Section 7. Troubleshooting

NOTE: Turn off power to unit prior to attempting service or repair.

7.1 Problems and Corrective Action

Problem	Possible Cause	Corrective Action
Low or no chlorine.	Low *stabilizer* (cyanuric acid) level in pool water. For outdoor pools only.	Add stabilizer to maintain 30 - 50 ppm per pool professional's recommendations.
	Insufficient operating hours of the unit.	Increase the system operating time per day. See *Section 5, Operating Instructions*.
	CHLORINE PRODUCTION percentage set too low or off at 00%.	Increase chlorine production by pressing the Chlorine Production Rate Adjustment button (arrow button B). See *Section 5, Operating Instructions*.
	Recent increases in weather temperature without increasing the chlorine production of your unit.	Increase chlorine production by pressing the Chlorine Production Rate Adjustment button (arrow button B). See *Section 5, Operating Instructions*.
	Temporary loss of chlorine due to heavy organic load - rain, leaves, fertilizer or heavy bather load. Pets using pool.	Set "Boost" mode and allow to run for 24 hours. Recheck. If still too low, Super Chlorinate with outside source. (Take pool water sample to Pool Professional). See *Section 5, Operating Instructions*.
	Low (Less than 2.5 gpl) salt level in pool water.	Test salinity by pressing the Test Salinity button. See *Section 4, Table 2*.
	High nitrate level.	Contact a pool professional.
	Metals present in pool water.	Contact a pool professional.
	New pool water. Not shocked properly upon startup.	Super Chlorinate Pool. See *Section 5.4, Startup*.
	Clogged or dirty cell.	Remove cell for inspection. Clean if necessary. See *Section 6, User Maintenance Instructions*.

Problem	Possible Cause	Corrective Action
No display on LCD (*Screen is blank*).	No Power to Unit.	Check power. Turn on pump. 1. Defective automatic timer or pump switch. 2. Loose connection at automatic timer or pump switch.
	Loose ribbon cable between front and back PC board.	Check that ribbon cable is fully inserted into connector.
	Incorrectly wired. Unit not wired for 240 VAC.	Check that unit is correctly wired for 240 VAC and connected to 240 VAC.
	Loose or bad connection at white connector between transformer and PC board.	Check connector at white plug to insure proper connection. If burnt connector contact authorized service representative.

Problem	Possible Cause	Corrective Action
“Cell On” indicator does not come on.	Chlorine Production set to 00%.	Adjust CHLORINE PRODUCTION to desired percentage.
If No Flow also….	Insufficient water flow. Cell is plugged with debris, pump has lost prime.	Remove obstruction and/or clean cell. See *Section 6.3, Electrolytic Cell Cleaning*. Prime pump if necessary.
If No Flow also….	Flow/Temp/Salinity Sensor not plugged in.	Plug in flow/temp/salinity sensor. See *Section 2, Figures* 2.
	Salt level below 2.0 gpl (2000 ppm).	Add salt as described in *Section 4.6*.

Problem	Possible Cause	Corrective Action
“No Flow” indicator stays on continuously.	Pump fails to provide sufficient water flow.	Check for correct operation of the pump. Ensure there is no loss of pump prime or clogged strainer baskets.
	Closed valves.	Check and correct all valve alignments.
	Dirty filter.	Follow filter cleaning procedures.
	Obstruction in the electrolytic cell.	Remove cell for inspection. Follow cleaning procedures. See *Section 6.3, Electrolytic Cell Cleaning*.
	Flow/Temp/Salinity Sensor not installed properly.	Ensure that the flow/temp/salinity sensor is installed according to *Section 3, Figure 9*. If not, contact a pool professional.
	Flow/Temp/Salinity Sensor not plugged in.	Plug flow/temp/salinity sensor into connector on power centre printed circuit board. Turn power to unit off and back on (Cycle Power). See wiring diagram in Figures 2. See also, *Section 6.4, Flow/Temp/Salinity Sensor Cleaning, Step 4*.
	Flow/Temp/Salinity Sensor elements covered with PVC glue, taped over, or covered with other debris.	Remove and clean flow/temp/salinity sensor and reinstall. See *Sections 6.4*.
	Defective flow/temp/salinity sensor.	Contact a pool professional.

