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 dead front
- Replace damaged wiring immediately
- 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.
ProLogic: Main PCB Layout

A  Remote DSP comm (RS485 – 10VDC)
B  Temp sensor terminal block (5VDC)
C  Heater 1&2 terminal block (dry contacts)
D  Valves 1-4 & 4Amp fuse (24VAC)
E  Cell Plug for chlorination
F  High Voltage Relays (top – Filter, Lights, AUX1, AUX2; bottom (AUX 3-6).
G  Flow Monitor (flow switch connector)
H  Transformer Input (120VAC X 2)
I  System Input Power (120VAC from breaker)
J  Rectifier input (24VAC for Chlor. circuit)
K  Transformer Output (24VAC)
L  20Amp Fuse (protects Chlor. circuit)
M  Rectifier Output (18-33VDC – Chlor. circuit)
N  Sense & Dispense output (120VAC)
O  Local Display power (11VDC)
P  Plugs for accessory equipment (11VDC)
ProLogic®

How To:
Follow these steps **ONLY** if you wish to restore the system to factory default.

**WARNING:** Resetting the system to factory default will wipe out all configuration changes, schedules, and settings preferences.

### How To: Reset Config. to Default

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

2. **Step 2**
   - Press the (<) one time, ‘Reset Config. to Default’ should appear on the display. Note: pressing the (>) repeatedly in configuration also eventually lead to this screen.

3. **Step 3**
   - Press the (+) key to reset. The system will ask ‘Are you sure?’, press ‘Menu’ to cancel, OR the (+) button again to confirm. Warning: Once confirmed, all stored information will be erased.

4. **Step 4**
   - Once the reset has been completed, the display will report ‘Config. Reset Confirmed’. To exit Config., press the ‘Menu’ button, to continue programming press the (>) button.

**Note:** It is important to write down the system’s configuration, settings, and timers prior to resetting the Configuration to Default.
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.

**Step 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.

**Step 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.

**Step 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.

**Step 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.
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: Change Cell Type

Follow these steps **ONLY** if Salt Chlorination is Enabled. It is important to verify which cell type is being used AND to verify the system is configured for the correct model. If incorrectly set, salt readings and chlorinator operations will be unreliable.

**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’.

**Step 2**
Press the (>) until ‘Chlor. Config.’ appears on the display. Press the (+) button, one time, to enter into the Chlorinator Configuration screen.

**Step 3**
The display should show ‘Chlorinator Enabled’ if not, press the (+) button to Enable it. Then press the (>) two times.

**Step 4**
If the cell type shown does not match the model plumbed-in, press the (+) or (-) until it matches. Then press the ‘Menu’ to exit.

Note: If the ‘Cell Type’ option does not appear in the ‘Chlor. Config.’ menu, then review the system’s model number to identify the type of cell that should be used with the system. Some earlier board revisions could not be configured for different cell types.
How To: Reset 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.**

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

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

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

**Step 4**
Once complete, press the ‘Menu’ button to exit.
How To: Clean the TurboCell

Cell cleaning frequency is dependent on several factors; pH & calcium levels have the greatest effect on how often cells require 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

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 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 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.
The check system > ‘Inspect Cell’ message indicates that the system is recommending the TurboCell should be inspected and cleaned (if necessary). This message will appear 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’ message

1. IF the ‘Inspect Cell’ alarm appears, then press the ‘Menu’ button until ‘Default Menu’ screen appears, navigate using the (>) until ‘Inspect Cell press + to reset’ appears, then promptly press the (+) key.

2. 

3. 

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. 8 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. 12.
ProLogic®
Troubleshooting
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<td><em>GLX-PL-LOC-xx</em>&lt;br&gt;<em>substitute appropriate model number (xx=P4, PS4, PS8, or PS16)</em></td>
<td><strong>Local Display</strong></td>
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1. No Cell Power/Low Volts

- **No Cell Pwr. /Low Volts**
  - Verify 24VAC on the transformer output
  - **Is 24VAC present?**
    - **YES**
      - Check 20A fuse
    - **NO**
      - Verify transformer input
      - **Is fuse damaged?**
        - **YES**
          - Replace fuse (GLX-F20A-10PK)
        - **NO**
          - Is wiring correct?
            - **YES**
              - Replace main board (see pg. 17)
            - **NO**
              - Correct wiring
    
