High Voltage Electrocution Hazard

Hazardous voltage can shock, burn, cause serious injury and or death. To reduce the risk of electrocution and or electric shock hazards:

- Only qualified technicians should remove the dead front
  - Qualified technicians should: replace damaged wiring immediately
  - Qualified technicians should: Insure panel is properly grounded and bonded
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ProLogic: How It Works

• All ProLogic systems are salt chlorination ready and can control 4-16 high voltage relays, 3-4 valve actuators and 1-2 heaters.

• These systems can manage: Hayward Variable Speed Pumps, ColorLogic Lighting, Sense & Dispense, AquaConnect Homenet, as well as a wide variety of remotes.

• The panel features an 8 slot, 100amp subpanel.

• Equipment can be programmed to run off daily schedules and/or based on manual commands. Equipment such as heaters can be programmed to operate only on demand. Safety features such as interlocks and freeze protection can help protect pool pad equipment.
How To: Reset Average Salt

Follow these steps ONLY if Salt Chlorination is Enabled. The Average Salt level needs to be reset after initial start up, after a board replacement, following major pool chemistry adjustments, and when a cell is replaced.

1. The active salt readings (instant salt) appears in the ‘Diagnostic Menu’. Press the ‘Menu’ button repeatedly, until the ‘Diagnostic Menu’ appears. Then press (>) one time.
2. If all zeros or if ‘Chlorinator Off Percentage Met’, press (+) key. IF, after a short countdown delay, the display does not revert to zeros, refer to step 3.
3. Above is an example of the updated instant salt reading in PPM. If this instant salt reading varies from the average press the (>) one time, then go to step 4.
4. Press the (+) key to replace the existing average with this new instant salt reading; this will start the average process over again. Press the ‘Menu’ button to exit.

Note: The main circulation pump MUST be ON and the chlorinator AND flow switch MUST have flow to successfully complete this process.
How To: Adjust Chlorinator Output

Follow these steps to adjust the Chlorinator Output Percentage ONLY if Salt Chlorination is Enabled. NOTE: IF Sense & Dispense ‘ORP Auto Sensing’ is being used, output must be adjusted under the ‘Chemistry Config. Wizard’; refer to next page.

Step 1

To display the settings, press the ‘Menu’ key until ‘Settings Menu’ appears. Then press the (>) until ‘Super Chlorinate’ appears.

Step 2

Use the (+) or (-) button to toggle between super chlorinate ‘On’ or ‘Off’ (depending on preference). Then press the (>) one time to display chlorinator % options.

Step 3

Use the (+) or (-) button to adjust desired chlorinator output. If multiple bodies of water are programmed, press the (>) button again. IF only one body of water, press the ‘Menu’ button to exit.

Step 4

For the second body of water, use the (+) or (-) key to adjust the desired chlorinator output. Once complete, press the ‘Menu’ button to exit.

Note: If the chlorine levels do not increase within 24 hours, test the water chemistry to determine the current salt, stabilizer, phosphate, and nitrate levels.
How To: Adjust ORP Set Point (S&D)

Follow these steps to adjust the Chlorinator’s ORP Set Point, **ONLY if Salt Chlorination is Enabled AND the system is configured for ‘ORP Auto Sensing’**.

**Step 1**
Press the ‘Menu’ until, ‘Configuration Menu-Locked’ appears. To unlock, press and hold the (<) & (>) until the text, on the display, changes from ‘Locked’ to ‘Unlocked’ (unit will beep).

**Step 2**
Press the (>) repeatedly, until ‘Chemistry Config. Wizard’ appears on the display. Press the (+) key to enter, then (>) until ‘Maintain ORP level’ appears on the display.

**Step 3**
Use the plus (+) key to increase, or the minus (-) key to decrease the ORP set point.

**Step 4**
Once the value is set, press the (>) key until ‘-End of Wizard-’ appears on the display, then press ‘Menu’ to exit config.

**Note:** **ONLY increase or decrease the ORP Set Point in increments of 25 mV. Once free chlorine reaches 3.0, verify and/or balance the water chemistry. Once balanced, note the reported ORP reading, this represents the value for maintaining adequate free chlorine levels.**
How To: Adjust Heater Set Points

Follow these steps to adjust the Heater set points through your ProLogic system.

