MegaChlor
MegaChlor-CD

Saltwater Chlorine Generators

Installation & Operation Manual

ControlOMatic, Inc.

12146 Charles Drive, Grass Valley, CA 95945

(530) 205-4520 • https://www.controlomatic.com

Support and Service: support@controlomatic.com

1   READ AND FOLLOW ALL INSTRUCTIONS

2   SAVE THESE INSTRUCTIONS

3   **WARNING**—To reduce the risk of injury, do not permit children to use this product.

4   **WARNING**—Use MegaChlor only according to these instructions. Any modification or misuse of this product will void the warranty.

5   **WARNING**—Install MegaChlor in accordance with all national and local electrical, plumbing, safety, and other applicable codes.

6   **WARNING**—Connect MegaChlor to a GFCI (Ground Fault Circuit Interrupt) or GFI (Ground Fault Interrupt) protected VAC power source only.

7   **WARNING**—Protect the power supply and outlet from exposure to the elements, i.e. direct sun, rain, snow, condensation, etc.

8   **WARNING**—Cutting the cord from the power supply to the MegaChlor electrode voids the warranty. Damage will occur if the connection is reversed.

9   **WARNING**—DO NOT use with extension cord. Injury may result.

10   **WARNING**—DO NOT operate MegaChlor if damaged in any way.

11   **WARNING**—DO NOT pull on the cord to disconnect the power supply from power source. Do not allow the cord to be walked on, or to rest on sharp edges or corners. Do not drop, throw, or otherwise rough handle MegaChlor.

12   **WARNING**—Disconnect, remove, and store MegaChlor indoors when pool/spa has been winterized or drained.

13   **CAUTION**—Leave pool/spa cover open at least 1 minute to allow trapped gases to escape prior to use.

14 **CAUTION**—Measure water quality parameters and adjust if necessary prior to each pool/spa use.

15 **CAUTION**—Although MegaChlor-CD does assist in monitoring chlorine levels, manual water sampling and testing periodically by the owner is required to ensure safe water conditions.

16 **WARNING**—Remove the MegaChlor electrode from the pool/spa when using the pool/spa.

17 **WARNING**—DO NOT handle the MegaChlor electrode during chlorine generation (visible bubbling). Slight discomfort may be felt in cuts, sores, or sensitive skin areas due to chlorine concentration and the electrolysis process.

18 **WARNING**—DO NOT insert objects into, or tamper with the MegaChlor electrode in any way. Inserting metal objects into the electrode may cause damage and will void the warranty.

19 **WARNING**—DO NOT plug MegaChlor control box directly into the VAC supply, as this will damage the MegaChlor. Always use the provided low-voltage power supply.

MegaChlor Overview

MegaChlor is a semi-automated saltwater chlorine generation system, specifically designed for swim spas and pools up to 17,000 gallons (64,000 liters). MegaChlor generates chlorine from a small amount of ordinary salt (sodium chloride, NaCl) dissolved in the water. The amount of salt added is very small in relation to the volume of the water. The concentration required for the MegaChlor is only about 10% of the salt level of ocean water, which is also about half the amount in the human eye.

The small addition of salt also benefits pool and spa users by providing a softening effect on the water, leaving hair and skin feeling smoother and healthier than with traditional sanitizing products. All it takes for MegaChlor to keep your water fresh and clean is 4 cups of salt per 100 gallons (380 liters) of water.

MegaChlor produces chlorine in its pure form using electrolysis in order to sanitize the water. While the MegaChlor runs on a timer, the MegaChlor-CD automatically starts a chlorine generation cycle when the chlorine level is low enough, using its chlorine detection technology.

Since the chlorine originates from the salt, the unused chlorine inherently converts back into that salt, allowing the MegaChlor to reuse that salt to make new chlorine. Essentially, this means that the salt level will remain fairly steady, only gradually decreasing from things like splashing or people leaving the pool or spa with salt water still inherently on them.

Water Preparation & Maintenance

To ensure proper operation, the pool or spa should be prepared before installing the MegaChlor, so it should be drained, rinsed, refilled with fresh water, and balanced to the recommended levels indicated in this section. We have included test strips to help you measure and verify the water chemistry in that last step.

In most cases, filter replacement is recommended but not required, with the exception being for hydrogen peroxide systems. The combination of hydrogen peroxide and chlorine may cause gum-like buildup, water discoloration, and skin irritation, so it is important in that case to make sure that there is no residual hydrogen peroxide in any part of the pool or spa, particularly that filter.

MegaChlor will significantly reduce the amount of maintenance required, but regular chemical checkups, including chlorine levels and pH, are recommended, for the sake of proper water maintenance and thus the health and safety of the users, not to mention also for the lifespan of the MegaChlor unit and the pool or spa. The table on the next page lists the generally accepted ideal chemistry for the water.

