

# *ChlorMaker*



## ***OPERATING INSTRUCTIONS***

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# ***IMPORTANT SAFETY INSTRUCTIONS***

## **READ & FOLLOW ALL INSTRUCTIONS**

**When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:**

**WARNING:** Cutting the cord from the power supply to the ChlorMaker cell voids the warranty. Damage will occur if the connection is reversed.

**WARNING:** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

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

**WARNING:** Install ChlorMaker in accordance with all national and local electrical, plumbing, safety, and other applicable codes.

**WARNING:** Connect ChlorMaker to a GFCI (ground fault circuit interrupt) or GFI (ground fault interrupt) protected VAC power source only.

**WARNING:** Protect the power supply and outlet from exposure to the elements including direct sun, rain, snow, condensation, etc.

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

**WARNING:** DO NOT operate ChlorMaker if damaged in any way.

**WARNING:** DO NOT pull on the cord to disconnect the Power Supply from power source. Do not allow the cord be walked on, or to rest on sharp edges or corners. Do not drop, throw, or otherwise rough handle ChlorMaker.

**WARNING:** DO NOT operate or leave the power supply in temperatures below 32°F or 0°C. The power supply may not survive in extremely cold temperatures.

**WARNING:** Disconnect, remove and store ChlorMaker indoors when spa has been winterized or drained.

**CAUTION:** Leave spa cover open at least 1 minute to allow trapped gases to escape prior to use.

**CAUTION:** Measure water quality parameters and adjust if necessary prior to each spa use.

**CAUTION:** ChlorMaker doesn't measure the chlorine level and must be adjusted properly in order to not over-chlorinate your spa. Over-chlorination can lead to spa damage and un-healthy water conditions.

**WARNING:** Remove the ChlorMaker cell from the SPA when using the SPA.

**WARNING:** DO NOT handle the ChlorMaker cell during chlorine production (visible bubbling). Slight discomfort may be felt in cuts, sores, or sensitive skin areas due to chlorine concentration and the electrolysis process.

**WARNING:** DO NOT insert objects into, or tamper with the ChlorMaker cell in any way. Inserting metal objects into the cell may cause damage and void the warranty.

**WARNING:** DO NOT plug ChlorMaker control box directly into the VAC supply, this will damage the ChlorMaker. Always use the low voltage power supply.

## **SAVE THESE INSTRUCTIONS**

# INTRODUCTION

ChlorMaker is a semi-automated, salt water chlorine generation system specifically designed for portable spas up to 1000 Gallons. ChlorMaker generates chlorine from a small amount of ordinary salt (Sodium Chloride, NaCl) dissolved in the spa water. The amount of salt added is very small in relation to the volume of the water in the spa. The concentration required for the ChlorMaker is only about 5% of the salt level of ocean water and below the typical taste level of most humans.

The small addition of salt also benefits spa users by providing a softening effect on the water, leaving hair and skin feeling smoother and healthier than with traditional sanitizing products. Only 2.5 cups of salt per 100 gallons (379 liters) of water is all it takes for ChlorMaker to produce fresh, pure chlorine leaving your water clean and clear day after day.

ChlorMaker produces chlorine in its pure form using electrolysis in order to sanitize the spa water. The ChlorMaker operates on a 3 hour cycle. The chlorine in a spa will dissipate quickly due to the warmer temperatures of the water, so the ChlorMaker operates with a short 3 hour cycle time to ensure sanitizer levels are maintained. After the salt is converted to chlorine, the chlorine will later be converted back to salt, keeping the salt level steady. When you use the spa your body attracts some salt and when you get out the salt level will drop slightly.

## WATER PREPARATION & MAINTENANCE

To ensure proper operation, the spa must be drained, rinsed, refilled with fresh water, and balanced to the recommended levels indicated in this section before installing the product. Use the included test strips to measure water chemistry and verify the water is properly balanced. Replacing the filter is recommended, but not required unless, the spa was previously sanitized with a hydrogen peroxide system. The combination of hydrogen peroxide and chlorine may cause gum-like build up, water discoloration, and skin irritation.