**Step 1**
Press the ‘Menu’ repeatedly, until ‘Settings Menu’ appears on the display.

**Step 2**
Press the (>) repeatedly, until ‘Spa Heater’ or ‘Pool Heater’ appears on the display.

**Step 3**
Use the plus (+) key to increase, or the minus (-) key to decrease the temperature set point.

**Step 4**
Repeat Steps 2-3 for all applicable bodies of water, then press the ‘MENU’ button four times to return to the ‘Default Menu’.

**NOTE:** If the heater is not wired through the ProLogic then it will need to be adjusted directly on the Heater instead of through the ProLogic system.
How To: Clear Inspect Cell Message

Follow these steps ONLY if Salt Chlorination is Enabled AND the system shows a Check System LED, with an ‘Inspect Cell’ message. Every 500 operational hours this message will appear. Before resetting, inspect and/or clean the cell if necessary.

1. Press the ‘Menu’ until, ‘Default Menu’ appears on the display. This menu is where the ‘Inspect Cell’ message is stored.

2. Press the (>) key, repeatedly, until ‘Inspect Cell, Hold + to reset’ appears on the display.

3. To clear, press & hold the (+) key while message is displayed.

4. Once complete, press the ‘Menu’ button to exit.
How To: Set a Pump Schedule

Follow these steps to program your pump to turn ON & OFF automatically through the Timer’s Menu.

Step 1:
Press the ‘Menu’ repeatedly, until ‘Timers Menu’ appears on the display.

Step 2:
Press the (> ) until ‘Filter T1,T2,T3,T4’ or ‘Spa-all’ appears on the display (depending on which schedule you wish to program).

Step 3:
Use the plus (+) key or the minus (-) to adjust the start time (left side), then press the (> ) once to get to the stop time.

Step 4:
Use the plus (+) key or the minus (-) to adjust the stop time.
Repeat Steps 2-3 for all desired schedules.

NOTE: The ‘T’ in ‘Filter T1’ stands for time window, there are up to four of these for the pool in a PL-PS system. IF a variable speed pump is being used go to the next page to learn how to set the pump operation percentage for each timer.
How To: Change VSP Speed Settings

Follow these steps **ONLY** if using a Variable Speed Pump in conjunction with the ProLogic Controller **AND** you wish to change the pump’s operational percentages.

1. Press the ‘Menu’ repeatedly, until ‘Settings Menu’ appears on the display.
2. Press the (>) until ‘VSP Speed Settings’ appears on the display, then press the (+) to enter.
3. Press the (>) until Filter Speed1 appears, use the (+) & (-) buttons to adjust up/down, then press the (>) to navigate forward.
4. Repeat Step 3 until all desired percentages are set, then press the ‘Menu’ button to exit the ‘Settings Menu’.
How To: Clean the TurboCell

Cell cleaning frequency is dependent on several factors; pH & calcium levels have the greatest effect on how often cells requires cleaning. In pH environments between (7.2 - 7.8) cells typically require cleaning 3-4 times a year (with moderate calcium levels).

Turn Pump Off & Remove Cell

Calculate Cell

Step 1

Clean Cell

Holding the cell up to a light source, inspect for calcium deposits. Even if a TurboCell appears clean, it may still require cleaning if salt accuracy is off AND/OR chlorine production has diminished.

Wear Protective Equipment

Step 2

Calcified Cell

If the cell requires cleaning, please wear protective equipment. It is highly recommended to use a Hayward Cell Cleaning Stand as shown on the right (GLX-CELLSTAND).

NOTE: ALWAYS WEAR PROPER EYE PROTECTION AND PROTECTIVE GLOVES.
MIX SOLUTION AND CLEAN CELL ONLY IN A WELL VENTILATED AREA.
MURIATIC AND OTHER ACIDS CAN CAUSE SEVERE INJURY, BURNS AND RESPIRATORY PROBLEMS IF NOT HANDLED PROPERLY. REFER TO THE MANUFACTURER’S DIRECTIONS FOR SAFE HANDLING.
The TurboCell draws amperage when power is applied, during chlorination. The amperage draw will be impaired when calcium and other debris exist within the cell’s electrolytic grid; this in turn effects the salt reading and chlorination efficiency.