It is recommended that chlorine and pH levels are checked before each use, or at least once per week when not in use. Alkalinity, hardness, and salt levels should be checked at least once per month (see the table on the next page and Salt Requirements for recommended levels).

About once a month, use a phosphate remover (available at your local pool and spa supply store or online) to manage the phosphates in the water, to keep them from increasing the demand for chlorine and reducing the life expectancy of the MegaChlor electrode.

It is also recommended to manually shock the water after high usage (e.g. after a party with multiple users), or biweekly if used frequently. Make sure to leave the pool or spa circulating for several hours before retesting, ensuring more accurate test results.

Recommended Levels

Parameter	Recommended Level
Free Chlorine	1.5-3.0 PPM
pH	7.4-7.6
Total Alkalinity	100-140 PPM
Calcium Hardness	300-400 PPM
Cyanuric Acid (Pools Only)	30-50 PPM

Warning: Consistent chlorine levels above 5.0 PPM (parts per million) and/or consistent salt concentration levels above 5000 PPM may lead to corrosion of metal components in the pool or spa.

Warning: Consistent calcium hardness levels below 300 PPM may lead to equipment damage and failure. Make sure calcium hardness levels are within the recommended range above.

Salt Requirements

MegaChlor will generate either chlorine or bromine depending on the type of salt used: use sodium chloride (NaCl) for chlorine or sodium bromide (NaBr) for bromine. For the sake of consistency in this manual, we will primarily use chlorine in our explanations and examples, but those will all still apply to bromine, with the only exception being the quantity of salt needed (see more details on the next page).

Warning: Salt only needs to be added once per water change, so adding unneeded salt may cause the salinity to increase too much, causing the MegaChlor to shut down, to protect the power supply and the electrode from damage.

Chlorine Salt—Sodium Chloride (NaCl):
For chlorine, raise the salt level to 2000-4000 PPM (parts per million). Pool salt is the most common salt used for saltwater chlorine generators (i.e. your MegaChlor), but you can use any salt that is at least 99% pure sodium chloride and does not use any anti-caking agents. Essentially, when you check the ingredients list, sodium chloride should be the only one on the list.

Some mineral-enriched salts can also be used to help make the water even softer on the skin, but they will require higher quantities to achieve that sodium chloride salt level. Those extra minerals may increase your risk of having too much overall salt in the water, so make sure to monitor the salt lights as you add the salt. See more details on the next page, after the chart.

Bromine Salt—Sodium Bromide (NaBr):
For bromine, raise the salt level to 3000-5000 PPM (parts per million). Similar to sodium chloride (NaCl), you will need the sodium bromide (NaBr) to be at least 99% pure, which will most likely be easiest to find at a pool and spa store, locally or online.

If you are unsure about what would be best for your pool or spa, your local pool and spa store can likely analyze a sample of your water to give you that more specific help.

Note for use in Canada: Sodium bromide products should not be used for this application in Canada.

Estimated Salt per 1000 Gallons (3800 Liters) of Water

Salt Type	Pounds	Kilograms	Cups	PPM
Sodium Chloride (NaCl)	25	11	40	2000-4000
Sodium Bromide (NaBr)	40	19	65	3000-5000

Note for use in Canada: Sodium bromide products should not be used for this application in Canada.

The amount of salt to add depends on the size of the pool or spa, which should be listed in its manual. You can also estimate the size of your pool or spa with an online volume calculator.

Here are some examples, using sodium chloride (NaCl):
- 12,500 gallons
  - 12,500 ÷ 1000 (gallons) is 12.5
  - 12.5 × 25 (pounds per 1000 gallons) is about **300 pounds**
- 47,500 liters
  - 47,500 ÷ 3800 (liters) is 12.5
  - 12.5 × 11 (kilograms per 3800 liters) is about **130 kilograms**

Simply pour the recommended amount of salt directly into the water, evenly inside the perimeter of the pool or spa, to bring the concentration to the recommended level. Then, if available, turn on the jets circulation system, etc., to help mix it in. If the water is cold, it may take several hours for the salt to fully dissolve.

Note: It may take the MegaChlor a few hours to register the salt level the first time because of the salt still dissolving into the water, so we recommend waiting before turning on the MegaChlor.

Note: If there is too much salt, the MegaChlor will shut down and display **Green** and **Red** (**Salt High** and **Salt Low**) lights at the same time. When in doubt, start with less salt than you think you need, since it is much easier to add more salt than it is to remove it, since removing it requires draining pool/spa water and adding fresh water. If you have a water softener, your water may already have some salt in it, so in that case, before adding any salt, let the water get to temperature and then turn the MegaChlor on. That way, you can check the current level and gradually add salt in as needed.

