inspect the Pro Logic chlorinator cell approximately every 3 months and clean the cell if necessary. The Pro Logic will automatically remind you when it is time and display “Inspect Cell, + to reset” as part of the rotating Default Menu. Clean the cell and then press the “+” button during the “Inspect Cell” display to reset the timer.

- Low Salt/Minerals or Very Low Salt/Minerals -- When the salt is too low the Pro Logic will generate less chlorine and the life of the cell is degraded. Check the cell and clean if necessary before adding salt.

- High Salt/Amps/Minerals -- The Pro Logic will stop generating chlorine under certain high salt conditions in order to protect the internal electronics from damage. The only way to lower the salt level is to partially drain the pool and add fresh water.

- Water/Pool Sensor -- If the water or pool (if Dual Equipment) sensor is either an open or short circuit.

- Air sensor -- If the freeze protection feature is enabled (Configuration Menu/ Filter Config.) and the air sensor is either an open or short circuit.

- Solar sensor -- If Solar is enabled and the solar sensor is either an open or short circuit.

- Spa sensor for Dual Equipment-- If dual equipment spa sensor is either an open or short circuit.

- Chlorinator Cell sensor -- If the chlorinator function enabled (Configuration Menu/Chlorinator) and the cell sensor is either an open or short circuit.
**Automatic System Operation**

The Pro Logic controls most of your pool equipment automatically in order to minimize the time spent working on your pool. Most of the pool equipment can be programmed to operate on a timeclock basis. In addition, the desired pool and spa temperatures and pool and spa chlorinator settings can be programmed. This section will guide you on how to program the automatic operation for each function.

The programming of automatic functions can be performed at either the main display/keypad located at the pool equipment pad or the in-home remote display/keypad.

**Using the programming buttons**

There are 5 buttons on each keypad that are used for programming (refer to diagram).

There are 4 steps to programming any function:

1. Press the “MENU” button to get to the desired menu. Multiple pushes of the button will rotate through all 6 menus and return to the starting point.
2. Press either key to scroll through the various items in the selected menu. Multiple pushes of the button will rotate through all menu items and return to the starting point. Only menu items that are applicable to your pool will appear. (Example: if you don’t have a spa, then no spa related menu items will appear).
3. Once a menu item has been selected above, the current setting/selection will appear (flashing) on the display. Use the “+” and/or “-” keys to change this selection. Sometimes “+” and “-” will adjust a value up or down (example: heater temperature setting or timeclock on/off time). In this case, pushing the “+” or “-” button will change the value by one increment and holding the “+” or “-” button in for more than one second will make the values auto scroll. In other cases, the “+” and “-” may toggle between 2 options (example: turning superchlorination ON or OFF).
4. After you have adjusted the item to the desired value, simply move on to the next menu item to “lock in” your new setting. The Pro Logic memory will maintain the setting, even if power is removed for an extended period.

---

- **PS-16 Communication Error** – If an PL-PS-16 and the Expansion Unit is not responding.
- **Low Volts** – If the chlorinator cell voltage is too low.
- **No Cell Power** – If no chlorinator cell power is detected on the printed circuit board.
- **Chk Flow Switch** – If the flow switch input is invalid.
- **Cell Power Error** – If a chlorinator cell power error is detected on the printed circuit board.
- **No Flow-Filter Pump** – If the filter pump is on and the flow switch indicates no flow for 15 minutes or more.
- **Cell Filter VSP Comm Error** – If variable speed is selected for the Pool Filter and the Hayward VSP interface is not responding.
- **Pool Filter VSP Drive Comm Error** – If variable speed is selected for the Pool Filter and the Hayward VSP drive controller is not responding.
- **Spa Filter VSP Comm Error** – If variable speed is selected for the Dual Equipment Spa Filter and the Hayward VSP interface is not responding.
- **Spa Filter VSP Drive Comm Error** – If variable speed is selected for the Dual Equipment Spa Filter and the Hayward VSP drive controller is not responding.
- **Aux1 VSP Comm Error** – If variable speed is selected for the Aux1 relay type and the Hayward VSP interface is not responding.
- **Aux1 VSP Drive Comm Error** – If variable speed is selected for the Aux1 relay type and the Hayward VSP drive controller is not responding.
- **Aux1 VSP Err: x** – If variable speed is selected for the Aux1 relay type and the Hayward VSP is indicating and error. x is the same decimal error displayed by the VSP itself.
- **Main Voltage is too low**
- **Main Voltage is too high**
- **Remote Stop was pressed**
- **Prime Failed**
- **Failed to start**
- **Pump has stalled**
- **SVRS tripped**
- **Drive failure**