It is important to properly maintain your spa for the health and safety of all users. Spas are unique in both size and usage patterns. ChlorMaker will significantly reduce the amount of spa maintenance required, but regular chemical checkups, including chlorine levels and pH, are recommended. Proper water maintenance will prolong the life of ChlorMaker and the spa. The following table describes generally accepted optimum water chemistry for portable spas.

It is recommended that chlorine and PH levels are checked before each use, or at least once per week when not in use. Alkalinity, Calcium Hardness, and Salt Concentration should be checked at least once per month. It is recommended that the spa is manually shocked after high usage (example: after a party with multiple users), or biweekly if used frequently. Always remember to leave the spa circulating for several hours before retesting.

Parameter	Recommended Level
Free Chlorine	2.0 to 3.0
pH	7.2 to 7.6
Total Alkalinity	80 to 120 PPM
Calcium Hardness	200 to 400 PPM

Phosphates in the spa water will increase the demand for chlorine and will reduce the life expectancy of the generator. Remove Phosphates upon start up and each month thereafter. Phosphate Remover can be purchased at any local Pool & Spa supply store.

**WARNING: Consistent chlorine levels above 5.0 PPM (parts per million) or consistent salt concentration levels above 5,000 PPM may lead to corrosion of metal components in the spa.**

**WARNING: Consistently low Calcium Hardness levels below 150 PPM may lead to spa equipment damage and failure. Make sure Calcium Hardness levels are within the recommended range above.**

# SALT REQUIREMENT

ChlorMaker will generate either Chlorine or Bromine depending on the type of salt used. Sodium Chloride Salt provides Chlorine Generation and Sodium Bromide Salt provides Bromine. Please Note: Each salt requires a different level of salinity for the ChlorMaker to operate effectively. **WARNING: SALT ONLY NEEDS TO BE ADDED ONCE AND BROUGHT TO THE APPROPRIATE SALT LEVEL (BLUE LIGHTS) PER SPA WATER CHANGE. DO NOT KEEP ADDING SALT.**

**CHLORINE SALT - SODIUM CHLORIDE (NaCl):** Raise Salt Level to 1,500 to 2,000 PPM (Parts Per Million). Approved salts include "pool salt" made for salt water chlorine generating systems, canning and pickling salt from your local market, and some water softener salts that are 99% pure sodium chloride or better. Some high-end, mineral enriched salts can be used but require higher quantities to achieve 2,000 PPM sodium chloride salt level. These approved salts are generally available at pool & spa supply stores, home improvement centers and On-Line stores in a variety of sizes. NOTE: Never use rock salt or salts that have more than 1% "anti-caking agents", "yellow prussiate of soda", or "sodium ferrocyanide". These compounds may cause surface staining.

**BROMINE SALT - SODIUM BROMIDE (NaBr):** Raise Salt Level to 3,000 PPM (Parts Per Million). There are several manufacturers of Sodium Bromide Salt to choose from. Please make sure the Sodium Bromide you purchase is 99% pure or better. Ask your local pool and spa dealer for assistance.

**Chart is Based on 100 Gallons or 379 Liters of Spa Water**

Salt Type	Pounds	kg	Cups	Salt Level
99% Pure Sodium Chloride (NaCl)	1.5	0.681	2.5	1500-2000 PPM
99% Pure Sodium Bromide (NaBr) Fine Grain Salt	2.5	1.135	4	2500-3000 PPM

The amount of salt to add and dissolve is dependent upon the size of the spa. Determine the volume of water in gallons or liters by checking the spa owner's manual or use any Internet volume calculator.

