Safety Precautions

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 panel
- Replace damaged wiring immediately
- Insure panel is properly grounded and bonded
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AquaRite: How It Works

• The AquaRite Salt Chlorine Generator is designed to convert 99% pure salt into chlorine gas (HOCl).

• The conversion occurs in the Electrolytic Cell, also known as the TurboCell® (used throughout this guide).

• Power is sent from the AquaRite Control Center to the TurboCell, when chlorine production is scheduled (based on time percentage).

• When power is applied to the TurboCell, conductive plates produce a field; which in-turn establishes an electrochemical reaction between Chloride ions & the water to create Hypochlorous Acid.
AquaRite: Main PCB Layout

- **A**: PCB Input Power (120/240VAC)
- **B**: Transformer Input (120VAC & 120VAC)
- **C**: External Control Jumper
- **D**: Display Output (5-10VDC)
- **E**: Rectifier Output (18-33VDC)
- **F**: Comm Block – External Control (5-10VDC)
- **G**: Transformer Output (12 VAC)
- **H**: Chlorinator Fuse (20A – ATO style)
- **I**: Rectifier Input (12 VAC)
- **J**: Cell Input/Output
- **K**: Flow Switch Input/Output
# AquaRite: Chemistry Requirements

<table>
<thead>
<tr>
<th>Test</th>
<th>Ideal Range</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free Chlorine</td>
<td>1.0 - 3.0 ppm</td>
<td>Weekly</td>
</tr>
<tr>
<td>pH</td>
<td>7.2 - 7.8</td>
<td></td>
</tr>
<tr>
<td>Alkalinity</td>
<td>80 - 120 ppm</td>
<td>Monthly</td>
</tr>
<tr>
<td>Salt</td>
<td>2700 - 3400 ppm</td>
<td></td>
</tr>
<tr>
<td>Stabilizer</td>
<td>30 - 50 ppm</td>
<td>Quarterly</td>
</tr>
<tr>
<td>Calcium</td>
<td>200 - 400 ppm</td>
<td></td>
</tr>
</tbody>
</table>
How To: Switch from Metric to US Standard

If the first reading (average salt) is displayed in decimal form instead of a number represented in thousands, then the unit has been set to ‘Metric Mode’.

**Step 1**
To change the unit from Metric Mode to US Standard, start by pressing the ‘Diagnostics’ button one time.

**Step 2**
Once showing the temperature in Celsius, move the switch up to ‘Super Chlorinate’ then back to ‘Auto’.

**Step 3**
Immediately the temperature reading should change to reflect a Fahrenheit value. If it does not repeat step 2.

**Step 4**
After 30 seconds the unit should settle back to the default reading. The reading should now reflect a number in thousands.

*NOTE: The process is the same to go from US Standard to Metric.*
How To: Change the Default Display

*If the first reading represents a number followed by the letter ‘P’, then the default reading has been changed to express the ‘Desired Output %’.*

**Step 1**

To change the default reading back to the average salt, start by pressing the ‘Diagnostics’ button two times.

**Step 2**

When the unit reads ‘AL-4’ move the switch up to ‘Super Chlorinate’ and back to ‘Auto’.

**Step 3**

Continue moving the switch up to ‘Super Chlorinate’ and back to ‘Auto’ until the display reads ‘AL-0’.

**Step 4**

It takes about 30 seconds for the unit to settle back on the default reading. It should now reflect the average salt level.
How To: Set TurboCell Type

Before operation, the AquaRite must be configured to the correct TurboCell installed. “t-15” is the factory default. If the incorrect cell is chosen the salt level will be inaccurate and the system will likely suspend chlorination as a result.

Step 1
Start with the main toggle switch in the ‘Auto’ position.

Step 2
Push the diagnostics button until ‘t -15 , t -9 , t -5 , t -3’ appears.

Step 3
To change cell type, cycle slide switch up to ‘Super Chlorinate’.

Step 4
Return switch to ‘AUTO’. Repeat until display shows correct cell.
How to: Reset Average Salt Level

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.

Step 1
To reset, move the switch to ‘Off’ and then back to ‘Auto’. Wait for the relay to click (5 to 10 seconds).