For Pool Filter, Spa Filter and Aux using Gen2 EcoStar Variable Speed Pumps only:

- **Main Voltage is too low**
- **Main Voltage is too high**
- **Remote Stop was pressed (Press “+” to restart)**
- **Prime Failed (Press “+” to restart)**
- **Failed to start (Press “+” to restart)**
- **Pump has stalled (Press “+” to restart)**
- **SVRS tripped (Press “+” to restart)**
- **Drive failure (see Pump Display)**

- **CSM Comm Error:** – If Chemistry Sensing is enabled and the Chemistry Sense Module (CSM) is not responding.
- **pH Probe Error:** – If the CSM indicates that there is a problem with the pH probe.
- **pH Low - Check Feeder:** – If a pH level of 6.9 or less is detected, check the feeder for proper operation.
- **pH High - Check Feeder:** – If a pH level of 8.1 or higher is detected, check the chemical supply and the feeder for proper operation.
WARNING: pressing the "SYSTEM OFF" button overrides any programmed freeze protection

Pool/Spa Valves
Pool-only or Spa-only systems: The POOL/SPA/SPILLOVER button has no function.

Standard Pool and Spa systems without spa spillover: In pool-only mode (“POOL” LED illuminated), press the “POOL/SPA/SPILLOVER” button to switch to spa-only operation (“SPA” LED illuminated). Pressing the “POOL/SPA/SPILLOVER” button again will switch back to pool-only. Note that the filter pump will turn off while the pool/spa valves are turning.

Standard Pool and Spa systems with spa spillover: When currently in the pool-only mode (“POOL” LED illuminated), press the “POOL/SPA/SPILLOVER” button to switch to spa-only operation (“SPA” LED illuminated). Press the button again to switch to spa spillover operation (“SPILLOVER” LED illuminated). Pressing the “POOL/SPA/SPILLOVER” button again will switch back to pool-only mode. Note that the filter pump will turn off while the pool/spa valves are turning.

Dual Equipment Pool and Spa systems without spa spillover: The POOL/SPA/SPILLOVER button has no function. The “POOL” LED will always be illuminated.

Dual Equipment Pool and Spa systems with spa spillover: When currently in the separate Pool and Spa loops mode (“POOL” LED illuminated) and the Spa Filter is off, press the POOL/SPA/SPILLOVER button to switch to spa spillover operation (“SPILLOVER” LED illuminated). Press the POOL/SPA/SPILLOVER button again to return to the separate Pool and Spa loops mode of operation. Note that the Pool Filter pump will shut off while the pool/spa return valve is turning. The system will automatically switch out of spillover whenever the spa filter pump is turned on.

NOTE: For Dual Equipment Pool and Spa systems, there is no Spa Only mode.

Heaters
This description applies to Heater1 and to Heater2, if programmed (note that the function of the Valve4 button changes to Heater2 when Heater2 is enabled). Pressing the “HEATER” button causes the Pro Logic to switch the heater control output between a “forced off” state and a normal, automatic thermostatic control operating state.

System Off
Each remote display/keypad has a red “SYSTEM OFF” button on the upper left corner of the keypad. Pressing this button will turn all outputs off and they will remain off, regardless of any programmed control logic, until either the “SYSTEM OFF” button (on any remote display/keypad) is pressed again or the “SERVICE” button is pressed on the display/keypad at the main unit. The red “SYSTEM OFF” LED will illuminate to indicate that all outputs and being forced off.

WARNING: pressing the “SYSTEM OFF” button overrides any programmed freeze protection and may cause damage to your system in freezing conditions.