- 99% Pure Sodium Chloride (NaCl) Coarse Grain Example:
  - For a 350 Gallon Spa: Divide 350 Gal by 100 and multiply by 2.5 to get the amount to add in cups.  
 $(350 / 100 * 2.5) = 3.5 \times 2.5 = 8.75$  Cups
  - For a 1250 liter Spa: Divide 1250 liters by 379 and multiply by 0.681 to get the amount to add in kg.  
 $(1250 / 379 * 0.681) = 3.3 \times 0.681 = 2.25$  kg and for cups  $(1250 / 379 = 3.3 \times 2.5 = 8.25$  cups)

Simply pour the recommended amount of salt directly into the spa water to bring the concentration to the recommended level. Turn the spa jets on. If the water is cold it may take several hours for the salt to fully dissolve, warmer water will help dissolve the salt faster.

**NOTE:** It may take the ChlorMaker a few hours to register the salt level the first time. Wait a couple of hours for the salt to dissolve, and then turn on the ChlorMaker.

**NOTE:** When putting salt in, do not add too much. The ChlorMaker will shut down and display **RED/GREEN** lights at the same time. It is always better to put less in, and then add a little more later if needed. If you have a water softener then your water source may already have some salt, in this case let the water get to temperature and turn the ChlorMaker on before adding any salt to check the current level.

**NOTE:** If you are trying to decide which salt you want to use, ControlOMatic recommends pool salt (NaCl). Sodium bromide (NABR) is around \$13 per pound and pool salt (NaCl) is around \$0.18 per pound. To use NaBr on a 400 gallon spa would cost around \$130 for the salt, and then you would have to buy it again when you drain your spa. ControlOMatic has also received feedback that the smell from Bromine is noticeable.

**NOTE:** Many hardware stores and big box stores carry pool salt, so it is easy to find 40 pound bags at such places.

# ChlorMaker Installation

## Prepare the SPA

Drain and clean the spa, refill and add salt. Allow the water to get to over 95°F and balance the water.

## Installation Steps

1. Install a protected electrical outlet, if not already available near, the spa for the Power Supply
2. Mount the control Box
3. Drape the ChlorMaker cell over the side of the spa, ensure it is hanging vertically
4. Turn the ChlorMaker on
5. Set the power level



## Power Supply

The power supply supports 100 to 240 VAC with an output voltage of 5.5 VDC. The supply cord from the Power Supply to the ChlorMaker control box is 15 feet. Installing any equipment inside the spa equipment compartment may void the spa warranty or void the safety certification of the spa and is not recommended.

## 110 VAC Electrical Outlet

Locate a GFCI protected outlet near the spa. **WARNING: A 110 VAC GFCI or GFI protected outlet is required.** A weather protective cover is required to house the power supply at the power source connection. Weather protective covers are available at most local hardware stores. If an outlet needs to be installed, have a licensed electrician add a 110 VAC GFI protected outlet.

## 220 VAC Electrical Outlet

The power supply plug style is for 110 VAC. Have a licensed electrician install a 220 VAC GFI protected connection near the spa that will accept a 110 VAC style plug. The outlet may need to be a minimum distance from the spa and the local electrical codes should be checked.

## Power Supply Connector

Remove the tie straps from the ChlorMaker power supply cable and route the cable to the outlet, do not plug in yet. The cable should already be attached to the power supply, the connector has 2 metal pins, one is round and the other is rectangular and can only go in one way, reversing the connection will damage the ChlorMaker. The ChlorMaker includes 2 cable clips, use one (3/16" with a #6 x 1/2" screw) to attach the cable to a solid surface if necessary.

## Cold Weather Operation

The power supply is not designed for temperatures below 32°F or 0°C. If this can't be avoided store the power supply in a warm location when the temperature is low or install the power supply in the spa equipment area where there is some protection.



## 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
2. Out of direct sunlight
3. A location that will minimize rain and moisture. Even though the box is waterproof, minimizing moisture exposure will minimize the chance of moisture getting inside the box
4. A flat location on the spa skirt that is close enough for the power supply cable to reach the electrical outlet and the cable can be protected or locate on a post or wall near the spa, close enough to the spa for the 10 foot cell cable to reach, with the cell hanging in the deepest part of the spa

The ChlorMaker box mounting flange has two large holes allowing for installing the screws first.