Problem	Possible Cause	Corrective Action
Salt level too high.	Too much salt has been added to pool.	Backwash or partially drain pool and dilute with fresh water until salinity returns to 3.0 gpl to 3.5 gpl.

Problem	Possible Cause	Corrective Action
Chlorine level too high.	Electrolytic cell is manufacturing too much chlorine.	Decrease the chlorine production rate adjustment button (arrow button A). See Section 5, Operating Instructions. If chlorine output at the lowest setting consistently provides for excessive chlorine levels, decrease daily pump operation time as much as necessary. If chlorine output at lowest setting is still excessive then the salt water chlorinator system is oversized for the pool.

Problem	Possible Cause	Corrective Action
“Service” Indicator On.	Low salt level in pool water.	Test salinity. Add salt as described in *Section 4.6*.
	Cell requires cleaning.	Refer to Maintenance Procedure for acid wash cleaning. See *Section 6.3, Step 2*.
	Cell not working properly after cleaning	Contact a pool professional.
	DC power cord not properly connected to the cell.	Check connection. Check for dirt or corrosion around DC cord contacts at cell. Check Cell studs for same.
	Flow/Temp/Salinity Sensor not plugged in.	Plug flow/temp/salinity sensor into connector on power centre printed circuit board. (Cycle Power).
	Water temperature too low	Winterize your pool. See *Section 6.5, Winterizing*.
	All the above have been checked and indicator light is still on.	Contact a pool professional.

Problem	Possible Cause	Corrective Action
Salt Level Too Low.	Not enough salt added on start up.	Add salt to pool, 3.0 gpl to 3.5 gpl. See *Section 4.6*.
	Heavy Rainfall.	Add salt to pool, 3.0 gpl to 3.5 gpl. See *Section 4.6*.
	Leak in pool.	Repair pool.
	Dirty flow/temp/salinity sensor contacts or faulty sensor.	Remove and clean flow/temp/salinity sensor contacts. Check flow/temp/salinity sensor cable for damage. See *Section 6.4*. Verify salinity with Myron “L” metre calibrated for NaCl, titration test units, or other salt metres. Please be aware that salt test strips have a large variance in readings (400 - 800 ppm).

Problem	Possible Cause	Corrective Action
Chlorine Odour.	Presence of excess chloramines (combined chlorine).	Manually shock the pool following the directions in *Section 5.4.1* Shocking.

Problem	Possible Cause	Corrective Action
Cloudy Water, Slimy Walls of Pool.	Combined algae and bacteria growth.	Brush down the affected walls and follow the directions in *Section 5.4.1* Shocking.

Problem	Possible Cause	Corrective Action
Eye and/or skin irritation.	Improper water balance.	Balance the water to recommended levels in *Section 4.4.*

Problem	Possible Cause	Corrective Action
Scale formation on pool equipment. NOTE: To clean the deposit (scale) on the electrolytic cell plates, see *Section 6.3*.	Incorrect pH causing metals to come out of solution.	Adjust total alkalinity to 100-120 ppm. Then adjust pH to within the range 7.2-7.8. See *Section 4.4.*
	High total hardness.	Dilute pool with fresh water. Consult your pool professional regarding use of a sequestering agent.