Step 2
Press Diagnostics button 5 times to display the Instant Salt level. Wait for the number to stabilize.

Step 3
When the instant salt level is stable (and the negative sign still present), slide switch to ‘Super Chlorinate’ and back to ‘Auto’.

Step 4
It takes about 30 seconds for the unit to settle back on the default reading. It should now reflect the new average salt level.

NOTE: Repeat this process once more to ensure both polarities are reading within 500ppm of each other.
How To: Adjust Chlorine Output

The ‘Desired Output %’ dial, sets the level of cell operation in % of operating time, in 3 hour increments. Example: 50% (factory default) implies the cell is producing chlorine half the total pump/filter operating time; so the cell should produce chlorine for the first 90 minutes of 3 hours before repeating.

NOTE: If the chlorine level does not increase within 24 hours after increasing output, test water using an independent test kit to determine the current salt, stabilizer, phosphate, and nitrate levels. More information related to chlorine production on Pages 41-42).

NOTE: Output is scaled back to 20% or lower (depending on where the dial is set) at 60 °F and chlorine production stops altogether at 50 °F.
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

Wear Protective Equipment

Calcified Cell
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.

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.
How To: Clean the TurboCell (Cont.)

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

Mix a solution comprised of 4 parts water to 1 part Muriatic Acid. Always Add Acid to Water. Once mixed turn the turbo up vertically either in a bucket or using the recommended cell cleaning stand.

Carefully Pour Solution into Cell

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

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.

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.
**How To: Clean the TurboCell (Cont.)**

The Inspect Cell LED, when flashing alone, indicates that the system is recommending the TurboCell should be inspected and cleaned (if necessary). The LED will flash alone every 500 operational hours as a reminder to inspect and/or clean the TurboCell.

### 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.

### Reset: Inspect Cell (if applicable)

IF the “Inspect Cell” LED was flashing alone, press and hold the diagnostics button for 5 seconds OR until the Inspect Cell LED goes out. This will reset the inspect cell timer for another 500 operational hours.

**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.11 or wait 24 hours for the system to acclimate to the recent changes.
AquaRite®
Troubleshooting
1. Check Salt & Inspect Cell: flashing or ON

- **Check Salt & Inspect Cell**
  - Salt level is ≥3200?
    - **NO**
      - Add salt
    - **YES**
      - **Section B**
        - Are both readings within 500ppm of each other?
          - **NO**
            - Replace the TurboCell
          - **YES**
            - **Section B**

- **YES**
  - Cell model matches display reading?
    - **NO**
      - Program correct cell type
    - **YES**
      - **Reset Ave. Salt**

- **Cell is Clean?**
  - **NO**
    - Clean the Cell
  - **YES**
    - **Problem solved**

- **Did LED Clear?**
  - **NO**
    - Contact Support (908) 355.7995
  - **YES**
    - Jump to Section B
1. Check Salt & Inspect Cell: flashing or ON

*When these lights flash, the cell reports salt levels between 2400-2700ppm; this does not affect chlorine production. When these LEDs are ON solid, the cell reports 2300ppm or less and chlorine production is suspended.*

![Image of TurboCell with clean and calcified cells]

**Test the Salt Level**

**Desired Salt Concentration:**

3200PPM

**Inspect the TurboCell**

**Step 1A**

Test the salt concentration of the water using an independent test, with a calibrated salt meter. IF the salt level is below 3200, raise the salt level *(referring to salt addition table pg. 41).* IF fine, go to 1B.

**Step 1B**

The TurboCell must be clean in order to report accurate salt readings. IF the cell looks like the image on the left, clean the cell *(pg.13-15).* IF cell is clean, proceed to step 1C.

*The system should be reading salt within 500ppm of an independent test. The cleanliness of the TurboCell plays a major role in the AquaRite’s ability to report salt levels accurately.*
1. Check Salt & Inspect Cell: flashing or ON (cont.)

The AquaRite control center may be programmable to interact with different cell models ("t-15" is the factory default). Verify the TurboCell model (located on the label the wraps around the body) then compare it to what is programmed in the system.

Correct Cell Programmed?