- **Replace main board (see pg. 17)**
  - Replace Transformer (GLX-XFMR)
  - **Replace Transformer (GLX-XFMR)**
    - **YES**
      - **120VAC present on input power, terminal block?**
        - **YES**
          - Replace main board (see pg. 17)
        - **NO**
          - Resolve source power issue
  - **NO**
    - **120VAC present on input power, terminal block?**
      - **YES**
        - Replace main board (see pg. 17)
      - **NO**
        - Test Main PCB input power
          - **Is wiring correct?**
            - **YES**
              - Replace main board (see pg. 17)
            - **NO**
              - Correct wiring
  
- **YES**
  - Replace main board (see pg. 17)

- **NO**
  - **120VAC present on input power, terminal block?**
    - **YES**
      - Replace main board (see pg. 17)
    - **NO**
      - Resolve source power issue

- **Replace Rectifier wiring**
  - **YES**
    - Resolve source power issue
1. No Cell Power/Low Volts

‘No Cell Power’ & Low Volts implies the chlorinator cycle has been interrupted due to no/low voltage detected when the cell power relay was turned on. If the system reports ‘CELL POWER ERROR’, replace the main board (see pg. 17).

Test transformer output

Verify that 20-24VAC is present between the two yellow wires (this represents the transformer output). IF no/low volts, proceed to step 1B. IF voltage is correct, jump ahead to step 1D

Test transformer input

Disconnect the transformer input wires. On the PCB, verify 120VAC between blue & white posts, & 120VAC between violet & grey. IF no/low voltage, go to 1C. IF voltage is correct, replace transformer (GLX-XFMR).
1. No Cell Power/Low Volts (cont.)

‘No Cell Power’ means the current chlorinator cycle has been interrupted due to no voltage being detected when the cell power relay was turned on.

PCB Input Power

Verify the ProLogic is receiving 120VAC between the black & white wires on the “Control Power” side of the terminal block. IF no/low volts, correct at the breaker. IF correct replace the main PCB board (see pg. 17).

Inspected Fuse & Rectifier wiring

Visually inspect & test the 20Amp fuse. IF fuse is blown, replace it (GLX-F20A-10PK). IF fuse is OK, inspect the rectifier wiring. IF rectifier wiring is correct, replace the main board (see pg. 17).

NOTE: Verify the main board’s input power comes from positions 3 & 4 on the terminal block, which is labeled “Control Power”. The two bottom left terminal blocks are factory installed for SENSE & DISPENSE OUTPUT POWER ONLY, AND SHOULD NOT BE USED TO POWER THE MAIN SYSTEM BOARD.
2. Blank Display/No LEDs

**Blank Display/NO LEDs**

- Power OFF & verify display connections
  - Local display cable free of damage?
    - NO: Contact tech support for replacement (908)355.7995
    - YES: Remove terminal blocks and power cycle
      - Is Display normal?
        - NO: System has a 2amp, integrated fuse?
          - NO: Replace main board (see pg. 17)
            - YES: Test 3amp (violet) fuse
              - YES: Fuse has continuity? Replace fuse (GLX-F3A-10PK)
              - NO: Replace local display: (see pg. 17)
        - YES: Is Display normal?
          - NO: Solve problem in terminal block or comm equipment.
          - YES: Isolate equipment to find root cause
    - YES: Local display power is 11VDC?
      - NO: Replace main board: (see pg. 17)
      - YES: Is 120VAC present?
        - NO: Resolve source power issue
        - YES: Test incoming power
          - YES: Fuse has continuity? Replace fuse (GLX-F3A-10PK)
          - NO: Replace main board (see pg. 17)
2. Blank Display/No LEDs

If the local display shows a blank display or no lights are illuminated an abrupt power outage may have been the cause, in this case, resetting the unit may correct this problem.

Verify display connections

Step 2A

Turn off power at the main breaker and remove the display wiring harness. Inspect for damage and reseat. IF damaged, contact technical support for a replacement cable (908.355.7995). IF okay, go to 2B.

Disconnect terminal blocks

Step 2B

With power OFF, remove the terminal blocks on the left side of the PCB (including comm equipment). Restore power. IF display appears, problem resides in the terminal blocks. IF display is still OFF, go to 2C.