Mix: 4 Parts H₂O / 1 Part Muriatic Acid

1 Part:
Muriatic Acid

4 Parts:
Water

Carefully pour the solution into the cell until it reaches the top. The solution should remain in the cell for 15 minute intervals until the reaction is complete. Carefully, pour solution back into approved container.

Cleaning Tip:
For best results, stand the cell vertically with cord-side down

NOTE: ALWAYS ADD ACID TO WATER! NEVER ADD WATER TO ACID.

The cell cleaning solution may be reused a few times.

ALWAYS: STORE MIXED SOLUTIONS IN A SAFE AREA, OUT OF HARMS WAY.
When the solution is depleted, follow the manufacturer’s instructions for proper disposal.
Thoroughly Rinse Cell & Return

After the solution has been safely removed, thoroughly rinse the TurboCell before returning it to its place in the plumbing. Once returned turn the pump back ON and proceed to the step 6.

NOTE: If the cell was reading a low salt level prior to cleaning, the average salt may need to be reset. To reset the average salt level, follow the steps outlined on pg.6 or wait 24 hours for the system to acclimate to the recent changes. For detailed instructions on resetting the ‘Inspect Cell’ message, refer to pg. 10.
ProLogic®
Troubleshooting
1. No Cell Power/Cell Power Error/Low Volts

These messages all imply that the chlorinator cycle has been interrupted due to no/low voltage detected when the cell power was turned on. Please add liquid chlorine to the pool until the issue has been resolved.

Please contact a technician

STOP: This must be resolved by a certified technician. Please contact tech service: (908) 355-7995 OR contact a pool professional: https://www.hayward-pool.com/shop/en/pools/Dealer-Locator

NOTE: These reported errors DO NOT indicate that there is a problem with the turbo cell. However, it is recommended to clean the cell, if it is calcified, before scheduling service repairs. Cell cleaning instructions may be found on pg. 13-15)
2. Chlorinator OFF, High Salt/Amps

The message ‘Chlorinator Off – High Salt/Amps’ indicates that the ProLogic has detected an amperage draw, from the turbo cell, that exceeds the allowable threshold for the programmed cell model.

Test salt concentration of the water using an independent test, with a calibrated salt meter. If salt is above 3400, go directly to 2D. If correct, go to 2B.

Desired Salt Concentration: 3200PPM

With the pump running, press the ‘Menu’ button until ‘Diagnostic Menu’ appears. Press the (>) one time. Then press the (+) to reset the chlorinator and go to 2C.

NOTE: If the main circulation pump was recently turned on, the chlorinator may show up to a 60 second Filter delay. Once the countdown expires, verify the voltage, amperage, temperature and salt level are expressed under the ‘Diagnostic Menu’.
2. Chlorinator OFF, High Salt/Amps (cont.)

The message ‘Chlorinator Off – High Salt/Amps’ indicates that the ProLogic has detected an amperage draw, from the turbo cell, that exceeds the allowable threshold for the programmed cell model.

Verify chlorinator readings

After a short delay, new readings should appear on the display. These readings report on the active chlorinator circuit. IF the ProLogic is reporting a voltage of 35V or higher, contact a pool professional:


IF voltage is under 35V, Contact tech service: (908) 355-7995 for more assistance.

NOTE: IF the error persists, Please add liquid chlorine to the pool until the issue has been resolved.
The salt concentration will need to be reduced. To calculate how much water to drain, follow the formula provided below (Proportional Method):

**Part I**

\[(\text{Ave. Pool Depth” } \times 3200) \div \text{Actual Salt level in Pool}\]

**Part II**

\[\text{Ave. Pool Depth - Answer from Part 1} = \text{Amount of Water to Drain}\]

**Example:** a pool has an ave. depth of 54” and the salt level is 4500ppm

\[
\begin{align*}
54 \times 3200 &= 172800 \\
4500 &= 38.4 \\
54 - 38.4 &= 15.6”
\end{align*}
\]

**Note:** It is recommended to reduce the water level no more than six inches at a time before replenishing with fresh water. Failure to do so may result in damage to the pool structure or surface.
3. Chlorinator OFF, Cell Sensor Open

The ‘Chlorinator Off, Cell Sensor Open’ indicates that the system can not see a connection to the cell.

