

CORE CONTROL™

CircuPool®



Installation and Operation Guide

Models: **CTRL35** **CTRL55**

Smart Chlorine Generator with Wi-Fi Enabled Monitoring & Control
Expandable Platform Providing Automation of Your Pool's Core Needs

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IMPORTANT SAFETY INSTRUCTIONS

READ AND FOLLOW ALL INSTRUCTIONS

All electrical work must be performed by a licensed electrician and conform to all national, state, and local codes. Improper use or installation can badly harm the unit and its surroundings. When installing and using electrical equipment, basic safety precautions should always be followed, including the following:

- **DANGER** Disconnect all AC power before installation. Do not operate the unit with the cover open.
- Device can be connected / disconnected to / from power supply by plug or circuit breaker.
- Position the equipment so that disconnecting device is easily accessible.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- **WARNING** – to reduce the risk of injury, do not permit children to use/access this product.
- The Control Module must be mounted **vertically** on a flat surface, and at a minimum horizontal distance of 5 ft (or more, if local codes require so) from the inside walls of the swimming pool.
- **WARNING – risk of electric shock!** Connect only to a grounding type circuit protected by a ground-fault circuit-interrupter (GFCI) outlet. The installer should provide this GFCI requirement. The GFCI should be rated for minimum 6 Amps and tested on a regular basis by pushing the test button. If the GFCI fails to operate correctly, there is ground current flowing indicating the possibility of electric shock: **do not use this unit.** Disconnect unit and have a qualified professional fix the problem before operating again.
- The Input circuit must be connected only after OVERCURRENT DEVICES, such as fuse or circuit breaker to limit the amperage in the input wire to the maximum that is permitted by the National electrical Code.
- The Control Module must be permanently connected, with copper wire, not less than 14 AWG.
- Do not bury the cord. Place the cord to minimize damage by lawn mowers, hedge trimmers & other equipment.
- **WARNING!** To reduce the risk of electric shock, replace a damaged cord immediately.
- **WARNING!** To reduce the risk of electric shock, do not use an extension cord to connect the unit to electric power supply; provide a properly located outlet.
- Wiring of the unit must be performed according to the wiring instructions detailed in this manual.
- Build-up of flammable fumes can result in a hazardous condition if the cell is allowed to operate without water flow.
- Ensure that equipment and materials used in or around the pool and spa are compatible with salt-based sanitation systems. Certain materials may be susceptible to salt and chlorine damage.
- ALWAYS ADD ACID TO WATER, NEVER WATER TO ACID.
- If acid is stored in the machine room, make sure it is properly vented to avoid damage from acid vapors.
- Under no circumstances should the machine room be used to store equipment, furniture, sports gear or any other apparatus that is not related to the pool, including spare acid containers. The machine room must be aired and vented prior to entering it.
- Acid container must be stored inside a spill containment vessel (a basin to holds acid in case of overflow or tipping of the acid container)
- Control Module is suitable for IP65 environment conditions.
- **SAVE THESE INSTRUCTIONS.**



CORE CONTROL Owner's Manual

INTRODUCTION

Congratulations on your recent purchase of a CircuPool CORE CONTROL Smart Chlorine Generator System. Its WiFi-enabled operation easily allows it to be remotely monitored and controlled, and its revolutionary design allows for expandable control such as chemical automation & equipment automation. CircuPool's CORE CONTROL platform uniquely offers a comprehensive solution to escape from the routine hassles of manual pool chlorination, sanitization, and essential balancing, while being able to ensure the pool system is operating in sync. The CORE CONTROL uses a very low level of salt in the pool water to continuously create free chlorine, killing bacteria and algae in the water and helping to maintain a sparkling clean pool. Its adjustable chlorine output allows you to select the optimal level of chlorination for your pool's needs, and can be automated by adding additional sensors. Please take a moment to read through the entire manual before installing your new unit. Your generator must be installed and operated as specified.

GETTING STARTED

READ ENTIRE MANUAL FIRST - To ensure consistent & reliable operation, the pool and equipment must be used and maintained as specified. Most issues are easily avoidable with correct maintenance.