NOTE: If the blank display or No LEDs symptom is being caused by the comm equipment or in the terminal blocks. Isolate the problem by plugging in one piece of equipment at a time, until the problem reappears.
2. Blank Display/No LEDs (cont.)

ProLogic main boards have a 2amp, permanently installed fuse that protects the local display circuit. AquaLogic main boards had a 3amp violet ATO style fuse that protected the local display circuit.

Test fuse

With power OFF, test the 2amp fuse integrated into the board. IF this fuse is not present, go to step 2D. IF fuse has continuity, proceed to step 2E. IF the fuse is damaged, replace the main board (see pg. 17).

Test 3amp fuse

With power OFF, test the 3amp fuse, located near the local display. IF the fuse is bad, replace it (GLX-F3A-10PK). IF the fuse has continuity, go to step 2E. NOTE: this style of fuse is only found on AquaLogic systems.
2. Blank Display/No LEDs (cont.)

If the local display shows a blank display or no lights are illuminated an abrupt power outage may have been the cause, in this case, resetting the unit may correct this problem.

Test incoming power

Turn the main system breaker ON and verify that 120VAC of input power is present. IF no/low voltage, correct the source power issue. IF voltage is correct, proceed to step 2F.

NOTE: Verify the main board’s input power comes from positions 3 & 4 on the terminal block, which is labeled “Control Power”. The two bottom left terminal blocks are factory installed for SENSE & DISPENSE OUTPUT POWER ONLY, AND SHOULD NOT BE USED TO POWER THE MAIN SYSTEM BOARD.

Test local display power

With power OFF, disconnect display, and restore power. Verify, across pins 1 & 3 (left to right) for 5-11VDC. IF no/low voltage replace main board. IF correct, replace display (see pg. 17).
3. CSM Comm Error

- **CSM Comm Error**
  - Is a chemistry sensing module installed?**YES**
  - Verify connections & inspect CSM wire for damage
    - Wire is damaged?**YES** Replace CSM Module (GLX-SD-ELEC-MOD)
    - Wire is damaged?**NO** Test Comm port power
      - 5-10VDC between pins 1 & 3?**YES** Replace CSM Module (GLX-SD-ELEC-MOD)
      - 5-10VDC between pins 1 & 3?**NO** Replace main board (see pg. 17)
  - Disable Chemistry Sensing
    - Problem solved

- Is a chemistry sensing module installed?**NO**
  - Replace main board (see pg. 17)
3. CSM Comm Error

CSM stands for (Chemistry Sensing Module), this error appears when Sense & Dispense is enabled, but the Chemistry Sensing Module is not found.

Verify whether or not a HL-CHEM (sensing module and enclosure) is installed. IF not installed, go to step 3B to disable this feature. IF a sensing module is installed, proceed to step 3C.

HL-CHEM
CSM = Chemical Sensing Module

Step 3A

Verify HL-CHEM is installed

Step 3B

Disable sensing system

3. CSM Comm Error (cont.)

The Chemistry Sensing Module plugs into one of the three available communication ports of the ProLogic (which are located on the top left side of the main board).

Verify wires & connection

Verify wire between HL-CHEM and ProLogic, is not damaged. Unplug CSM connector from main board & plug it back in. IF wire/connector is damaged replace (GLX-SD-ELEC-MOD). IF free of damage, go to step 3D.

Test comm port

While powered, test for 5-10VDC between pins 2 & 4 (left to right). IF no/low voltage, replace the main board (see pg. 17). IF voltage is correct, replace the chemistry sensing module (GLX-SD-ELEC-MOD).

NOTE: If the cable that runs from the HL-CHEM to the ProLogic board is damaged then the chemistry module MUST be replace. DO NOT attempt to repair damaged cable.
4. Chlorinator OFF, High Salt/Amps

Chlor. Off High Salt/Amps

Test salt level

Is salt level 3400 or below?  

YES

Reset Chlorinator diagnostics

NO

Dilute salt level and reset average salt

Is voltage reading above 35V?  

YES

Replace main board (see pg. 17)

NO

Contact tech support (908)355.7995

Verify correct TCELL type in configuration

Does cell model match programming?  

YES

Problem solved

NO

Reset average salt, is error still present?

