

## Section 6. Maintenance

Before servicing the Jandy chlorine generating device, ensure that you have read and understood the Important Safety Instructions section.

### 6.1 Weekly

1. **Chlorine Test.** Test pool water chlorine level with a reliable test kit. Maintain an ideal range by adjusting the chlorine output level on the power pack (see Section 5.4) or if necessary, by supplementing the chlorinator with additional dry or liquid chlorine. The recommended free chlorine level is 1 - 3 ppm. See section 4.5 for instructions on collecting a water sample.

**NOTE** Never use glass containers in the pool area. Broken glass becomes difficult to see under water.

2. **pH Level Test.** Test the pH level of your pool with a test kit. If necessary, adjust to maintain a pH level of 7.4 - 7.6 (see Section 4.3).
3. **Total Alkalinity Test.** Test pool water for total alkalinity with a test kit. Take steps necessary to maintain an alkalinity of 80 - 120 ppm (U.S.) or 100 - 120 ppm (Canada) (see Section 4.3).
4. **Calcium Hardness.** Test pool water for calcium hardness level using test kit or by having a water sample tested by a pool professional. Adjust as necessary to maintain a calcium hardness of 175 - 400 ppm (see section 4.3).

### 6.2 Monthly

1. **Check the cell.** It is recommended that the cell be inspected every month for scale and/or calcium deposits. Light colored, crusty deposits known as scale will form in excessively hard water or from pool water that is out of balance. Following the installation of the Jandy chlorine generating device, check the cell once a month for signs of scale. Hold the plate bundle to a light source so the light can be seen between the plates. If the light is easily seen through the plates and/or a small amount of scale is visible, the cell does not need to be cleaned. Reinstall.

On the other hand, if the light is barely visible through the plates or the light is totally blocked by scale, then the cell needs to be cleaned. See Section 6.3 for instructions.

**NOTE** Excessive cleaning can shorten the life of your cell.

2. **Salt Level Test.** Use salinity test strips, a TDS/ salinity meter, or another reliable method to test the salinity of the pool water. Once the existing salinity has been established, use Table 1 to determine the amount of salt to add to reach the desired level. Be conservative when adding salt as it is easier to add more if needed than it is to dilute if there is too much salt. If the salinity level of the pool is correct and the salt LED does not go out, see Section 7. Troubleshooting.
3. **Pool Water Sample.** Take water sample to local pool store for testing.
4. **Stabilizer (Cyanuric Acid).** Test pool water stabilizer (cyanuric acid) level using a test kit or by having a water sample tested by a pool professional. Maintain ideal range of 30 - 50 ppm. Follow your pool professional's recommendations and check all local and federal regulations to ensure that the ideal range is suitable for your specific conditions. For indoor pools, it is not necessary to add chlorine stabilizer to the swimming pool water.
5. **Metals Test.** It is recommended that the pool water be tested periodically for the presence of metals such as iron, and manganese. These metals should not be present in the pool water. If those metals are present, contact your local pool professional.

### 6.3 Cleaning the Cell

#### **⚠ CAUTION**

Disconnect power to the system at the main circuit breaker before performing this procedure to avoid risk of electric shock which can result in property damage, severe injury or death.

If the cell has a tendency to scale, it is recommended that every month the cell be removed and inspected for scale formation and/or debris. Some filters allow debris to pass through to the cell which could lodge between the plates in the cell. A small amount of scale formation is normal. If by looking through the cell it is observed that there is excessive scale formation between the plates or debris is present, the cell must be cleaned as follows:

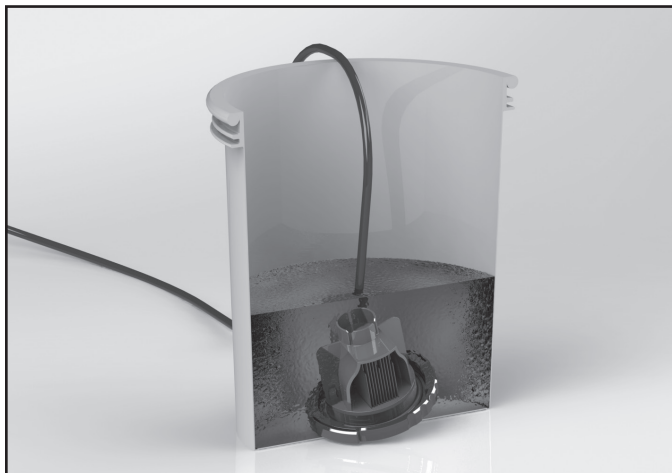


1. Ensure that all power to the power pack and the controller is turned off at the circuit breaker.
2. Before removing the cell for cleaning, shut off any necessary valves to prevent any water loss.
3. Open the air relief valve on the filter to release any pressure in the pool system.
4. Loosen the ring and remove the cell.
5. With protective glasses and gloves on, add one (1) part muriatic acid to ten (10) parts water in a small bucket and mix the cleaning solution together.