1. Install the two small screws  $5 \frac{3}{8}$ " apart and  $1 \frac{1}{4}$ " or more below the edge of the shell part of the spa
2. Place the box onto the screws and slide the box down
3. Tighten the screws

## ChlorMaker Cell

Lift the lid off the spa and drape the cell over the side into the water. Use the following guidelines for the placement of the cell:

1. For best results place the cell in the deepest location in the spa. When generating chlorine the bubbles will travel up and, if in the deepest location in the spa, will be in contact with the spa water longer
2. The cell must be in a vertical orientation. If lying flat it will generate less chlorine
3. The cell 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 in a deeper location. When the pump is off the filter door closes and the chlorine level will be much higher in the filter area.
4. The ChlorMaker includes 2 cable clips. Use one of the clips ( $\frac{1}{4}$ " clip and a  $\#6 \times \frac{1}{2}$ " screw) to fasten the cable to the side of the spa if necessary





## OPERATION

The ChlorMaker has 3 buttons and 4 lights built into the overlay on the control box. With the buttons you can check the power level, change the power level and put into boost mode. The lights indicate the salt level and the current mode (making chlorine or standby).

### **Power Up**

To turn on the ChlorMaker plug in the power supply (wall transformer). When the ChlorMaker turns on it will flash the lights as follows:

1. **WHITE** - Blinks two times
2. **RED, BLUE, GREEN** - will flash in that order
3. **WHITE** - will then flash the power level, count the flashes (the number is the power level, 1 to 10)
4. Chlorine production will start after a few seconds

### **Making Chlorine (Salt Level Indication)**

ChlorMaker will indicate if the salt level is low or normal. If it is low that is OK, you could add more salt if you want, but not required. If the lights are on solid or blinking (at a one second rate) the ChlorMaker is producing chlorine:

- Solid **GREEN** - Salt Level High
- Solid **BLUE** - Salt Level Normal
- Solid **RED** - Salt Level On The Low Side
- Solid **RED / GREEN** at the same time - Salt Level has exceeded the maximum and the ChlorMaker has shut down to protect the power supply and the cell. Drain out some water and refill to dilute the salt level
- The lights will blink the salt level when in boost mode

### **Not Making Chlorine (Standby Mode)**

The ChlorMaker works on a 3 hour cycle. The first part of the 3 hours is chlorine production mode where there will be visible bubbles coming out of the cell; the rest of the 3 hours is standby mode where the cell is not making chlorine. The standby mode is indicated by the **GREEN** light flashing every 10 seconds. This shows the ChlorMaker has power and is on, but waiting for the 3 hour period to end.

# Power Levels

ChlorMaker includes 10 power level settings that are set based on water volume, usage and testing. The ChlorMaker factory setting is 3 (on 15 minutes and standby is 2 hours and 45 minutes). The output power to the cell is always the same. The power levels change the amount of time the cell is energized every three hours. At the start of the three hour period the cell will be energized and then, after the time indicated by the power level, the cell will go into standby mode and stop producing chlorine. At the start of the next 3 hour period the cycle repeats. Follow the steps below to increase or decrease the power level.

## VIEW THE CURRENT POWER LEVEL SETTING

Simply press the UP or DOWN arrow button once and count the **WHITE** flashes. Each flash represents a power level. For example: 3 **WHITE** flashes = power level 3, 7 **WHITE** flashes = power level 7.

## CHANGE POWER LEVELS

1. Press both the UP arrow and the DOWN arrow at the same time. The **WHITE** Light will turn on solid indicating that it is in power change mode.
2. Press the UP arrow to increase power - the **GREEN** light will flash each time the UP arrow is pressed. If set at the maximum power level of 10, the **GREEN** light will be on solid.
3. Press the DOWN arrow to decrease power - the **RED** light will flash each time the DOWN arrow is pressed. If at the minimum power level of 1, the **RED** light will be on solid.
4. When finished do not press any buttons for 3 seconds. The **WHITE** light will flash (count the flashes) confirming the new power level setting.