Note: If you are trying to decide which salt you want to use, we typically recommend sodium chloride (NaCl), since it is often more inexpensive, all while still being effective. If you have sensitive skin and are outside of Canada, sodium bromide (NaBr) may be even more gentle than sodium chloride (NaCl) already is, so feel free to check with your dermatologist for which option would be best for you.

Preparation

Drain and clean the pool or spa, refill, and add salt. Then, allow the water to get to temperature, and balance the water.

Installation Steps

Control Box

Electrode

1. Add salt (see Preparation section).
2. Install a protected electrical outlet, if not already available nearby, for the power supply.
   • **Note:** The power supply is **not** weatherproof, so it must be in a protected environment.
3. Mount the control box (see Mount the Control Box section).
4. Drape the MegaChlor electrode over the side of the pool or spa, ensuring that it is hanging vertically.
5. Turn the MegaChlor on.
6. Set the power level.
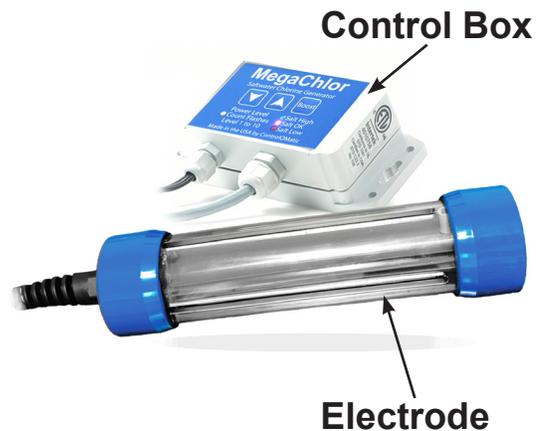
Power Supply

The power supply supports 100 to 240 VAC with an output voltage of 12 VDC, and it comes with a 15-foot cord spanning from the power supply to the MegaChlor control box. **To prevent damage** to the power supply, you will need a weather-protective cover (readily available in hardware stores and online) to house the power supply at the outlet. For the power cord, keep out of direct sunlight and away from areas where it could become a tripping hazard for pool and spa users.

Please note that installing any equipment inside the pool or spa's equipment compartment may void its warranty and/or its safety certification and is thus not recommended.

110 VAC Electrical Outlet

Locate a GFCI-protected outlet (**required** for fire and shock safety) near the pool or spa. If the outlet needs to be installed, have a licensed electrician add a 110 VAC GFCI-protected outlet.

220 VAC Electrical Outlet

Since the power supply plug style is for 110 VAC, have a licensed electrician install a 220 VAC GFCI-protected connection that will accept a 110 VAC-style plug. Please check your local electrical codes to ensure that the outlet is at least the minimum distance from the pool or spa, along with verifying any other safety standards that apply to your overall pool/spa area.

Cold Weather Operation

The power supply is not designed to operate in temperatures below -4ºF (-20ºC). If you live in an area that can get that cold, store the power supply in a warm location when the temperature is low or install the power supply in the pool/spa equipment area where there is some protection. For the latter, make sure to first verify where you can install the power supply without voiding your pool/spa's warranty or safety certifications.

Mount the Control Box

Find a suitable location to mount the control box, meeting the following requirements:
1. Vertical installation with the two cables coming out the bottom (i.e. all the words are right side up)
2. Out of direct sunlight
3. Exposed to minimal rain and moisture
    a. Even though the box is water resistant, reducing moisture exposure will minimize the chance of moisture getting inside the box
4. On a flat location on the pool or spa skirt that:
    a. is close enough for the power supply cable to reach the outlet
    b. keeps the cable protected, e.g. on a post or wall nearby
    c. is close enough for the 10-foot electrode cable to reach, with the electrode hanging in the deepest part of the water

The MegaChlor box mounting flange has two large holes, allowing for installing the screws first. There are also four corner holes that can be used to mount the control box to the surface.
1. Install the two small screws $5\frac{3}{8}$ inches apart and $1\frac{1}{4}$ inches or more below the top edge of the shell part of the pool or spa.
2. Place the box onto the screws and slide the box down.
3. Tighten the screws.