Service
The main unit keypad has a “SERVICE” key. This button is used primarily during servicing of the pool equipment. If you want to completely disable the automatic operation and operate the system manually, you can put the system into Service or Service-Timed mode by pressing the “SERVICE” button. Pressing the “SERVICE” button once will switch the system into service mode which means that all automatic functions are disabled, and the remote display/keypads are disabled (except for manual turn off for emergencies). The red “SERVICE” LED will be illuminated and the Pro Logic will remain in this mode of operation until manually taken out of service mode.

Pressing the “SERVICE” button again will cause the Pro Logic to switch to service-timed mode which is very similar to service mode, except that the Pro Logic will automatically return to normal operation after 3 hours. During service timed operation, the “SERVICE” LED will flash and the time remaining will be displayed on the remote display keypad(s).

Pressing the “SERVICE” button again, will return the Pro Logic to normal (automatic) operation. See Trouble-shooting/Diagnostic Information for more information about the service modes.

• pH Timeout - Check Feeder – If the unit has been dispensing pH for more than the selected timeout without reaching the desired level. Check the chemical supply and the feeder. If both are OK, the timeout may need to be increased. Press the “+” button to reset the alarm and resume dispensing.
• pH Calibration Error – When using the pH Calibration Wizard and the entered test result was different from the measured pH level by ± 1.0 or more. The pH probe may need to be cleaned or replaced.
• ORP Probe Error – If the CSM indicates that there is a problem with the ORP probe.
• ORP Low - Check Chlor – If an ORP level of 350mV or less is detected. Check the chlorinator for proper operation.
• ORP High - Check Chlor – If an ORP level of 950mV or higher is detected. Check the chlorinator for proper operation.
• ORP High - Chlor Off – If an ORP level of 950mV or higher is detected and the chloride feed mode is ORP Auto Sensing, the chlorinator has been turned off. Check the chlorinator for proper operation.
• ORP Timeout -Chlor Off – If the unit has been chlorinating for more than the selected sanitizer timeout without reaching the desired level, the chlorinator has been turned off. Press the “+” button to reset the alarm and resume chlorination.
• Ambient Sensor- If the Pro Logic internal temperature sensor is either an open or short circuit.

For helpful troubleshooting information on any of these issues, go to the Diagnostic Menu and then scroll through the various items until you see the cause for the “CHECK SYSTEM” LED being illuminated.

Diagnostic Menu
To enter the Diagnostic Menu, press the “Menu” button repeatedly until the display shows “Diagnostic Menu”. At this point, you can use either the “<” or “>” buttons to scroll through the various menu items which are described below:

-23.45V +8.75A
84ºF 3200PPM

Press to switch chlorinator operation to opposite polarity (15 second delay)
Move to previous/next menu item

+/-23.45V is the voltage applied to the chlorinator cell
+/-6.75A is the current (amps) through the cell
84ºF is the water temperature at the cell
3200PPM is the “instant” salt level at this time

This display will be shown only if the chlorinator is enabled. For the chlorinator to be operating, several other things must be happening: the filter pump must be running, the flow switch must be detecting flow, the chlorinator setting must be set greater than 0%, the water temperature at the cell must be between 50ºF and 140ºF, and the salt level must be within the operating range. If any of these conditions are not met, the chlorinator diagnostic display will tell you the reason. It’s possible to have more than one reason, in which case after you rectify what was displayed the first time, a second display will appear.

If the current (amps) display is 0.00A, then the chlorinator is operating normally but is in the off part of its normal operating cycle. Simply press either the “+” or “-” key to start a new cycle.

The Pro Logic periodically reverses the polarity of the voltage applied to the cell in order to automatically clean off any calcium deposits. It is important that you check the chlorinator operation in both polarities. To do this, press either the “+” or “-” buttons and the chlorinator will turn off, wait for 15 seconds and then turn on in the opposite polarity.
If a conventional or solar heater is operating, it is likely that the temperature of the water at the cell is higher than the pool/spa water temperature displayed on the Pro Logic default display.