### ⚠ CAUTION

- When cleaning the cell, wear protective eyeglasses and gloves.
- When mixing acid with water, prepare the solution by **ALWAYS ADDING ACID TO WATER. NEVER ADD WATER TO ACID.**
- Never use undiluted Muriatic acid. Always use the recommended mixture of Muriatic acid and water.

6. Submerge the cell into the cleaning solution.



7. A foaming action will begin, which is caused by scale (calcium carbonate) being dissolved from the plates. If foaming action does not begin, the cell does not need to be cleaned (STOP THE CLEANING PROCESS - go to the step 10). Otherwise allow the cell to remain in the solution until the foaming has stopped (approximately 5 - 10 minutes).

**NOTE** Do not use a screwdriver or any other metal object to remove calcium deposits.

8. Flush the cell with fresh water and perform the inspection again. If considerable blockage is still present, then re-submerge the plates back into the cleaning solution, flush and reinspect.
9. After the cell has been cleaned, dispose of the solution according to local regulations.

10. Rinse the cell thoroughly with clean tap water and inspect. If deposits are still visible on the electrolytic cell, repeat step 6.

**NOTE** Excessive acid washing will damage the electrolytic cell. **Do not leave in acid for more than 30 minutes.**

11. Once the cell is clean, reattach the cell as described in Section 3.4.

### ⚠ WARNING

Do not energize or operate the unit if the cell housing is damaged or improperly assembled.

## 6.4 Winterizing

**NOTE** Do not use Ethylene Glycol (anti-freeze) in the system.

Very little chlorine is needed in cold water. Operating the chlorinator below 55°F (13°C) is not recommended. Operating the chlorinator in cold water can dramatically shorten the life of the cell.

If preventative measures are not taken, freezing water may cause severe damage to the cell. Prevent freeze damage to the cell by running pump continuously or winterize pool by draining water from pump, filter, and all intake and return lines. Remove the cell, clean it and store it indoors. A winterizing cap (R0621900) can be purchased to replace the cell during winterizing or cell maintenance.

This will enable pool pump to circulate water with the cell out of the line. During prolonged periods when the water will be less than 55°F (13°C), the unit should be turned off and a chlorine floater or erosion feeder should be used by putting a small number of tablets in either of these devices until the water temperature increases. Doing this will lengthen the cell life and provide better performance when water conditions are more optimal.

## Section 7. Troubleshooting

### WARNING

Always turn pump off prior to attempting service or repair. Your pump and filter system is operated under pressure and pressure must be released before you begin to avoid system damage or personal injury. Open the air relief valve on your pool filter to release the pressure in the system.

### 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. Follow your pool professional's recommendations and check all local and federal regulations to ensure that the ideal range is suitable for your specific conditions. (see Table 2).
	pH not within recommended range.	Chlorine does not operate as well as a sanitizer if the pH is not within range. This can cause a higher chlorine demand. The ideal range for pH is 7.4 - 7.6 (Use muriatic acid to lower pH and soda ash to raise pH).
	Insufficient operating hours of the unit.	Increase the system operating time per day.
	Chlorine output percentage set too low.	Increase chlorine production by pressing the Output button (see Section 5.4).
	Temporary loss of chlorine due to heavy organic load - rain, leaves, fertilizer or heavy bather load. Pets using pool.	Set chlorine production to 100% and set the pump and the cell to run for 24 hours. After 24 hours, recheck chlorine levels. If still too low, super chlorinate with alternate source to achieve Breakpoint Chlorination (BPC). Your local pool dealer can assist with this if you take to them a sample of your water.
	Low (less than 3,000 ppm) salt level in pool water.	Use salinity test strips, a TDS/salinity meter, or another reliable method to test the salinity of the pool water. Once the existing salinity has been established, use Table 1 to determine the amount of salt to add to reach the desired level. Maintain a salinity level of 3,000 ppm.
	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 the pool.
	Clogged or dirty cell.	Remove cell for inspection and clean if necessary (see Section 6.3).

Problem	Possible Cause	Corrective Action
<b>Chlorine level too high. (above 7.0 PPM)</b>	Chlorine output percentage set too high.	Decrease chlorine production rate by pressing the Output button (see Section 5.4)
	Power pack and cell turned on too long.	If chlorine output is set at the lowest setting and it consistently provides excessive chlorine levels, decrease operation time as much as necessary.
<b>No display on LCD (screen is blank).</b>	No power to unit.	Check the connection to the pump timer (see Section 3.5).
		Check if GFCI tripped.
<b>Display says “No Flow”. Caused by insufficient water flow through the cell.</b>	Caused by insufficient water flow through the cell.	Check and clean the pump and skimmer baskets.
	<b>NOTE</b> When the Flow light is on, the chlorine output will be turned off.	
	Dirty filter.	Clean the filter.
	Poor connection between cell and power pack	Check for secure connection to power pack
	Closed valves.	Check and correct all valve alignments.
Pump fails to provide sufficient water flow.	Check for correct operation of the pump. Make sure pump is sized properly for required flow rate.	
<b>The display says “Lo Tmp/Lo Salt”.</b>	Salt level is well below 2,500 ppm, depending on water temperature.	Maintain a salinity level of 3,000 ppm - 3,500 ppm (see Section 4.6 or contact your local pool professional).
	Calcium buildup in the cell	Clean the Cell
	<b>NOTE</b> Salinity readings are taken after 5 minutes and at regular 5 minute intervals. The Salt warning will turn on when the salt level drops well below 2,500 ppm and it will remain on until the salt level is raised to 3,000 ppm or slightly above.	
	Cell life expired.	Replace the cell.
	A combination of low water temperature (35°-65°F / 2°-18°C) and lower salt levels (1,500 - 2,000 ppm).	Check salt level in pool water. If level is between 3,000 - 3,500 ppm, no action is necessary. If salt levels are lower than 2,500 ppm, raise the salinity level to 3,000 - 3,500 ppm (see Section 4.6).  <b>NOTE</b> Salt levels above 4,500 ppm may cause corrosion damage.
<b>Salt level too low.</b>	Not enough salt added to pool.	Add salt to pool until salinity returns to 3,000 ppm (see Section 4.6).
	Leak in pool.	Repair pool.