NO

Change programming to match installed cell model
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 4E. IF correct, go to 4B.

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 4C.

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’.
4. 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 reflect the active information related to the chlorinator circuit. If the ProLogic is reporting a voltage of 35V or higher, replace the main board (see pg. 17). If voltage is under 35V, proceed to step 4D.

Verify cell programming

NOTE: The chlorinator circuit should never exceed 33Volts. If the voltage reads higher than 33V, under the ‘Diagnostic Menu’ the main board will need to be replaced.
4. Chlorinator OFF, High Salt/Amps (cont.)

The salt concentration will need to be reduced. To calculate how much water to drain, follow the formula provided below (Proportional Method):

Part I

(Ave. Pool Depth” X 3200) 
Actual Salt level in Pool

Part 1: 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).

Part 2: 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.

Part II

Ave. Pool Depth - Answer from Part 1 = Amount of Water to Drain

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

Example: Part I

54 X 3200 = 172800
4500

= 38.4

Example: Part II

54 – 38.4 = 15.6”

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.
5. Comm Error 1 OR 2

- **Comm Error 1 or 2**
  - Power down control for at least 2 minutes
  - Comm Error still present?
    - YES: Disconnect all terminal blocks and comm equipment
    - NO: Problem solved

  - Did Comm Error clear?
    - YES: Replace main board (see pg. 17)
    - NO: Replace local display (see pg. 17)

  - Test local display wiring harness
    - YES: Harness has continuity?
      - YES: Contact tech support for replacement (908)355.7995
      - NO: Isolate equipment to find root cause
    - NO: Problem is in terminal block or comm equipment.
5. Comm Error 1 OR 2

Comm Error 1: Typically occurs after a brownout or power outage and typically can be cleared by power cycling.

**Power cycle**

Move breaker (supplying the ProLogic with power) to the Off position for 2 minutes, then restore power. IF Comm Error clears, then the problem is solved. IF Comm Error is still present, go to step 5B.

**Disconnect terminal blocks**

With power OFF, remove the terminal blocks on the left side of the PCB (including comm equipment). Restore power. IF Comm Error clears, the problem resides in the terminal blocks. IF still present, go to 5C.

**NOTE:** With ProLogic revision 4.10, a heater terminal block was added (moving the heaters off the main sensor block which was common in older revisions). Verify all connected heaters are wired to the correct terminal position, as this can cause display problems and communication errors.
5. Comm Error 1 OR 2 (cont.)

Comm Error 2: Typically appears when power is incorrectly applied to the communication circuit, a problem with the local display, OR in some rare cases the main circuit board.

Test the local display harness

Replace the local display

Inspect the local display wiring harness for damage and test continuity (matching wire colors). IF continuity is found on each wire, go to step 5D. IF not, contact tech support for a replacement (908)355.7995.

Replace the local display (matching the model number inside control door with the replacement part number on pg. 17). IF replacing the display does not solve the problem, replace the main board (see pg. 17).
6. Heater Not Firing

- **Heater Not Firing**
  - **Is main circulation pump running?**
    - **NO**
      - **Turn ON Pump, Is pump ON?**
        - **NO**
          - **Inspect ‘Check System’ LED**
            - **Is it ON?**
              - **YES**
                - **Clear all errors first**
              - **NO**
                - **Raise heater set points to 104°F**
    - **YES**
      - **Exit service mode**
        - **Did the heater fire?**
          - **YES**
            - **Problem solved**
          - **NO**
            - **Did heater fire?**
              - **YES**
                - **Contact tech support (908)355.7995**
              - **NO**

- **Test both heater term. blocks to ground for 12-24VAC**
- **The problem resides on the heater; it either has an error message, it is not in bypass, is experiencing a failure, OR the bypass wires are damaged**
- **Replace main board (see pg. 17)**
6. 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 (12-24VAC) should be returned to it.

Check main circulation pump

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 7. IF pump is running, proceed to step 6B.

Verify the heater LED is ON

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 6C. IF the heater LED is illuminated, proceed to step 6D to test the heater relay.
6. Heater Not Firing (cont.)

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

Step 6C

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 6F. IF the heater LED illuminates but the heater does not fire, go to step 6D.