<table>
<thead>
<tr>
<th>Step 1C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verify the cell model programmed into the control center, matches the model listed on the cell. IF it does not match, change programmed cell (refer to pg. 10). IF correct, go to step 1D.</td>
</tr>
</tbody>
</table>

Reset the Average Salt Level

<table>
<thead>
<tr>
<th>Step 1D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reset the average salt level, twice, following the steps on pg. 10. Are the two instant salt level readings within 500ppm of each other? IF not go to step 1E. IF they are go to step 1F.</td>
</tr>
</tbody>
</table>

There are two polarities within a TurboCell which is why it is recommended to reset twice. Although there may be some variance between these two polarities, clean cell should NEVER show more than a 500ppm variance between polarities.
1. Check Salt & Inspect Cell: flashing or ON (cont.)

If the cell requires replacement, check the model number and verify whether or not the cell is under warranty. To verify warranty, please refer to pg. 44.

Replace the TurboCell

Part Numbers:
*T-Cell-15 OR GLX-CELL-15-W
*T-CELL-9 OR GLX-CELL-9-W
*T-CELL-3 OR GLX-CELL-3-W

The cell needs to be replaced in order for the AquaRite control center to read the salt level accurately. Replace the cell with the same model as it had prior and then reset the average salt level (instructions on pg. 11).

*NOTE: When replacing the TurboCell, use the GLX-CELL-xx-W when the cell is under warranty, otherwise use the T-CELL-xx part number.

Did the LEDs clear?

IF the “Check Salt” & “Inspect Cell” LEDs cleared, then the problem is solved. IF not please contact technical support directly by dialing: 908.355.7995 or email support via Hayward.com’s support page.
2. High Salt: LED ON

- **High Salt LED ON**
  - Salt level is under 3400?
    - NO: Dilute salt concentration
    - YES: **Section B**
  - **Section B**
    - Are both readings within 500ppm of each other?
      - NO: Replace the TurboCell
      - YES: **Section B**
    - Problem solved
      - YES: **Section B**
      - NO: **Section B**
  - **Cell model matches display reading?**
    - NO: Program correct cell type
    - YES: **Cell is Clean?**
      - NO: Clean the Cell
      - YES: Reset Ave. Salt
  - **Contact Support (908) 355.7995**
2. High Salt: LED ON

The High Salt LED will appear ON solid when the maximum allowable cell amperage has been reached. The AquaRite control center will shutdown all chlorine production until the problem is solved and the LED light clears.

Test the Salt Level

Desired Salt Concentration: 3200PPM

Test salt concentration of the water using an independent test, with a calibrated salt meter. IF salt is above 3400, go directly to 2G. IF the salt level is correct, proceed to step 2B.

Correct Cell Programmed?

Verify the cell model programmed into the control center, matches the model listed on the cell. IF it does not match, change programmed cell (refer to pg. 10). IF correct, go to step 2C.

NOTE: High water temperatures (typically found in smaller bodies of water, such as spas) can cause the High Salt LED to trigger when the salt concentration favors the high end of the range. If the water temperature is high, then consider diluting the salt level down between 2700-3200ppm.
2. High Salt: LED ON (cont.)

Although debris such as calcium typically cause low salt reading and not high ones, it is still recommended to clean out the cell. Conductive debris may cause an unwanted variance.

Inspect TurboCell

The TurboCell must be clean to report accurate salt readings. If the cell looks like the image on the left, then clean the cell (pg.13-15). If cell is clean, proceed to step 2D.

Reset the Average Salt Level

Reset the average salt level, twice, following the steps on pg. 11. Are the two instant salt level readings within 500ppm of each other? If not go to step 2E. If they are go to step 2F.
2. High Salt: LED ON (cont.)

If the cell requires replacement, check the model number and verify whether or not the cell is under warranty. To verify warranty, please refer to pg. 44.

Replace the TurboCell

Did the High Salt LED clear?

Part Numbers:
*T-Cell-15 OR GLX-CELL-15-W
*T-CELL-9 OR GLX-CELL-9-W
*T-CELL-3 OR GLX-CELL-3-W

The cell needs to be replaced in order for the AquaRite control center to read the salt level accurately. Replace the cell with the same model as it had prior and then reset the average salt level (instructions on pg. 11).

IF the “High Salt” LED cleared, then the problem is solved. IF not please contact technical support directly by dialing: 908.355.7995 or email via Hayward.com’s support page.