## SELECTING THE RIGHT POWER LEVEL

Selecting the right power level requires some testing and adjustment. There are many factors that affect the sanitizing needs of a spa such as: Frequency of spa use, number of people, if there is an Ozone Generator, spa temperature, last drain and refill, phosphate level, etc. After the testing and adjustment period, ChlorMaker will take care of your sanitation needs day after day.

As a starting point, set the power level to the general recommendations shown in the chart below. This is only a starting point and the final level may be very different. Use the following procedure to find the power level for your spa.

**Day 1:** Set the power level according to the table and the size of your spa.

**Day 2:** Measure the chlorine level. If it is higher than you want lower the power level by 1. If it is lower than the level you want raise the power level by 1.

**Day 3:** Repeat the Day 2 step until the chlorine remains constant at the required level for a couple days.

**NOTE:** If the chlorine level is 0 PPM, 24 hours after installation, the initial chlorine demand on the spa may be above what ChlorMaker 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 set-up.

If spa usage drops (vacation, winter, etc), **it is important to lower the power level down several levels.** If usage significantly increases (return from vacation, etc), it is important to adjust the power level up accordingly. Always retest and adjust the power level as needed.

**WARNING:** The ChlorMaker does not measure the sanitizer level and the power level needs to be properly adjusted. If the power level is higher than needed and the spa is left alone for a number of days without measuring the sanitizer, the levels may be too high and potentially damage spa components.

Power Level	Gallons	Liters
1 - 3	< 200	< 760
4	200 to 300	760 to 1150
5	300 to 400	1150 to 1500
6	400 to 500	1500 to 1900
7	> 500	> 1900

# Vacation Mode

When vacation mode is activated the ChlorMaker will decrease the on time to make less chlorine. Vacation mode is automatically activated when no buttons are pressed for over a week. When activated, the lights will flash **RED** and **BLUE** instead of **GREEN** every 10 seconds in standby mode. To exit vacation mode press any button. The amount the time is decreased is:

**No button pressed for 1 to 2 weeks: On time \* 0.75**

**No button pressed for over 2 weeks: On time \* 0.5**

# Boost Mode & Power Level Times

Activating Boost Mode will take ChlorMaker out of regular production mode or standby mode, and re-start the production of chlorine according to the following table. To activate Boost Mode simply press the Boost Mode Button. The Salt Light will begin flashing indicating that ChlorMaker is in Boost Mode. **IMPORTANT: The ChlorMaker can't make chlorine faster. The Boost Mode keeps it on for a longer period of time. If the spa chlorine has dropped to 0 PPM from heavy usage, chlorine may need to be added.**

Power Level	Normal Time	Boost Mode Time
1	00:02:00	00:12:00
2	00:07:30	00:45:00
3	00:15:00	01:30:00
4	00:30:00	03:00:00
5	00:45:00	04:30:00

Power Level	Normal Time	Boost Mode Time
6	01:00:00	06:00:00
7	01:30:00	09:00:00
8	02:00:00	12:00:00
9	02:30:00	15:00:00
10	03:00:00	15:00:00

# ChlorMaker Included Parts

When opening the package make sure all of the parts are included. The serial number is on the control box and on the last page of this manual.

#	ChlorMaker DO Included Parts
1	Cell with 10 foot cable
2	Power supply with 15 foot cable
3	ChlorMaker control box
4	Cable clips (2)
5	SS Screws: #6x1/2, #6x5/8 - (2 of each)
6	LaMotte test strips, salt and general spa
7	Owners manual



# TROUBLESHOOTING

It is always a good idea to revisit the user manual to make sure installation or maintenance steps were not overlooked before referring to the trouble shooting section.