Test the heater relay

Step 6D

With the heater LED illuminated, test the top heater terminal for 24VAC against ground, then do the same for the bottom terminal against ground. IF both OR neither terminals show 24VAC, go to step 6E. IF only one terminal shows voltage, replace main board (see pg. 17).
The ProLogic supports features like Solar Priority. Verify that no additional heating is occurring, as this can take precedence over automatic heating.

Troubleshoot heater

Verify the heater has power AND inspect heater for errors. If the heater displays an error please contact tech support (908) 355.7995. IF no errors appear, test each wire in the heater’s bypass loop for 24VAC. IF voltage is present on both or neither wires, the heater has an error, is not in bypass, or may be experiencing a failure. IF voltage is present on only one wire, then bypass wires are likely damaged.

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 tech support (908)355.7995. Prior to calling, under the ‘Settings Menu’ return set points back to their original state.
7. Auxiliary Equipment Inactive

- **AUX Equip. Inactive**
  - Inspect display, verify the AUX LED is ON
  - Verify 20-25VDC on low voltage side of relay
  - Is LED illuminated?
    - YES: Section B
      - Relay line power present? (120/240VAC)
      - NO: Correct source power issue
      - Load power present? (120/240VAC)
    - NO: Is AUX plugged into correct relay socket?
      - YES: Is voltage present?
        - YES: Automation is preventing manual turn-on
          - YES: Inspect for interlocks & call tech support (908) 355.7995
          - NO: Replace AUX relay (GLX-RELAY)
          - NO: Go To Section B
        - NO: Problem resides in the wiring or equipment
          - YES: Replace main board (see pg. 17)
          - NO: Replace local display (see pg. 17)
      - NO: Is the equipment running?
        - YES: Replace AUX relay (GLX-RELAY)
        - NO: Go To Section B
      - NO: Put the system in service mode & press AUX button
- Is LED illuminated?
  - NO: Replace local display (see pg. 17)
  - YES: Go To Section B
The ProLogic Relays are rated for 120/240VAC, 300W, 25A. To avoid damage, make sure wired equipment does not exceed these specifications.

7. Auxiliary Equipment Inactive

Inspect relay LED

Step 7A

The ProLogic will only attempt to engage a relay if the specific Auxiliary LED is illuminated on the display. Press the Auxiliary button that corresponds with the relay in question. IF the relay LED fails to turn ON, go to step 7B. IF ON, jump to step 7D.

Service mode

Step 7B

Activate service mode & press the relay button. IF the LED illuminates, a control related feature is overriding the relay, preventing normal operation from occurring (example: interlock...etc.), go to step 7C. IF LED does not turn ON, replace the local display (see pg. 17).
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, go to step 7D. 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 7C

While in service mode: IF the equipment wired to the relay in question does not run/turn on, go to step 7D. 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.

Test relay: low voltage side

Step 7D

With the Auxiliary LED illuminated, remove the relay bracket, providing access the low voltage side of the relay. Test suspect relay for 20-25VDC, between the red & black wires. IF no/low voltage is present, proceed to step 7E. IF correct, jump to step 7F to test the high voltage side.
There are two relay sockets on the ProLogic board. IF the ProLogic is a P-4, PS-4, OR PS-8V then the top socket should be filled and the bottom should remain open.

Inspect Relay wiring harness

Verify whether the Auxiliary in question is mounted in the top or bottom set or relays. Make sure the wiring harness is plugged into the correct socket on the board. IF incorrect, power down & move wiring harness & retest. IF correct, replace main board (see pg. 17).

Test relay: source power (line side)

To verify the relay is receiving power test the first terminal against ground to verify 120VAC is present. IF wired for 240VAC, also test the third terminal against ground. IF terminal 1 (120V) OR 1 & 3 (240V) do not have power, correct at the breaker. IF correct go to 7G.
With the Auxiliary LED illuminated, test the load side of the relay off the second terminal to ground (left to right) for 120VAC. For 240V equipment, also test the fourth terminal to ground for 120VAC. IF no voltage is present on either 1 OR 1 AND 3, then replace the relay (GLX-RELAY). IF power is correct, the problem resides in the equipment wiring or equipment itself.

Test relay: high voltage (load side)
# Cell Compatibility Chart

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<th>Ohms</th>
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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.
## Reading Serial Numbers

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