Press to load the “Instant Salt” into the averaged salt display

Move to previous/next menu item

This display will be shown only if the chlorinator is enabled. This display shows “Instant Salt” or Instant Minerals” (if Chlor. Opt. is set for “Display Minerals”). The “Instant Salt” is calculated based on the voltage, current (amps), and water temperature at the cell. This is different than the “average salt” value which is displayed as part of the default menu. There are a number of reasons why instant and average salt readings may differ. Some of these include salt having just been added to the pool and not yet thoroughly mixed, calcium buildup on the cell, and the cell aging.

If AQL-CHEM is used

pH 7.5 (On)

No function

Move to previous/next menu item

This display will be shown only if sensing is enabled. This display shows both pH and ORP levels/status when chemistry sensing is enabled via the Chemistry Configuration Wizard (requires the use of AQL-CHEM Sensing Kit). The Pro Logic will refer to these levels to determine how much chlorine to generate (ORP) and, if using an AQL-CHEM2 dispense kit, how much CO2 or acid to dispense (pH). Refer to the AQL-CHEM manual for specific information about these levels as well as the recommended ranges.

Flow Switch

Flow

No function

Move to previous/next menu item

This display will be shown only if the chlorinator is enabled. The current status of the flow switch is displayed. There is a short delay when transitioning from flow to no-flow and a longer delay on the transition from no-flow to flow. The delay time is displayed.

Cell Temp Sensor 77°F

No function

Move to previous/next menu item

Water Sensor

Open circuit

No function

Move to previous/next menu item

Spa Sensor

Open circuit

No function

Move to previous/next menu item

Air Sensor 94°F

No function

Move to previous/next menu item

Solar Sensor

Short circuit

No function

Move to previous/next menu item

NOTE: If Pool and Spa-Dual is selected, the water sensor will display as “Pool Sensor”.

Displays actual speed (in % or RPM) and power consumption (in Watts) as reported by the selected VSP.

Two Speed Filter Pump: If the pump is currently off, simply press the “FILTER” button to turn on high speed operation of the filter pump. The “FILTER” LED will illuminate continuously. Pressing the “FILTER” button again will switch to low speed operation and the “FILTER” LED will flash. Note that if the pump has been off for more than 30 seconds, it will run at high speed for 3 minutes regardless of selection. This high speed operation helps allow the pump to prime and establish normal water flow.

Variable Speed Filter Pump: If the pump is currently off, press the “FILTER” button to turn the pump on to the last speed (1, 2, 3, or 4) that was used. A temporary display is generated indicating the current speed selection (Filter On:Spd 1). Pushing the “+” or “-” button changes the speed selection. If the pump has been off for more than 30 seconds, it will run at high speed for 3 minutes regardless of selection. This high speed operation helps allow the pump to prime and establish normal water flow.

Freeze Protection: This feature protects the pool, plumbing, and equipment against freeze damage. If Freeze Protection is enabled and the AIR temperature sensor falls below the preset freeze protection temperature (see Filter Configuration), the Pro Logic will turn on the filter pump to circulate the water.

Spa Filter Pump (when using Dual Equipment)

Single Speed Filter Pump: If the pump is currently off, press the “AUX1” button to turn on the pump. Pressing the “AUX1” button again will turn off the pump. However, if there is a heater in the system, and it is operating, and the “Heater Cooldown” feature is enabled (Configuration Menu) then: when you press the “AUX1” button to turn off the filter, only the heater will turn off, the filter LED will flash and the display will indicate “Heater Cooldown”. At this point the filter pump will automatically turn off after 5 minutes of heater cooldown operation. If you want to override the heater cooldown, simply press the “AUX1” button again to turn off the filter pump.

Two Speed Spa Filter Pump: If the pump is currently off, simply press the “AUX1” button to turn on high speed operation of the filter pump. The “AUX1” LED will illuminate continuously. Pressing the “AUX1” button again will switch to low speed operation and the “AUX1” LED will flash. Note that if the pump has been off for more than 30 seconds, it will run at high speed for 3 minutes regardless of selection. This high speed operation helps allow the pump to prime and establish normal water flow.