Drape the MegaChlor Electrode

Lift the lid off the pool or spa (if applicable) and drape the electrode over the side into the water. For best results:
1. Place the electrode in the deepest location in the water. When generating chlorine, the bubbles will travel up and, if the electrode is in the deepest location, those bubbles will be in contact with the water for as much time as possible.
2. Keep in a vertical orientation. If it is horizontal, it will generate less chlorine, due to trapped bubbles reducing the available space on the plates inside.
3. If your pool also has a pool cleaner, make sure that the electrode is in a location where the cleaner will not get tangled in the cable.
4. The electrode can be located in the filter area if it will fit—but this is not recommended, as the bubbles will not be in contact with the water as long as they otherwise would in a deeper location. Plus, when the pump is off, the filter door may close, trapping the chlorine in the filter area instead of in the overall pool or spa.
5. The MegaChlor includes two cable clips. Use one of the clips (¼" clip and a #6 x ½" screw) to fasten the cable to the side of the pool or spa, if necessary.

MegaChlor-IL Installation

The MegaChlor In-Line (MegaChlor-IL) includes an in-line cell body and electrode for installing the MegaChlor in the equipment area. Since each installation is unique, there is no pre-made mounting kit for this product.

Warning: If your pool or spa has a heater, install the MegaChlor **after the heater** in the plumbing, and if possible, install as the last in-line component before the water enters the pool or spa.

Warning: Making chlorine in the pipes when there is no water flow is dangerous and can lead to damage, and there is no flow detection included with the MegaChlor.

Note: Even though the cell has 2" NPT in and out connections, the flow must be limited to a maximum of 5 gallons per minute, to prevent damage to the MegaChlor electrode, so a bypass must be used.

MegaChlor-IL Maintenance

At least once every two weeks, inspect the electrode:
- Open the pool or spa's equipment panel, and turn it off at the circuit breaker panel.
- Locate the in-line cell and check the clear part of the tube body, visually inspecting the titanium plates and gold/copper-colored wires.
- If there is any buildup, shut off the water (or use the plug to seal the cell) and remove the electrode for cleaning with a mild acid, e.g. vinegar or pH down. See the respective entry in the Troubleshooting Guide for more details on how to clean.
- Reinstall the newly cleaned electrode.

MegaChlor Operation

The MegaChlor has three buttons and four lights built into the overlay on the control box, allowing you to view and change the power level, view and change the zero point (MegaChlor-CD only), switch chlorine generation modes (**Boost**), and more (see MegaChlor-CD Advanced Operation). The lights indicate the salt level and the current mode (chlorine generation or standby).

Power On
To turn on the MegaChlor, plug the power supply into the outlet. As it turns on, it will flash the White, **Green** (**Salt High**), and **Blue** (**Salt OK**) lights a number of times, indicating the software version. For MegaChlor-CD, only the White and **Green** (**Salt High**) lights will flash. Then, the White, **Red** (**Salt Low**), **Blue**, and **Green** lights will flash, in that order.

Chlorine generation may start within a few minutes, depending on the chlorine level. The White light will flash every ten seconds to indicate standby mode, until the MegaChlor starts a chlorine generation cycle. The MegaChlor will start generating chlorine after about a minute, and the MegaChlor-CD will start as soon as it detects a low enough chlorine level (zero point).

Making Chlorine (Salt Level Indication)

When making chlorine, MegaChlor will indicate with a solid light if the salt level is high, low, or normal, along with visible bubbles coming from the electrode.

This reading is actually a measure of how much electrical current is being drawn to the plates in the electrode, so if there are extra minerals in your water or salt sources (e.g. well water or Dead Sea Salt), they may add to the reading. Only the actual salt (NaCl) in the water will produce chlorine though.

This may cause the MegaChlor to run with the **Green** light on, which is not a cause for concern and will not hurt the electrode. As described below, the **Green** light is just a warning to not add more salt, to avoid a shutdown.

We recommend starting with lower salt and seeing if that produces enough chlorine, since it is easier to add salt than it is to remove it. Plus, running with minimal salt will help your MegaChlor electrode last longer.

If the lights are on solid, your MegaChlor is generating chlorine:
- Solid **Green**—**Salt Level High**, current between 3.6 and 4.4 amps
- Solid **Blue**—**Salt Level Normal**, current between 2.2 and 3.6 amps
- Solid **Red**—**Salt Level Low**, current below 2.2 amps
- Solid **Green** & **Red**—current has exceeded the maximum of 4.4 amps and the MegaChlor has shut down to protect the power supply and the electrode
  - Drain out some water and refill with fresh water to dilute the salt level
  - Then, cycle power or press the **Boost** button to have it check again

Note for MegaChlor-CD: If a chlorine cycle was started by pressing the **Boost** button (as opposed to automatically turning on when the chlorine is low), the above lights may flash instead of being solid.