Inspect the Turbo Cell cable

Step 3A

Verify cell cable is not cut or damaged. IF cable is free of damage, go to 3B. IF the wire is damaged, please contact an authorized dealer to purchase a replacement: https://www.hayward-pool.com/shop/en/pools/Dealer-Locator

Unplug the Turbo Cell

Step 3B

Unplug the Turbo Cell then plug it back in. Reset the chlorinator (pg. 6). Press the ‘Menu’ button until the ‘Default Menu’ appears then scroll to the right. IF the error message has not cleared, contact technical support for more assistance: (908) 355-7995.
Freeze Protection is a safety feature built into ProLogic systems to protect all freeze enabled equipment from dangerously low temperatures.

Verify ambient temperature

Step 4A

Locate & inspect air sensor

Step 4B

Freeze Protection will run between a range of 33°F - 42°F. IF the air temperature is within this range, this operation is justified and interruption is not recommended. IF ambient temperatures are well above this range, go to step 4B.

Navigate through the ‘Default Menu’, press the (> until the air temperature readout appears. IF the sensor is not reading accurately, try moving it to see if the reading improves. IF the reading still does not improve, go to step 4C.
When freeze protection is active, even though the water temperature is reading normal, the ProLogic will continue to make chlorine. Suspending freeze protection by activating service mode will suspend chlorination.

Contact service (*optional: activate service mode)

The air temperature sensor may need to be replaced. To locate a pool professional visit: https://www.hayward-pool.com/shop/en/pools/Dealer-Locator. To temporarily suspend freeze protection, active service mode by pressing the red service button one time.

*Warning: IF activating service mode all chlorination and automatic filter times will be interrupted. While in service mode the pool/spa pump will need to be manually turn on and off AND the pool should be chlorinated using liquid chlorine.
5. Heater Not Firing

The ProLogic features a normally open circuit for each heater. When heat is called for, based on the temp set point and water sensor, the low voltage contact will close; once closed, the low voltage supplied by the heater should be returned to it.

Check main circulation pump

Verify the heater LED is ON

On the display, verify that the Filter relay is activated (denoted by an illuminated Filter LED). Also, verify the main circulation pump is running. IF the pump is off and cannot be turned on through the controller, go to section 6. IF pump is running, proceed to step 5B.

On the local display, with the main circulation pump running, verify the Heater LED is illuminated. IF the heater LED is not illuminated, go to step 5C. IF the heater LED is illuminated, proceed to step 5D to test the heater relay.
Service mode cancels all scheduled automation and also suspends safety features such as ‘Freeze Protection’. If the heater only fires while in service mode, make sure freeze protection is not active, also verify that solar priority is not overriding regular heating.

Service mode test

Press the service mode button AND turn on the main circulation pump. Press the heater button to force it on. If the heater LED illuminates AND the heater fires, then take the system out of service and go to step 5E. IF the heater LED illuminates but the heater does not fire, go to step 5D.

Inspect heater display

Verify the heater display is ON AND the heater has been set for BO, which stands for bypass operation (if applicable). Also, inspect heater for errors. IF the heater displays an error, please contact tech support for more assistance: (908) 355.7995. IF no errors appear, proceed to step 5E.
5. Heater Not Firing (cont.)

The ProLogic supports features like Solar Priority. Verify that no additional heating is occurring, as this can take precedence over automatic heating.

Verify set points and/or errors

First verify the status of the Check System LED. IF ON, go to the ‘Default Menu’ to identify if error relates to heating (i.e. water temperature sensor failure). IF Check System LED is OFF, access the heater set points under the ‘Settings Menu’. Raise all heater set points to 104°F. IF heater still does not fire contact a pool professional by visiting: https://www.hayward-pool.com/shop/en/pools/Dealer-Locator

Prior to calling, under the ‘Settings Menu’ return set points back to their original state.
6. Auxiliary Equipment Inactive

The ProLogic should only attempt to turn on wired equipment if the LED next to the specific auxiliary or valve is illuminated.