Variable Speed Filter Pump: If the pump is currently off, press the “AUX1” button to turn the pump on to the last speed (1 or 2) that was used. A temporary display is generated indicating the current speed selection (Filter On:Spd 1). Pushing the “+” or “-” button changes the speed selection. If the pump has been off for more than 30 seconds, it will run at the highest speed for 3 minutes regardless of selection. This high speed operation helps allow the pump to prime and establish normal water flow.

Freeze Protection: This feature protects the pool, plumbing, and equipment against freeze damage. If Freeze Protection is enabled and the AIR temperature sensor falls below the preset freeze protection temperature, the Pro Logic will turn on the spa filter pump to circulate the water.

Lights and Aux Outputs

Standard Relay: Manual operation of all relays (LIGHTS, AUX1 and AUX2 for a PS-4 model, LIGHTS, AUX1 - AUX6 for a PS-8 model, or LIGHTS, AUX1 - AUX14 for a PS-16 model) is identical. Assuming that the relay is currently off, simply press the appropriate button to turn on the relay. If the relay does not turn on, it probably is due to the “interlock” feature (which was set up in the Configuration Menu) being activated that requires the filter pump to be running and the valves to be in the pool-only position. This protects pumps and other equipment from possible damage. If the controlled output is on, pressing the appropriate button again will turn off the relay. Manual turn off is disabled if the “Freeze Protection” feature is enabled and the air temperature is less than the selected freeze temperature threshold.

Dimmer Relay: If Lights or an Aux output is configured as a dimmer, pressing the corresponding button will generate a temporary display which shows the dimmer output level (Off - On 100%). Pushing the “+” or “-” button changes the level in increments of 20%. When the desired output level is displayed, press the correspond-
Manual System Operation

While the main objective of the Pro Logic is to automate the operation of your pool/spa system, there may be certain times when you want to override the automatic operation and control the equipment manually. To operate the pool equipment manually while keeping the automation active, perform the following procedures. Note that if you turn a relay on manually, it will remain on until either you turn it off manually, or the next time the programmable automatic operation would normally turn that relay off. Example: the filter pump is programmed to run from 9:00A to 5:00P daily. If you turn the filter pump on manually at 8:00P, it will run continuously until the next day at 5:00P at which time it will turn off and follow the normal program from then on. Manually turning off a relay works in a similar fashion.

Output Names

The Pro Logic is shipped from the factory with each output labeled with a generic name (e.g. AUX1, VALVE3, etc.). One of the features in the software (see Configuration Menu, page 17) is that each output can be assigned a new name that is more descriptive of the equipment being controlled. This makes it much easier to operate all of the equipment on your pool without having to memorize what each output controls. Insert name labels are also provided to be placed next to each display pushbutton. Since there is no way to know how your particular system is configured, this manual will use the original generic names for each output.

Pool Filter Pump

The pool filter pump can be manually operated whether in Standard (single pump) or Dual Equipment (separate pumps for both pool and spa) mode. When in Standard mode, the display will refer to the pool filter pump as “FILTER”. When in Dual Equipment mode, the display will read “POOL FILTER”.

Single Speed Filter Pump: If the pump is currently off, press the “FILTER” button to turn on the pump. Pressing the “FILTER” button again will turn off the pump. However, if there is a heater in the system, and it is operating, and the “Heater Cooldown” feature is enabled (Configuration Menu) then: when you press the “FILTER” button to turn off the filter, only the heater will turn off, the “FILTER” LED will flash and the display will indicate “Heater Cooldown”. At this point the filter pump will automatically turn off after 5 minutes of heater cooldown operation. If you want to override the heater cooldown, simply press the “FILTER” button again to turn off the filter pump.

Automatic operation would normally turn that relay off. Example: the filter pump is programmed to run from 9:00A to 5:00P daily. If you turn the filter pump on manually at 8:00P, it will run continuously until the next day at 5:00P at which time it will turn off and follow the normal program from then on. Manually turning off a relay works in a similar fashion.