Standby Mode (Not Making Chlorine)

When in standby mode, the MegaChlor will flash the White light every 10 seconds. MegaChlor and MegaChlor-CD take different approaches to switching in and out of standby mode:

MegaChlor: The MegaChlor will generate chlorine for a period of time (see Power Levels section) and then switch to standby mode for 3 hours and then repeat. For example, at the default power level 3 (2 hours), the MegaChlor will generate chlorine for 2 hours, pause for 3 hours, generate again for 2 hours, pause for 3 hours, etc.

MegaChlor-CD: The MegaChlor-CD does not have a cycle time—instead, it turns on when needed. When the chlorine level is low, it will automatically start a chlorine generation cycle based on the selected power level. At the end of that cycle, the MegaChlor-CD will turn off until the chlorine level drops again, waiting at least 3 hours in between cycles so as not to risk over-chlorination.

Important: When the estimated electrode life has reached 90% use (i.e. 10% of the life is left), the White light will rapidly flash twice every ten seconds instead of just once. Depending on your water and salt sources, power level, zero point (MegaChlor-CD only), and overall care of the electrode, it may continue to work well, even beyond the 100% point. So, our intention is that this reminder helps you look out for when your electrode starts producing less chlorine and to order a replacement electrode ahead of time, to have it ready for when you need it.

Chlorine Voltage (MegaChlor-CD only)

MegaChlor-CD measures the chlorine as a voltage, and that voltage indicates whether or not there is any chlorine in the first place, not necessarily how much there is. In other words, if the voltage is low enough, then that means the chlorine is gone; if the voltage is above that point, then there is chlorine.

If you were to measure chlorine with a test kit, you may get a reading of low or no chlorine. This is normal so long as the MegaChlor-CD starts generating chlorine within a few hours. It is also quite common for manually maintained pools and spas to have brief instances of little to no chlorine in between maintenance.

If you would prefer for your MegaChlor-CD to produce chlorine sooner, before the chlorine levels get that low, you can raise the zero point (see Zero Point section). You also may need to lower the power level so that the MegaChlor-CD turns on more often for less time, balancing the total amount of time that it is on each day.

Power Levels

MegaChlor includes ten power level settings, to accommodate for a variety of pool and spa sizes and needs. Since the power output to the electrode is constant for the entire generation process, the power level instead indicates how much time the MegaChlor generates chlorine each time it turns on. The longer it runs, the more chlorine it adds to your water. For example, the factory setting of 3 indicates that the MegaChlor will run for 2 hours per cycle.

View the Current Power Level Setting

To view the power level, simply press the **Up** or **Down** button once, holding until the `White` flashes start, and then count the flashes. As a couple of examples, 3 `White` flashes means power level 3, and 7 `White` flashes means power level 7.

After this, the MegaChlor-CD also displays the chlorine value, the current to the electrode, or the zero point, depending on which button was pressed and whether or not the MegaChlor-CD is currently generating chlorine. See the MegaChlor-CD Advanced Operation section of this manual for more details.

Changing the Power Level

To adjust the power level, use the arrow buttons on the control box:

1. Press both the **Up** button and the **Down** button at the same time. The `White` light will turn on solid (instead of flashing), indicating that it is in power change mode.
2. Press the **Up** button to increase power—the **Green** (**Salt High**) light will flash each time the **Up** button is pressed. Once you reach the maximum power level of 10, the **Green** light will be on solid.
3. Press the **Down** button to decrease power—the **Red** (**Salt Low**) light will flash each time the **Down** button is pressed. Once you reach the minimum power level of 1, the **Red** light will be on solid.
4. When you are finished, do not press any buttons for three seconds, and the `White` light will flash the new power level, confirming the setting change.

Selecting the Right Power Level

Selecting the right power level may require some testing, since every pool and spa is different, and there are a variety of factors that can affect what level would be best for you and your pool or spa. Here are some examples:

- Frequency of pool/spa use
- Number of people
- Water temperature
- Phosphate levels
- Time of last drain and refill
- Presence of an ozone generator

After this period of initial testing, your MegaChlor will automatically keep your water chlorinated. To determine which level to test first, see the chart below for the estimated power level for your pool/spa size. This is only a starting point, and the final level may be very different, per the factors listed above.

Here is how you can test which level is right for your pool or spa:

- Day 1: Set the power level according to the table below and the size of your pool or spa.
- Day 2: Measure the chlorine level at the end of a chlorine generation cycle. If it is higher than you want, lower the power level by 1. If it is lower than you want, raise the power level by 1.
- Day 3: Repeat the Day 2 step until the chlorine remains constant at the desired level for a couple of days.