*NOTE: When replacing the TurboCell, use the GLX-CELL-xx-W when the cell is under warranty, otherwise use the T-CELL-xx part number.
To calculate how much water will need to be removed from a pool, with too much salt, follow the formula provided below (Proportional Method):

**Part I:**
Take the average depth of the pool in inches and multiply that by 3200. Then divide that number by the actual salt level in the pool (based on the independent test).

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

**Part II:**
Subtract the Ave. Pool Depth by the answer from part 1. This will give you the total number of inches to drain and replenish with fresh water to achieve a salt level of 3200.

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

**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 due so may result in damage to the pool structure or surface.
3. No Flow: LED flashing or ON

- **No Flow LED ON/Flashing**
  - Pump ON & valves are correct?
    - NO
    - Turn pump ON & correct valves.
  - Switch is preceded by 12" straight pipe?
    - NO
    - Consider moving switch.
    - NO
    - Problem solved.
  - Flow switch orientation is correct?
    - NO
    - Turn pump OFF & rotate switch.
    - YES
    - With Pump ON, did LED clear?
      - NO
      - Replace flow switch (GLX-FLO-RP).
      - NO
      - Replace Main PCB (GLX-PCB-RITE).
      - NO
      - Go to Section B.
      - YES
      - Replace flow switch (GLX-FLO-RP).
  - YES
  - Install new switch & manually close.
  - No Flow LED still ON?
    - NO
    - Problem solved.
    - NO
    - Yes
  - Install this new switch.
  - Section B
    - YES
    - Inspect wire, is it free of damage?
      - NO
      - Replace flow switch (GLX-FLO-RP).
      - YES
      - Clean Pump basket & Filter.
      - NO
      - Go to Section B.
      - YES
      - No Flow LED still ON?
        - NO
        - Problem solved.
        - YES
        - Install this new switch.

3. No Flow: LED flashing or ON

The “No Flow” LED indicates that the flow switch is not reporting consistent flow. When the pump initially turns on, this LED should flash for 10-60 seconds while the system verifies consistent flow.

Pump Running & Valves are Set?

Verify the pump is running & valves are positioned so the flow switch is receiving water. IF the pump is not ON or the valve are not correctly set, resolve that first, then recheck. IF correct go to step 3B.

Verify 12” of Straight Pipe

It is recommended for the flow switch to have 12” of straight pipe preceding it (the TurboCell counts as straight pipe). IF not, consider moving the flow switch. IF correct go to step 3C.

NOTE: The flow switch requires a minimum flow rate of 11GPM in order to properly engage. If using a variable speed pump and the No Flow LED appears, try increasing the pump run speed to ensure the flow rate is not causing the problem.
3. No Flow: LED flashing or ON (cont.)

The flow switch only works in one orientation. An arrow (molded into the top of the flow switch) indicates the direction water should be flowing through the switch.

Verify Flow Switch Orientation

Step 3C

Verify the arrows (located on switch top) are pointing in the same direction water is flowing. IF incorrect, rotate the switch until it matches the direction of water flow (DO NOT OVERTIGHTEN). IF correct go to 3D.

Unplug Connector & Inspect

Step 3D

Unplug the flow switch connector & inspect. Plug the connector back in, waiting 60 seconds. IF connector is damaged, replace flow switch (GLX-FLO-RP). IF connector is not damaged, proceed to step 3E.

The flow switch communicates through a connection similar to an RJ-11. Inspect the pins for damage or corrosion. If damaged replace the flow switch (GLX-FLO-RP) DO NOT attempt to repair.
3. No Flow: LED flashing or ON (cont.)

The flow switch wire carries the signal between the AquaRite and the flow switch. If damaged, the switch reports as an open circuit, which will suspend chlorination.

Inspect Flow Switch Wire

Step 3E

IF the flow switch wire is damaged, the signal will be interrupted so replace the flow switch (GLX-FLO-RP). IF the wire is not damaged, proceed to step 3F.

Inspect Filter & all Baskets

Step 3F

Check Filter pressure & pump basket for debris. Remove debris, backwash / clean filter. Turn pump ON & wait 60 seconds. IF LED is still ON go to 3G.