Display Check System LED

System Off (remote displays) or Service (main unit display)

Menu and Navigation Buttons

Aux1 - Aux6 (On/Off)

Valve4 or Heater2 (See Configuration Menu)

If the sensor appears to operating properly, then the temperature will be displayed. If this temperature is not correct then check the placement of the sensor. If the problem is not placement related, then the sensor will most likely require replacement. If the display is “Open Circuit” or “Short Circuit” then check the wiring to the sensor and also make sure that the wires are secure in the terminal block in the Pro Logic main unit.

Available displays depend on configuration. If you call the Hayward Technical Service Dept. for assistance, they may ask for the software revisions of both the main unit and each of the display/keypads or other devices that are attached to the system. Note that it is possible that different display/keypads have different software revision levels. For this reason, it is advisable to check this diagnostic menu item on every display.

If the pump is currently off, press the “FILTER” button to turn on the pump. Pressing the “FILTER” button again will turn off the pump. However, if there is a heater in the system, and it is operating, and the “Heater Cooldown” feature is enabled (Configuration Menu) then: when you press the “FILTER” button to turn off the filter, only the heater will turn off, the “FILTER” LED will flash and the display will indicate “Heater Cooldown”. At this point the filter pump will automatically turn off after 5 minutes of heater cooldown operation. If you want to override the heater cooldown, simply press the “FILTER” button again to turn off the filter pump.
Chlorination
When the chlorinator function is enabled (requires a chlorinator cell and P-KIT sold separately), the Pro Logic is
also an automatic chlorine generation system for pool and/or spa sanitization. If enabled (see Configuration Menu),
this operation requires a low concentration of salt (sodium chloride) in the pool/spa water. The Pro Logic auto-
matically converts the salt into free chlorine which kills bacteria and algae in the pool/spa. Chlorine will revert back
to sodium chloride after killing bacteria. These reactions will continuously recycle, virtually eliminating the need to
add sanitizing chemicals to your pool/spa. The only time you may need to add more salt to the pool/spa is when
water is replenished due to backwashing, draining, or splashing (not evaporation).

The Pro Logic is designed to handle the purification needs of most residential swimming pools up to 40,000 gallons
(150,000 liters), or the needs of most commercial pools up to 25,000 gallons (95,000 liters). Check local codes
for other restrictions. The actual amount of chlorination required to properly sanitize a pool varies due to bather
load, rainfall, temperature, and the pool’s cleanliness.

For pools larger than 40,000 gallons, the Pro Logic can control one or more Hayward Aqua Rite chlorinators to
supplement chlorine production.

NOTE: Before installing this product as part of a saline 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 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.

Default Display
Turn power on at the main panel and turn the Pro Logic control power circuit breaker on. The keypad will show
the default display. The default display alternates between the day/time, air and pool (or spa) temperature, pool/
spa sanitizer setting, and salt level. Under certain circumstances, additional displays may be added to the default
menu to inform you about system operation. Refer to the Programming Menu Flowchart on page 7 to view all
possible displays. The Pro Logic will automatically scroll through all of the available default menu displays or you
can press “<” or “>” to manually scroll.
System Overview

The Hayward Pro Logic is a multifunction pool controller used to fully manage your pool/spa system. The Pro Logic can control pumps, valves, lighting, heaters, and chlorination. Although the Pro Logic is easy to use, it is important to completely read through this operating manual before attempting to operate the control.

NOTE: This manual assumes that the Pro Logic has been wired and configured according to the Installation Manual. Aspects of the Pro Logic that pertain to system setup are not covered in this manual.

Automation

The PL-PS-4 (-8, -16) can control up to 4 (8, 16) high voltage (120/240V) pieces of equipment, up to 4 (8 for the PS-16) automatic valve actuators, and 2 conventional heaters plus a solar heater. Both manual and automatic (programmed) operation are available. All of the control functions can be programmed at a display/keypad which is part of the main unit (typically located near the pool equipment) or at one or more remote display/keypads.
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When using this electrical equipment, basic safety precautions should always be followed, including the following:

• **READ AND FOLLOW ALL INSTRUCTIONS**

• **WARNING:** Disconnect all AC power during installation.

• **WARNING:** Water in excess of 100 degrees Fahrenheit may be hazardous to your health.

