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HAYWARD GOLDLINE SALT SYSTEMS INGROUND

MAINTENANCE AND TROUBLESHOOTING GUIDE

Operation

Assuming that the water chemical levels are in the recommended range, there are three factors that you can control which directly contribute to the amount of chlorine the Aqua Rite will generate:

1. filter time each day (hours)
2. the "Desired Output %" setting
3. the amount of salt in the pool

The filter pump timer should be set so that all of the water in the pool passes through the filter each day. For pools with high chlorine demand, the timer may have to be set longer to generate enough chlorine.

To find the optimum "Desired Output %" setting, start at approximately 50%. Test the chlorine level every few days and adjust the dial up or down accordingly. It usually takes 2-3 adjustments to find the ideal setting for your pool/spa and after that, it should only take minor, infrequent adjustments. Because the chlorine demand of the pool increases with temperature, most people find they have to adjust the dial up at the peak of the summer and down during the colder periods. The Aqua Rite automatically stops generating when the pool water temperatures drops below 50°F. This is usually not a problem because bacteria and algae stop growing at this temperature. You can override this low temperature cutoff by switching to SUPER CHLORINATE for a day.

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

Prevent over-chlorination during cold weather: Check chlorine levels periodically. Most pools require less chlorine during cold weather and the "Desired Output %" should be lowered accordingly.

When connected to a pool automation control (Goldline Pro Logic, Pentair Intellitouch or Polaris Eos):

The Aqua Rite is designed to operate with all pool automation controls. The Pro Logic, Intellitouch or Eos can fully control the function of the Aqua Rite chlorinator in addition to the other pool equipment. The "Remotely Controlled" LED on the Aqua Rite chlorinator

will be illuminated when the automation control is activated. Adjustment of the Aqua Rite "Desired Output %" and also Superchlorination can be controlled from the pool automation display/keypad. Refer to the pool automation control instructions for more information. The Aqua Rite salt display and LED indicators operate as normal, but the main switch and "Desired Output %" dial are disabled.

Maintaining the Aqua Rite System

To maintain maximum performance, it is recommended that you open and visually inspect the cell every 3 months or after cleaning your filter. The Aqua Rite® will remind you to do this by flashing the "Inspect Cell" LED after approximately 500 hours of operation. After you inspect the cell (and clean, if necessary) press the small "diagnostic" button next to the display for 3 seconds to stop the flashing "Inspect Cell" LED and start the timer for the next 500 hours.

The Aqua Rite electrolytic cell has a self cleaning feature incorporated into the electronic control's logic. In most cases this self cleaning action will keep the cell working at optimum efficiency. In areas where water is hard (high mineral content) and in pools where the water chemistry has been allowed to get "out of balance", the cell may require periodic cleaning. The "Inspect Cell" LED will indicate if cell efficiency is decreased and servicing is necessary. If the "Inspect Cell" LED remains on after a thorough cleaning, the cell may be worn and require replacement.

Servicing and Cleaning the Aqua Rite cell

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

Mild Acid Washing: Use only in severe cases where flushing and scraping will not remove the majority of deposits. To acid wash, turn off power to Aqua Rite. Remove cell from piping. In a clean plastic container, mix a 4:1 solution of water to muriatic acid (one gallon of water to one quart of muriatic acid). ALWAYS ADD ACID TO WATER - NEVER ADD WATER TO ACID. Be sure to wear rubber gloves and appropriate eye protection. The level of the solution in the container should just reach the top of the cell so that the wire harness compartment is NOT submerged. It may be helpful to coil the wiring before immersing the cell. The cell should soak for a few minutes and then rinse with a high pressure garden hose. If any deposits are still visible, repeat soaking and rinsing. Replace cell and inspect again periodically.

Winterizing

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

Spring Start-up

DO NOT turn the Aqua Rite on, until the pool water chemistry has been brought to the proper level.

Troubleshooting

Visit www.goldlinecontrols.com for helpful information on operation, maintenance and troubleshooting your Aqua Rite® Electronic Chlorine Generator.