The Flow Switch is a safety switch. DO NOT attempt to repair the wire or the switch in any way. If compromised replace the switch (GLX-FLO-RP).
3. No Flow: LED flashing or ON (cont.)

**TIP:** Carry a working flow switch, because it is a great tool to have available. It will help when trying to determine whether an existing switch is failing or the main board is not sending or receiving the signal.

**Test with New Switch**

Plug a confirmed (working) Flow Switch into the control center and hold it closed, manually, for 60 seconds. Monitor the “No Flow” LED. IF LED goes out, install this new switch. IF LED remains on go to step 3G.

**Replace Main PCB**

Replace the main circuit board (**GLX-PCB-RITE**). Then, turn pump ON & monitor the “No Flow” LED. IF the LED goes out, the problem is solved. IF the LED remains on contact technical support (908.355.7995).
4. Display ONLY, Lights ONLY, or Neither

- Lights ONLY, Display ONLY, or Neither
  - 120/240VAC present? Input power
    - NO → Resolve source power issue
    - YES → Jumpers match source power?
      - NO → Power OFF & correct jumpers
      - YES → 18-33VDC between red & black wires?
        - NO → Reseat display, 5-10VDC between pins 2-4?
          - NO → Replace display (GLX-PCB-DSP)
          - YES → YES
        - YES → Replace Main PCB (GLX-PCB-RITE)

- Section B
  - Fuse blown?
    - YES → Replace Fuse
    - NO → 24VAC between two yellow wires?
      - YES → Test rectifier Input
        - YES → 12VAC between orange & ground?
          - YES → Wired correctly?
            - YES → Replace Transformer (GLX-XFMR)
            - NO → Replace Main PCB (GLX-PCB-RITE)
          - NO → Replace Rectifiers (GLX-DRK)
        - NO → Correct Wiring
      - NO → Replace Main PCB (GLX-PCB-RITE)

- 120VAC between blue & white, violet & grey?
  - NO → Replace Main PCB (GLX-PCB-RITE)
4. Display ONLY, Lights ONLY, or Neither

If the power center, displays LEDs ONLY, a Display reading ONLY, or Neither, then the system is exhibiting a power related symptom. First verify the incoming power. It should be either 120 or 240VAC +/- 15%. Then match the jumper configuration.

**Test Incoming Power**

- **Step 4A**
  - Test incoming power for 120/240VAC (+/- 15%). IF no/low voltage, then the problem resides in the power source and NOT the AquaRite control center. IF power is correct, go to step 4B.

**Match Jumpers & Incoming Power**

- **Step 4B**
  - **240VAC**
    - Verify jumper configuration matches incoming power. FOR 240, jumpers should be stacked between terminals 2&3 (shown on left).
  - **120VAC**
    - FOR 120VAC, jumpers span 1&2. IF incorrect, power off and change. IF correct go to 4C.

*New boards come factory preset with jumpers in the 240VAC position. ALWAYS double check power before changing jumpers. The board may be damaged if the supplied power and jumper configuration do not match.*
The display requires a minimum of \(5\text{VDC}\) to function correctly. The rectifier output should provide \(18-33\text{VDC}\).

The power off the rectifiers not only provides the cell power during chlorination cycles, it also serves to power other board related functions (such as the display function).
4. Display ONLY, Lights ONLY, or Neither (cont.)

The rectifiers take AC voltage from the transformer and convert it to DC voltage for both main board and chlorination functions.

Inspect Rectifier Wiring

Step 4E

Make sure the rectifiers are wired as shown above. IF the rectifiers are incorrectly wired, correct the wiring and retest. IF the rectifiers are wired, as shown above, proceed to step 4F.

*Cutoff Corner: (Bottom Right)

Test Transformer Output

Step 4F

Verify 24VAC between the two yellow wires (this represents the secondary side of the transformer). IF no/low voltage go to step 4G. IF voltage is correct, jump to step 4H.
4. Display ONLY, Lights ONLY, or Neither (cont.)

The transformer input is split into four wires. The blue and the white carry 120VAC from the main PCB to the transformer, as do the grey and violet.