Power Level	Gallons	Liters
1-3	< 1,000	< 3,800
4	1,000-3,000	3,800-12,000
5	3,000-6,000	12,000-23,000
6	6,000-10,000	23,000-38,000
7-10	> 10,000	> 38,000

Note: If the chlorine level is 0 PPM (parts per million), even 24 hours after installation, the initial chlorine demand on the pool or spa may be above what MegaChlor can produce in order to break away from zero. In this case, manually add chlorine or shock (according to the product label) to assist in the initial setup. You also may need to add more salt, particularly if you are using a mineral-enhanced salt like Dead Sea Salt, since only the sodium chloride (NaCl) in the water will produce chlorine. We recommend only adding a little at a time since it may take a while for it to dissolve and to change the salt indicator lights, and going over can cause the MegaChlor to shut down to protect the power supply.

If pool/spa usage drops (vacation, winter, etc.), make sure to adjust the power level accordingly to prevent over-chlorination. This is not necessary for MegaChlor-CD though, since it will automatically increase the time between chlorine generation cycles, using its chlorine detection.

Boost Button & Power Level Times

To start or stop a chlorine generation cycle, press the **Boost** button. If the MegaChlor was in standby mode, it will switch to producing chlorine, regardless of if the water has reached zero point (MegaChlor-CD only). If the MegaChlor was already producing chlorine, this cancels that cycle.

When pressing the button, the **Green** and **Blue** (**Salt High** and **Salt OK**) lights will flash, acknowledging the button push.

Note: The MegaChlor cannot make chlorine faster; the **Boost** button simply turns it on for a single cycle. If your chlorine has dropped to 0 PPM (parts per million) from heavy usage, chlorine may need to be added to help break past zero.

Note for MegaChlor-CD: If a chlorine cycle was started by pressing the **Boost** button (as opposed to automatically turning on when the chlorine is low), the salt status lights may flash instead of being solid.

Power Level	On Time
1	30 min
2	1 hr
3	2 hr
4	3 hr
5	4 hr
6	5 hr
7	6 hr
8	7 hr
9	8 hr
10	9 hr

Electrode Lifespan Indicator

This feature tracks the amount of time the MegaChlor electrode has been actively producing chlorine. The typical lifespan of the electrode is 7000 hours of chlorine generation. To view the lifespan:

1. Press the **Boost** and **Down** buttons at the same time.
   a. The following lights will flash to indicate the percentage used:
      - **Green** (**Salt High**) = 100
      - **Blue** (**Salt OK**) = 10
      - **Red** (**Salt Low**) = 1
   b. Examples:
      - 5 **Blue** flashes means that 50% life has been used
      - 6 **Blue** flashes and 2 **Red** flashes means that 62% life has been used (38% life is left)
2. When the electrode life has reached 90%, the **White** light for standby mode will rapidly flash twice every ten seconds instead of just once. Depending on your water and salt sources, power level, zero point, and overall care of the electrode, it may continue to work well, even beyond the 100% point. So, our intention is that this reminder helps you look out for when your electrode starts producing less chlorine and to order a replacement electrode ahead of time, to have it ready for when you need it.

To reset the indicator (i.e. after replacing the electrode), press all three buttons on the control box at the same time.

Here is how to read values from the unit lights:

- **Green** (**Salt High**) = 100
- **Blue** (**Salt OK**) = 10
- **Red** (**Salt Low**) = 1

So, 1 **Green** flash, 3 **Blue** flashes, and 4 **Red** flashes would mean 134.

Chlorine Voltage—When in Standby Mode

The built-in sensor measures for the absence of chlorine as a small voltage. To view that reading (in millivolts), press the **Down** button while in standby mode. The White light will flash the power level, and then the **Green**, **Blue**, and **Red** lights will display the current sensor value. When this value is low enough (zero point), the MegaChlor infers that the chlorine is gone and automatically starts a cycle in response.

Electrode Current (Salt Level)—When Generating Chlorine

While generating chlorine, the MegaChlor measures the current going to the electrode—this is how it determines which salt light to turn on. To view that reading, press the **Down** button while in a generation cycle. The White light will flash the power level, and then the **Green**, **Blue**, and **Red** lights will display the electrode current.

If the value is over 440 (4.40 amps), then there is too much salt in the water, and the MegaChlor will suspend chlorine generation until it detects less salt. This is what is happening when you see both the **Green** and **Red** lights on at the same time.

On the other hand, if your MegaChlor is not making enough chlorine and this value is lower than 300, feel free to add more salt.

Zero Point (MegaChlor-CD Only)

As previously mentioned in the Chlorine Voltage section, MegaChlor-CD uses a built-in sensor to measure for the absence of chlorine. When the sensor value drops below the zero point, your MegaChlor-CD starts a chlorine generation cycle. The factory default is 15, which may need to be raised or lowered, depending on the water source.

After pressing the **Up** button, the White light will flash the power level, and then the **Green**, **Blue**, and **Red** lights will display the zero point value.