• **WARNING:** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

• A green colored terminal marked “Grounding” is located inside the wiring compartment. To reduce the risk of electric shock, this terminal must be connected to the grounding means provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors supplying the equipment.

• One bonding lug for US models (two for Canadian models) is provided on the external surface. To reduce the risk of electric shock, connect the local common bonding grid in the area of the swimming pool, spa, or hot tub to these terminals with an insulated or bare copper conductor not smaller than 8 AWG US / 6 AWG Canada.

• All field installed metal components such as rails, ladders, drains, or other similar hardware within 3 meters of the pool, spa or hot tub shall be bonded to the equipment grounding bus with copper conductors not smaller than 8 AWG US / 6 AWG Canada.

• **SAVE THESE INSTRUCTIONS**

**LIMITED WARRANTY (effective 03/01/12)** Hayward warrants its Pro Logic, OnCommand and E-Command pool automation products as well as its Aqua Rite, Aqua Rite Pro, Aqua Plus and SwimPure chlorination products to be free of defects in materials and workmanship, under normal use and service, for a period of three (3) years. Hayward also warrants its Aqua Trol chlorination products to be free of defects in materials and workmanship, under normal use and service for a period of one (1) year. These warranties are applicable from the initial date of purchase on private residential swimming pools in the US and Canada. Installations of product for use on commercial pools in the US and Canada is covered for a period of one (1) year for defects in materials and workmanship. Hayward warrants all accessories and replacement parts for the above-identified pool automation and chlorination products for a period of one (1) year. Accessories also include remotes, actuators, base stations, temperature sensors, flow switches and chemistry probes. Each of these warranties is not transferable and applies only to the original owner.

Hayward shall not be responsible for cartage, removal, repair or installation labor or any other such costs incurred in obtaining warranty replacements or repair.

Proof of purchase is required for warranty service. If written proof of purchase is not provided, the manufacturing date code will be the sole determinant of the date of installation of the product. To obtain warranty service or repair, please contact the place of purchase or the nearest Hayward authorized warranty service center. For more information on authorized service centers please contact the Hayward Technical Service Support Center (61 Whitecap Road, North Kingstown RI, 02852) or visit the Hayward web site at [www.hayward.com](http://www.hayward.com).

**WARRANTY EXCLUSIONS:**

1. Material supplied or workmanship performed by others in process of installation.
2. Damage resulting from improper installation including installation on pools larger than the product rating.
3. Problems resulting from failure to install, operate or maintain the product(s) in accordance with the recommendations contained in the owners manual(s).
4. Problems resulting from failure to maintain pool water chemistry in accordance with the recommendations in the owners manual(s).
5. Problems resulting from tampering, accident, abuse, negligence, unauthorized repairs or alternations, fire, flood, lightning, freezing, external water, degradation of natural stone used in or immediately adjacent to a pool or spa, war or acts of God.
6. Use of a non-genuine Hayward replacement salt chlorination cell on any Hayward automation or chlorination product will void the warranty for that product.

The express limited warranty above constitutes the entire warranty of Hayward Pool Products with respect to its products and is in lieu of all other warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose. In no event shall Hayward Pool products be responsible for any consequential, special or incidental damages of any nature. Some states do not allow a limitation on how long an implied warranty lasts, or the exclusion of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.
<table>
<thead>
<tr>
<th>TEST</th>
<th>IDEAL RANGE</th>
<th>ADJUSTMENT REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free Chlorine</td>
<td>1.0 - 3.0 ppm</td>
<td>Raise desired output % to increase, lower desired output % to decrease -OR- increase or decrease pump filtration time.</td>
</tr>
</tbody>
</table>
| pH        | 7.2 - 7.8   | Too high - add muriatic acid  
Too low - add soda ash. |
| Alkalinity | 80 - 120 ppm| Add baking soda to increase.  
Add acid as required to decrease. |
| Salt      | 2700 - 3400 ppm | Add salt as required to increase. |
| Stabilizer| 60 - 80 ppm | Add cyanuric acid to increase. |
| Calcium   | 200 - 400 ppm| Add calcium to increase.  
Drain and add water to decrease. |
| Electrolytic Cell | inspect & clean | Refer to section in manual. |