<b>Problem</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
<b>Salt level too high.</b>	Too much salt has been added to pool.	Verify salt levels by testing. Using the most reliable method available i.e. taking sample to pool dealer before taking any dilution action. Backwash or partially drain pool and dilute with fresh water until salinity returns to 3,000 ppm - 3,500 ppm.
	Metal debris caught between plates or cell plates that may be touching.	Remove any debris caught between plates by using a garden hose under moderate pressure. If plates are loose and touching, replace the cell.
<b>Strong Chlorine odor.</b>	<p>Presence of excess chloramines (combined chlorine).</p> <p>Chlorine is an oxidizer, which means that organic waste is being removed from the water into the air. Strong odors are a part of this process. If these odors persist longer than 12 hours, take a water sample to your local pool dealer.</p>	Manually shock the pool (see Section 4.3).
<b>Cloudy water, slimy walls of pool.</b>	Combined algae and bacteria growth.	Brush down the affected walls and then manually shock the pool (see Section 4.3).
<b>Eye and/or skin irritation.</b>	Improper water balance.	Balance the water to recommended levels in Section 4.4.
	High chloramine levels	<p>Raise production rate to 100% and run pump for 24 hours.</p> <p><b>DO NOT SWIM DURING THIS TIME</b></p>
<b>Scale formation on pool equipment.</b>	High calcium hardness.	Dilute pool with fresh water. Consult your pool professional regarding use of a sequestering agent.
	Incorrect pH causing minerals to come out of solution.	Adjust total alkalinity to 80 - 120 ppm (U.S.) or 100 - 120 (Canada). Then adjust pH to within the range 7.4 - 7.6 (see Section 4.4).
	<b>NOTE</b> To clean the deposit (scale) on the cell, see Section 6.3.	

## Section 8. Display Readings

### 8.1 Display Reasons and Descriptions

Display Reading	Reason	Description
EN	Language on startup	This is the acronym which should appear during the 3 seconds startup screen.
English	Language	Language selected/available for the user. Output is OFF while selection is made.
Standby	Standby	When the system is ready and waiting for the next valid chlorination cycle without any errors. Output is OFF.
Standby ‡	Connected to Jandy Automation	When the system is connected to a Jandy Automation System via RS485 communication cable and waiting for the next valid chlorination cycle without any errors. Output is OFF.
Standby #	Connected to Jandy Variable Speed Pump (with controller)	When the system is connected to a Jandy Variable Speed Pump (with controller) via RS485 communication cable and waiting for the next valid chlorination cycle without any errors. Output is OFF.
Chlorinating	Chlorination	When the system is operating within a valid chlorination cycle without any errors. Output is ON.
Cleaning	Polarity is reversing	When the system is operating within valid chlorination cycle and the duty cycle timer has expired. Output is OFF.
Lo Temp/Lo Salt	Low water conductivity	When the system detects low water conductivity, this could be caused by cold water, low salt levels, or a combination of the two. Check the salt level. Output is ON.
No Flow	No flow or low flow	When the system detects an absence of flow while operating within a valid chlorination cycle. Output is OFF.
Check Cell	Cell overload	When the system is running within a valid chlorination window and detects a cell short circuit or overload. Designed to warn the user or service person. Output is OFF.
Check Cell	Cell open circuit	When the system is running within a valid chlorination window and detects a cell open circuit or disconnection. Designed to warn user or servicer. Output is off but retries each 30 seconds.

Display Reading	Reason	Description
Over Temp	Overheated controller	<p>The controller detects internal temperature and may can reduce output power as a self-protection feature.</p> <p>At 70°C (internal) output power to the cell is reduced by 50% (no message displayed).</p> <p>At 80° C (internal) output power to the cell is reduced to 0% (OFF), and this over temperature error is displayed. Output is OFF.</p> <p>Designed to warn the user or service person of overheating.</p> <p>Please confirm that this warning message automatically disappears when internal temp goes below 80 °C.</p>