Test Transformer Input

Step 4G

Disconnect the transformer input wires (blue, white, violet & grey). Test the board, first between the blue & white posts for 120VAC, then violet & grey for 120VAC. IF low/no, replace main board (GLX-PCB-RITE). IF voltage is correct, replace the transformer (GLX-XFMR).

Test the 20A Fuse

Step 4H

When voltage shows up on the transformer output, the transformer, and everything before it, is in good health. Test the 20A fuse (located on the right side of the board) for continuity. IF the fuse is bad, replace it (GLX-F20A-10PK). IF okay, go to step 4I.

NOTE: It is also important to visually inspect the fuse for damage. In rare cases, continuity may be measured in spite of a compromised fuse.
The orange wire carries 12VAC of the rectifier voltage, from the main PCB to the top rectifier. Verify all connections before proceeding.

Test Rectifier Input

Disconnect the orange wire and test for 12VAC on the board against ground (where the orange wire plugs in). If no/low voltage, replace the main board (GLX-PCB-RITE). If voltage is okay, replace the rectifiers (GLX-DRK).
5. LCD: Displaying “HOT” or “COLD”

- LCD Displays HOT or COLD
  - Check water temperature
  - Is water temp above 139 or below 51?
    - YES: Raise or lower water temp to clear message
    - NO: Clean the Cell
      - Did error clear?
        - YES: Problem solved
        - NO: Is the cell downstream of a running heater/chiller?
          - YES: Move Cell or bypass heater/chiller
          - NO: Replace the TurboCell
5. LCD: Displaying “HOT” or “COLD”

The LCD display will read “COLD” when the cell is reading water temps below 50°F. The LCD display will read “HOT” when the cell is reading water temps above 140°F.

Inspect the cell for calcification. Clean the cell & reset the average salt reading (pg. 11). If the message still appears AND the water temperature is not greater than 139°F or lower than 51°F, then go to 5B.

To override a “COLD” message for 24 hrs., move the toggle switch from OFF, up to Super Chlorinate (without stopping on Auto). This will override the message for 24 hours. If the system reads “HOT” it is possible the temperature sensor (within the cell) has failed and the cell will require replacement.
AquaRite®
Additional Information
## Cell Compatibility Chart

<table>
<thead>
<tr>
<th>Cell Type</th>
<th>Control Center Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AquaRite</td>
</tr>
<tr>
<td>T-CELL-3 &amp; GLX-CELL-3-W</td>
<td>1.50 or later</td>
</tr>
<tr>
<td>For residential pools up to 15,000 gallons</td>
<td></td>
</tr>
<tr>
<td>T-CELL-5 &amp; GLX-CELL-5-W</td>
<td>1.50 or later</td>
</tr>
<tr>
<td>For residential pools up to 18,000 gallons</td>
<td></td>
</tr>
<tr>
<td>T-CELL-9 &amp; GLX-CELL-9-W</td>
<td>1.50 or later</td>
</tr>
<tr>
<td>For residential pools up to 25,000 gallons</td>
<td></td>
</tr>
<tr>
<td>T-CELL-15 &amp; GLX-CELL-15-W</td>
<td>All revisions</td>
</tr>
<tr>
<td>For residential pools up to 40,000 gallons</td>
<td></td>
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**Software Revision: Cell Compatibility Chart**
## 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.
Chlorine Output & Salt Levels

1. With Firmware Revision 1.55 (5/8/2009) the cycle time (reversal of polarity) changed from 120 minutes (2 hrs) to 180 minutes (3 hrs). When you set the ‘Desired Output %’ dial on the main panel this sets the level of salt cell operation as a percent of the operating time of each cycle. 50% is the factory default. Below are simple examples for 2 and 3 hr cycle times.

   • **2 hr cycle**: If the output is set at 50% and the total time for operation is 8 hrs, the salt cell will operate (and produce chlorine) for 50% (1 hr) of each 2hr cycle for a total of 4 hrs.

   • **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 hrs 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. Move the switch to ‘Super Chlorinate’ to enable. This will cause the system to produce chlorine at 100% output for 24 hours assuming the pump remains on constant for 24 hours. Once 24 hours expires, the chlorine output dial will once again drive the chlorine output percentage.
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 % when the heat of the season, when a-typical temperatures are recorded.
# Reading Serial Numbers

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