- **Inspect relay LED**
  - Press the Auxiliary button that corresponds with the relay in question. IF the relay LED fails to turn ON, proceed to step 6B. IF ON, jump ahead to step 6C for more information.

- **Service mode**
  - Activate service mode & press the relay button. IF the LED illuminates, a control related feature is overriding the relay (example: interlock...etc.), go to step 6C. IF LED does not turn ON contact a pool professional by visiting: [https://www.hayward-pool.com/shop/en/pools/Dealer-Locator](https://www.hayward-pool.com/shop/en/pools/Dealer-Locator)
Service mode suspends all automation, including schedules, equipment protections and set point limitations.

While in service mode: IF the equipment wired to the relay in question does not run/turn on, then there is likely a problem with that piece of equipment. IF running/on, then exit service & attempt to manually turn Auxiliary ON. After pressing the button the system should explain any interlocks or preventions. Contact service for additional assistance (908)355.7995.

Equipment running/on in service?

Step 6C
7. Wireless Remotes Not Pairing to ProLogic

All Wireless remotes that pair with the ProLogic run of RF. There are up to 5 RF channels that can be used to counteract possible interference.

Step 7A
Verify that a RF antenna is attached or connected to the ProLogic system. NOTE: the antenna may extended away from the main panel. IF an antenna is visible please go to step 7B. IF not, please contact tech support for more assistance: (908) 355-7995.

Step 7B
When the system is in service mode, all remotes are temporarily disabled. Verify the system’s red ‘Service’ LED is NOT illuminated. IF illuminated, press the red service button until the LED goes out. IF not on, proceed to step 7C.

Service mode
The ProLogic RF remotes should work between 200-400ft line of sight (depending on the remote). The RF antenna may also be mounted up to 500ft away from the ProLogic control panel.

Check for RF settings

1. Press the ‘Menu’ button until ‘Settings Menu’ appears.
2. Press the (>) until ‘Teach Wireless: + to start’ appears.
3. Press and hold wireless button

Press the ‘Menu’ button until ‘Settings Menu’ appears. Press the (>) until ‘Teach Wireless: + to start’ appears. If this does not appear go to step 7F. If this option appears, press the (+) button and immediately go to step 7D.

Attempt pairing

Step 7D

On the remote, press and hold the ‘Menu’ button if applicable. IF there is no ‘Menu’ button on the remote press and hold any button. IF display show ‘Teach Wireless: Successful, then the two are now paired. IF display shows ‘Failed’, go to 7E.
7. Wireless Remotes Not Pairing to ProLogic

All Wireless remotes that pair with the ProLogic run of RF. There are up to 5 RF channels that can be used to counteract possible interference.

Change wireless channel

1. Press the ‘Menu’ button until ‘Settings Menu’ appears.
2. Press the (> until ‘Wireless Channel:’ appears.
3. Press the (+) or (-) to change to a different channel. Press the right arrow and (+) again to save. Repeat steps 7C and 7D. IF pairing is still unsuccessful, go to 7F.

Verify compatibility

- **Base Antenna (prefix)** | **Compatible Remotes (prefix)** | **ProLogic Firmware Rev.**
- AQL2 | AQL2 | 2.60+
- AQL/GLX | AQL/GLX | 1.10+

Verify the remote and base antenna part number prefixes match the included table. Also, verify the main software revision (found under the ‘Diagnostic Menu’) is also complies with the table requirements. IF correct please contact tech support: (908) 355-7995.
8. Pump Error Codes

Below is a list of additional “Check System” error codes which relate to the ProLogic’s operation with Hayward’s TriStar and EcoStar Variable Speed Pumps. All errors may be prefaced with Pool Filter (or Spa Filter (Dual Equipment) or Lights or Aux 1...14):

- VSP Comm Error
- VSP Drive Comm Error
- VSP Err: xx
- Mains voltage low
- Mains voltage high
- Rmt Stop is pressed
- Remote Stop: + to rst
- Prime Fail: + to rst
- Fail start: + to rst
- Pump stall: + to rst
- SVRS trip: + to rst
- Drv failure: See pump

Please refer to the pump service manual for detailed troubleshooting.
9. Sense & Dispense Error Codes