Diagnostic Displays

Sequential pushes of the small "diagnostic" button next to the LCD display will cause the Aqua Rite to display the following information:

1. Pool temperature (xx degrees Fahrenheit or Celsius)
2. Cell voltage (xx.x volts)
3. Cell current (x.xx amps)
4. Desired Output % ("0P" -- "100P" depending on knob position or input from remote pool automation controller)
5. Instant salinity (-xxxx ppm or -x.xx grams/Liter)
6. Product name sent to the pool automation control display ("AL-0" which signifies "Aqua Rite")
7. Software revision level (r1.xx)
8. Chlorinator cell type (t-3, t-5, t-9, t-15)

On the 9th push of the button the display will revert back to the default salt display. Also, if the button is not pushed for 30 seconds, the display will revert back to the standard salt display.

Common Problems and Solutions

1. "Power" LED not on

Check to make sure either 120VAC or 240VAC input power is connected to the proper screw terminals at the Aqua Rite control. Verify input voltage with a voltmeter. If there is input power, the fuse may have blown. The Aqua Rite is protected by a 20 amp mini ATO fuse located on the circuit board above the cell connector.

2. "Generating" LED flashing

The temperature of the pool water is too high or low to operate. You can override this by switching the main switch to SUPER CHLORINATE. The Aqua Rite will run at maximum output for the remainder of the current pump cycle or 24 hours, whichever comes first.

3. "No Flow" LED illuminated

The Aqua Rite has sensed a no flow condition and has stopped generating chlorine. Check that the flow switch is plugged into the connector on the bottom of the control

unit and that the wire is not cut or damaged. Make sure you have at least 12" of straight pipe before the flow switch. If there is adequate flow and the LED is still on, check that the arrows on the flow switch (on top of hex) are pointing in the direction of flow.

4. "Check Salt" LED illuminated or flashing

Be sure that the correct model Turbo Cell has been selected (page 7).

Check salt level in pool/spa. If salt level is low, add salt according to chart on page 4.

Before adding large quantities of salt, it is advisable to have your salt level professionally checked.

5. "High Salt" LED illuminated

Be sure that the correct model Turbo Cell has been selected (page 7).

Check salt level in pool/spa. If salt level is too high, lower salt level by draining some of the pool water out of the pool and replace with fresh water. Continue until the salt concentration is at recommended levels.

6. "Inspect Cell" LED flashing

Be sure that the correct model Turbo Cell has been selected (page 7).

Inspect and clean cell according to directions on page 8. When done, press the "diagnostic"

button for 3 seconds to stop the "Inspect Cell" LED flashing.

7. "Inspect Cell" LED illuminated

Be sure that the correct model Turbo Cell has been selected (page 7).

Remove and inspect the cell for scale. If the cell is scaled, follow the directions on page 8 for cell cleaning. If the pool has the proper amount of salt and the "Inspect Cell" LED is still illuminated, the cell may be worn and need replacement.

8. Possible causes of little or no free chlorine residual

- Aqua Rite® switch in OFF position.
- Desired Output % adjustment setting is too low.
- Low stabilizer (Cyanuric Acid).
- Filter pump time too short (8 hours for average size pools, more for large pools)
- Salt level too low (below 2400 ppm, Check Salt LED on).
- Salt level too high (High Salt LED on).
- Very warm pools increase chlorine demand--increase Output %, or filter run time.
- Cold water (below 50°F) causes Aqua Rite to stop generating (Generating LED flashing).
- Excessive scaling on cell.
- High level of Nitrogen in pool water.
- "Yellow Out" or similar treatment recently used. Some yellow algae treatments will use chlorine at a very high rate and deplete the residual free chlorine. Manually shock the pool if indicated in the directions on the algae treatment. It still may be a matter of days before the pool returns to "normal" and chlorine tests will show the desired 1-3ppm free chlorine reading.

9. "-Pcb-" displayed and all 4 red/yellow LEDs are illuminated.

A possible Printed Circuit Board fault has been detected. Call for service.