7.2 Service Codes

Code Number	Possible Cause	Corrective Action
120	Low current in forward direction to cell.	1. Clean cell if necessary (see *Section 6.3*). 2. Check DC cord.
121	Low current in reverse direction to cell.	1. Clean cell if necessary (see *Section 6.3*). 2. Check DC cord.
123	Extremely Low current to cell.	1. Clean or replace cell if necessary (see *Section 6.3*). 2. Check DC cord.
124	Higher than normal current to cell.	Contact a pool professional.
125	Cell needs to be cleaned.	Clean cell if necessary (see *Section 6.3*).
126	Low current in forward direction and VAC input voltage below 100/200 VAC.	Contact a pool professional.
127	Low current in reverse direction and VAC input voltage below 100/200 VAC.	Contact a pool professional.
144	Low salinity (below 2.0 gpl).	Add salt to pool to achieve 3.0 gpl (see *Section 4.6*).
145	High salinity (above 4.0 gpl).	Backwash filter if a DE filter is installed. Partially drain pool and dilute with fresh water until salinity returns to 3.0 to 3.5 gpl.
170	Possible front board service condition or unit not correctly wired to 120 VAC.	Contact a pool professional.
171	Possible backboard service condition.	Contact a pool professional.
172	Flow sensor service condition or flow sensor is unplugged.	Contact a pool professional.
173	Low VAC input voltage and on board power supply is not regulated or unit not correctly wired.	Unit wired to improper AC voltage. Contact a pool professional.
174	Pool temperature is too high for operation of AquaPure®.	Flow/salinity sensor indicates water temperature at sensor above 108ºF (42°C). Reduce water temperature.
175	Flow sensor air lock condition or very low salinity.	Verify proper flow/temp/salinity sensor installation (see *Section 3, Figure 9*). Check salinity with Myron “L” metre calibrated for NaCl or test strips. Add salt as necessary (see *Sections 4.5 through 4.6*).

7.3 Level 2 Service Codes

If you encounter a Level 2 Service Code, contact your local pool professional for service.

Code Number	Possible Cause	Corrective Action
180	Heated sensor element not heating. (Generates 172 code)	Contact a pool professional.
181	Flow sensor temperature sensor failure. (Generates 172 code - flow sensor service)	Contact a pool professional.
182	Salinity sensor sees less than 0.2 gpl of salt, no salt in pool or sensor air locked. (Generates 175 code – flow sensor air lock)	Contact a pool professional.
183-186	Flow salinity sensor temperature probe error codes. (They will all generate 172 codes which indicate flow sensor service is required)	Contact a pool professional.

Code Number	Possible Cause	Corrective Action
187	Front board power supply either too low or too high. (Generates 173 – Low input voltage code if Level 2 code 188 is present) (Generates 170 code if 188 is not present)	Contact a pool professional.
188	VAC input voltage is too low. (Generates 173 code if Level II code 187 is present)	Contact a pool professional.
189	Relay not conducting in the forward direction. (Generates 171 code – Backboard service)	Contact a pool professional.
190	Relay not conducting in the reverse direction. (Generates 171 code – Backboard service)	Contact a pool professional.
191	High cell current (at upper limit of A/D converter) and cell voltage below 19V. (Generates 170 code – front board service)	Contact a pool professional.
192	High cell current and cell voltage below 19V. (generates 171 code – Backboard service)	Contact a pool professional.
193	Measured significant cell current when SCRs were turned off. (Generates 170 code – front board service)	Contact a pool professional.
194	Cell current is 85% lower than desired and cell voltage above 19V (Generates 125 code – Cell dirty or needs replacement)	Contact a pool professional.
195	Salinity invalid due to out of range measurements caused by front board error (Generates 170 code – front board service)	Contact a pool professional.

7.4 Additional Letter Codes

Code	Condition	Reason
EC	External Control	ORP unit or external controller has shut off chlorine production.
Lo	Low Temperature Cutoff	Temperature of Pool is < 10˚C (50ºF). Chlorine production stopped.
bo	Boost	In “Boost” mode unit will operate at 100% production for 24 run time hours.
HH	High-High	Input has exceeded Maximum Range.
JA	AquaLink™ RS Online	AquaLink RS is controlling the AquaPure® and desired output percentages.
Jb	Boost (AquaLink RS Interface)	AquaLink RS is controlling the AquaPure and “Boost” is active.