Below is a list of additional “Check System” error codes which relate to the Pro Logic’s operation with Sense and Dispense™ Chemistry Automation:

- pH Calibration Error
- pH Probe Error
- pH Low-Check feeder
- pH High-Check feeder
- ORP Probe Error
- pH Timeout-Chk feedr, Press + to reset
- ORP Low-Check Chlor
- ORP High-Check Chlor
- ORP High-Chlor off
- ORP Timeout-Chlr off, Press + to reset
- CSM Comm Error

Please refer to the Sense & Dispense™ service manual for detailed troubleshooting.
10. Additional Sensor Error Codes

Below is a list of additional “Check System” error codes which relate to open or shorted sensors:

- Cell Sensor Open
- Cell Sensor Short
- Wtr Sensor Open
- Wtr Sensor Short
- Pool Sensor Open
- Pool Sensor Short
- Spa Sensor Open
- Spa Sensor Short
- Air Sensor Open
- Air Sensor Short
- No Flow – Filter Pump
- Chk Flow Switch
- Solar Sensor Open
- Solar Sensor Short
- Ambient Sensor Open
- Ambient Sensor Short
- Cell Missing

‘Open sensor’, ‘Cell Missing’, and ‘Check Flow Switch’ errors should be checked by confirming sensor wiring is not broken. Shorted sensor errors may require replacement by a pool professional, to locate one, please visit: https://www.hayward-pool.com/shop/en/pools/Dealer-Locator
ProLogic®

Additional Information
## Cell Compatibility Chart

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Salt Addition Chart: lbs. required for 3200ppm

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**Note:** Prior to adding salt, always test water with independent tests to determine current salt and stabilizer levels.

**How to add salt**

Brushing the salt around will speed up the dissolving process. DO NOT allow the salt to sit in a pile at the bottom of the pool. Salt water is heavier than fresh water, so the salt water will tend to accumulate at the deepest part of the pool. Run the filter system with the suction coming from the main drain for 24 hours to evenly distribute the salt throughout the pool.

**Note:** Refer to the Plasters recommendations for cure time before adding salt.
1. The cycle time (reversal of polarity) is 180 minutes (3 hrs). When you set the ‘Desired Output %’ through the control system it sets the level of chlorination based on the three hour cycle. 50% represents the factory default. The following represents an example of how the system reacts to percentage output:

- **3 hr cycle**: If the output is set at 50% and the total time for operation is 9 hrs, the salt cell will operate (and produce chlorine) for 50% (1.5 hrs) of each 3 hr. cycle for a total of 4.5 hrs

2. Super-chlorinate is an additional option to use in order to ‘catch up’ in chlorine production when making adjustments to the desired output level. To activate, press the menu button until the ‘Settings Menu’ appears. Press the right arrow until ‘Super Chlorinate Off’ appears; press the (+) to change it from ‘Off’ to ‘On’. This will cause the system to produce chlorine at 100% output for 24 hours (unless the Super Chlorination duration was changed previously in the configuration. Once the Super Chlorinate function has concluded the chlorine output percentage will once again drive the chlorine production.
3. It is possible that the displayed salt level can be significantly different from the actual salt level (when measured through an independent test). This can happen as a result of a dirty cell or from a cell that is experiencing the aging process. Low salt readings should ALWAYS be followed by a cell cleaning first and then an actual meter measurement of the salt level in the water. If the cell is clean and the level of salt measured in the water is correct, then the cell has started to age, which results in a lower calculated salt level. This is an acceptable situation, assuming the level of free chlorine in the pool is appropriate. NEVER add additional salt in this circumstance.

4. If the free chlorine is not appropriate and the steps in item 2 have been followed and addressed as needed, then the ‘Desired Output %’ needs to be increased in a 25% increment (for example from 50% to 75%) to allow for the TurboCell to operate for a longer period (% of total operating time) in order to produce a sufficient amount of chlorine as the cell begins to age. Allow 24 hours and re-test free chlorine. Increase in increments of +10% if required. Keep in mind this is assuming the chemistry parameters are correct in the pool and there is nothing that is creating a significant chlorine demand. Also, it is common to have to increase the chlorine output % during the hotter months of the season, when a-typical temperatures are recorded.