## **Plates Need Cleaning - Cleaning the Electrode (Cell) - White Calcium Deposits**

- If there is a white calcium buildup between the titanium plates, this will interfere with the chlorine production. Disconnect the power before cleaning. Soak the cell in a mild acid (white vinegar or pH down) for 10 to 30 minutes and rinse in clean water. Repeat until the white deposits are gone
- The electrode can also be removed from cell housing for cleaning using a suitable wrench if not hand tight.

## **RED Lights While Making Chlorine**

- Salt level low: Add salt. Before adding salt it is a good idea to measure the salt level first
- Check the cell for white calcium buildup and if present clean the plates
- Plates damaged: Unit needs to be replaced. The plates will last 7000 to 10000 hours of chlorine production and the ChlorMaker may be at the end of its life. Note: The lower the power level you can operate on, the longer the ChlorMaker will last

## **Consistently Low Chlorine**

- Power level too low: Increase the power level
- Low salt level: Adjust the salt level as necessary. The ChlorMaker will make less chlorine with a lower salt level
- Plates need cleaning: See above
- High bather load: Additional chlorine or shock may be needed
- Very high salt level: The **RED** and **GREEN** lights may be on indicating a very high salt level. When this happens the ChlorMaker shuts down and will stop making chlorine to protect the power supply. Drain out some of the water and refill with fresh water to lower the salt level.
- Just doesn't keep up:
  - Remove organic material such as leaves and clean the filter
  - Make sure the cell is at the deepest point in the spa and in a **VERTICAL ORIENTATION!**
  - Remove the phosphates: Phosphates are food for algae and consume chlorine. The ChlorMaker makes chlorine slowly and removing the phosphates will help lower the spas chlorine consumption demand
  - Shock the water: You can use either a chlorine based shock or chlorine free

## **Consistently High Chlorine**

- Power level too high: Lower the power level

## **The ChlorMaker is off, No Lights**

- Check if in the standby part of the cycle, watch and see if the GREEN lights flash every 10 seconds
- The GFCI circuit breaker has tripped. Verify that there is input VAC.
- The power supply has been damaged. The rain cover didn't prevent moisture from the power supply, was subjected to freezing weather or the cord has been cut.

# Replacement Parts

The titanium plates of any saltwater chlorine generator will eventually wear out and need replacing. Visit [www.controlomatic.com](http://www.controlomatic.com) and select Shop which will take you to our store.

Item	Part Number	Type	Description
1	TCPS	Power Supply	Replacement power supply for TechniChlor / ChlorMaker / SmarterChlor
1	ChlorMaker-Electrode	Electrode	ChlorMaker replacement electrode
2	Insta-Test-4	Test Kit	Insta-Test 4 Spa Test Strips, Chlorine, pH, Hardness & Alkalinity
3	Insta-Test-Salt	Test Kit	Insta-Test Salt Pool and Spa Test Strips Sodium Chloride
4	CM-CELL	Cell Body	Replacement cell body, electrode is a separate item.
5	CMSCIL-KIT	Kits	In-Line Conversion Kit for ChlorMaker and SmarterPool

NOTE: Installing the ChlorMaker inline may void the spas warranty and UL safety certification as you will be adding to the existing equipment of the spa. We can provide the conversion kit CMSCIL-KIT or you can find the required parts at your local hardware store. If you install it inline we recommend spas with a 24 hour continuously running pump that has 3/4" tubing.

## Notes:

## LIMITED WARRANTY

Models: This warranty applies to ChlorMaker 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. The warranty does not cover any loss or damage to the spa, spa components, users, or anything outside the system due to system failure. Since ControlOMatic has no control of the use of this system the purchaser assumes all responsibility for using the system.

This warranty does not apply to any costs, repairs, services, damages, claims or losses for all of the following: Service calls to install, re-install 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, [www.controlomatic.com](http://www.controlomatic.com).

## PRODUCT REGISTRATION

Either register your ChlorMaker online at [www.controlomatic.com](http://www.controlomatic.com) or fill out the product registration form and mail it to: ControlOMatic, 12659 Arbor Ln. Grass Valley, CA 95949.