Changing the Zero Point (MegaChlor-CD Only)

If you need to adjust the zero point, press and hold the **Up** button, and continue holding the **Up** button through both the power level and zero point displays, which will then end with the White light turning on solid, at which point you can stop holding the button. While the White light is solid, pressing the **Up** button will increase the zero point by 1, and pressing the **Down** button will decrease it by 1. The range is 10 to 150, and to let you know when you reach the ends of the range, the **Red** light will be on solid at 10, and the **Green** light will be on solid at 150.

A higher zero point means that your MegaChlor-CD will start generating chlorine sooner (while there is more chlorine still in the water), causing the MegaChlor-CD to turn on more often. Because of this, you may need to lower the power level so that it turns on more often for less time.

A lower zero point means that the MegaChlor-CD will wait for the chlorine level to drop further before generating more, which may be more efficient for less frequently used pools and spas.

To maximize your electrode's lifespan, we recommend having your zero point at the lowest value that still chlorinates your water to the desired level.

Before using this troubleshooting guide, please review the installation and operation instructions in this manual, in case there were any steps missed along the way.

Green (Salt High) and Red (Salt Low) Lights on at the Same Time
This is simply an indication of too much salt. To protect the power supply and the electrode from damage, your MegaChlor has temporarily shut itself down. Even if you added the correct amount and the salt level measured **OK**, the indication is also dependent on water temperature and other minerals in the water. When in doubt, start off lower than expected and add more salt over the next couple of days as needed. It is much easier to add more salt than it is to take it out.

To fix the high salt level, first take the electrode out of the water and press **Boost**. This is to turn on chlorine generation outside of the water. If the **Green** and **Red** lights persist, then the problem is unrelated to the water.

If they do turn off, the next step is to use a 5-gallon (20-liter) bucket to determine how much you need to dilute your water.
1. Fill the bucket about ⅔ of the way with pool/spa water and the other ⅓ with fresh water.
2. Turn off the electrode and place it in the bucket for about 5 minutes to adjust to temperature.
3. Then turn it on and check to see if the light is **Blue** (**Salt OK**) when making chlorine. If needed, empty the bucket and repeat this test, using different amounts of pool/spa versus fresh water until the light is **Blue**. If the salt is **High**, try again with less pool/spa water, and if it is **Low**, try again with more pool/spa water. The amount of the bucket that is pool/spa water is the level to which you should drain your pool or spa to then refill with fresh water. For example, if the light turns **Blue** in the bucket with ⅔ pool/spa water, drain your pool or spa to about ⅔ of the way full, and then refill with fresh water.

Buildup in the Electrode, on the Plates or on the Gold/Copper-Colored Wires
The MegaChlor electrode uses a process called electrolysis to generate chlorine, and calcium is a naturally occuring byproduct of that reaction—especially if your water source contains high levels of that calcium (hard water). If there is too much buildup, it will interfere with chlorine generation, potentially even shorting the unit if left untreated.

To clean, disconnect from power and then soak the electrode in a mild acid (e.g. vinegar or pH down) for 10-30 minutes and then rinse in clean water. Repeat as needed until the calcium is gone.

Red Light on While Generating Chlorine
This light indicates that the salt level is **Low**, so simply add salt. We recommend also measuring the salt level with a test strip before adding though, especially if you are still adjusting to your new MegaChlor.

After a while, you may have white calcium buildup on or between the titanium plates in the electrode, interfering with chlorine generation. In that case, read the previous entry in this troubleshooting guide to learn how to clean this.

Also, if your MegaChlor's electrode lifespan is spent (see Electrode Lifespan Indicator), the plates may be wearing out and needing to be replaced.

MegaChlor is Off: Lights and/or Buttons Stopped Working
First, unplug the MegaChlor from the outlet, wait at least 10 seconds, and plug it back in. This will reboot the unit, which may be all that it needs, especially if it has been a while since its last reboot.

If the problem persists, check to make sure that there is no water near the control box, since that could be a sign that water got inside. If you do not see any moisture nearby, check to make sure that your power cord is securely connected to both the outlet and the MegaChlor.

Consistently Low Chlorine

The power level is most likely too low, so simply raise the power level and check for improved results over the next couple of days (see the Operation section of this manual).

MegaChlor-CD only: If your power level is unexpectedly high, then raising the zero point (see Zero Point) may also help since the chlorine levels could be getting too low before the chlorine generation even begins. To prevent over-chlorination, we recommend lowering your power level back down to 3 or lower before adjusting the zero point (you can always bring back the higher power level over the next few days if needed).

Consistently High Chlorine

The power level is most likely too high, so simply lower the power level (see Changing the Power Level) and check for improved results over the next couple of days.

We also recommend checking the salt level of your pool/spa water, both with the salt status lights and with a test strip specific for sodium chloride (NaCl), which should say 2000-4000 PPM. For bromine, test for sodium bromide (NaBr) and verify that the test strip says 3000-5000 PPM.

If your salt level is above its respective PPM range, feel free to add some fresh water, to dilute the salt level back into that range. This is particularly important if the PPM is over 5000, which could damage your pool or spa over time. If you need to drain water in order to have enough room for the fresh water, see the bucket test in the first entry in this troubleshooting guide, which will help you estimate how much to drain.

New to Saltwater Pools & Spas

Here are some guidelines and suggestions for if this is your first saltwater pool or spa:

- Always start out with low salt since it is much easier to add salt than it is to remove it. The MegaChlor measures the salt level with an electrical current, so water temperature, other minerals, and other factors can affect the measurement, in addition to the salt itself. If there is too much salt (i.e. when both the **Green** and **Red** lights are on), the MegaChlor will pause chlorine generation so as not to draw too much current and damage itself.

- Keeping your water balanced is more than just maintaining chlorine: you will also need to maintain the pH, along with possibly balancing alkalinity, hardness, etc., depending on your water source. To get more detailed help for your specific water, bring a sample to your local pool and spa store so that they can analyze your water and give you more tailored advice.

- If you have a sudden increase in pool/spa usage (i.e. from friends visiting), you may need to temporarily increase the power level, manually turn on the chlorine generation (**Boost**), or even shock the water to rebalance after that higher chlorine usage.

- Make sure to occasionally inspect the electrode since some water sources (i.e. ones high in calcium) can cause buildup inside the electrode, both on the plates and on the wires connected to those plates. This buildup will prevent the electrode from generating chlorine, and could potentially even short the unit if left untreated for long periods of time.
  - The easy fix for the buildup is to unplug the MegaChlor and let the electrode soak in a mild acid (e.g. vinegar) for 10-30 minute intervals until the buildup is gone.

Limited Warranty

Models: This warranty applies to MegaChlor and MegaChlor-CD models referenced as "System".

ControlOMatic, Inc. Warrants the system to be free of all defects in material and workmanship for one (1) year from the owners original purchase date. The system includes the power supply unit, cable, electronics, and electrolytic generator for residential use only. The product must be installed properly and used in accordance with this manual and all applicable local codes and regulations. This warranty is not transferable (proof of purchase may be necessary). Damage to the system from improper water maintenance is not covered in this warranty.

In no event shall ControlOMatic, Inc. be liable for consequential damages for breach of this warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply. The warranty does not cover any loss or damage to the product due to improper installation, product abuse, misuse, negligence, or improper maintenance of the system, pool or spa. Due to many conditions beyond our control, this warranty does not cover any loss or damage to the pool/spa, its components, users, or anything outside the system due to system failure. Since ControlOMatic has no control of the quality of components used in the manufacturing of purchaser's pool/spa or maintenance, the purchaser assumes all responsibility for using the system. Just as improper use of chemicals can damage components, improper use of this system can also cause failure. It is recommended that proper water balance practices be implemented, especially regarding the total hardness. Since standard heating elements can easily be damaged by improper water balance, it is also recommended a titanium heating element be used instead.

This warranty does not apply to any costs, repairs, services, damages, claims or losses for all of the following: Service calls to install, reinstall or correct the installation of the product, or to explain the usage of the system to the buyer, repairs necessitated by use other than normal home use, damage resulting from misuse, unintended use, unforeseen use, non pool or spa use, abuse, accidents, alterations, improper installation, or corrective work necessitated by repairs made by anyone other than an authorized service technician.

THE FOREGOING WARRANTIES ARE CONTINGENT ON THE PROPER USE OF THE SYSTEM IN ACCORDANCE WITH THESE INSTRUCTIONS AND SPECIFICATIONS AND SHALL NOT APPLY TO ANY SYSTEM THAT HAS BEEN REPAIRED OR MODIFIED BY PERSONS OTHER THAN THE MANUFACTURER.

THE EXPRESS WARRANTIES SET FORTH IN THIS AGREEMENT ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. MANUFACTURER HEREBY SPECIFICALLY DISCLAIMS ANY OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT WILL MANUFACTURER'S LIABILITY FOR ANY CLAIM, WHETHER IN CONTRACT, TORT OR UNDER ANY OTHER THEORY OF LIABILITY, EXCEED THE AMOUNT NECESSARY TO REPAIR OR REPLACE THE COVERED SYSTEM.

Should any problem develop during the warranty period, contact ControlOMatic: https://www.controlomatic.com/contact-us/.