Before installation or operation, please take the time to read this entire manual, compare package contents with the parts list, and gather tools required. Improper installation may void the warranty and create unnecessary hazards. This manual contains step-by-step instructions to help ensure that your installation meets the recommended standards. Spending the time to understand your system and its functions will ensure successful, trouble-free operation.

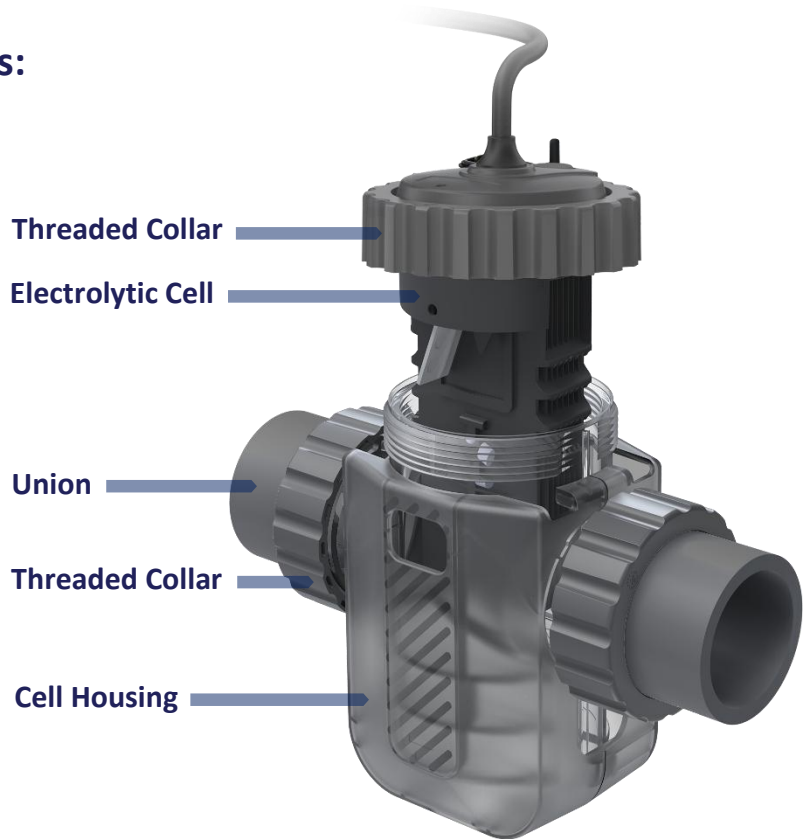
As with any electrical device, it is very important that the installation and service of this equipment be performed by a qualified person with the skills and experience required to do it safely and correctly. Improper installation or service can result in severe electrical shock to the installer or user of the equipment or pool. Please choose your installer with great care! Be sure to familiarize yourself with the pool chemistry requirements and maintenance procedures. If you are unsure about any of the information in this manual, please contact your installer / dealer.

Please visit www.circupool.com/help for more information, tips, and troubleshooting assistance.

SYSTEM OVERVIEW

The **CORE CONTROL** chlorine generator system includes the following in its user-friendly, integrated design.

CORE CONTROL System Includes:



My-Pool App Google Play or Apple app store
*Phone illustration

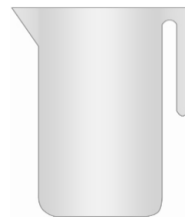


WiFi Module

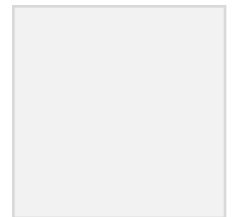
Winter cap



Cleaning Vessel



Templates (2)



Control Module: This component centralizes control for the system with an intuitive, user-friendly design. It supplies power to the Cell and allows you to customize the system's operation in order to meet your pool's unique needs.

WiFi Module: This component allows the Control Module to be accessed via the My-Pool App from any internet-connected mobile device. Designed to be extremely intuitive, no technical knowledge is required.

Electrolytic Cell: This component creates chlorine as the water inside passes through and returns to the pool. The Electrolytic Cell ("Cell") contains a bipolar set of titanium plates that use a low level of DC electrical power to generate chlorine from salt in the water. Its integrated salinity / flow / temperature sensors ensure that there is adequate salinity & water flow for the Cell to activate, and monitor the temperature in order to protect the cell.

Cell Housing: This component houses the Electrolytic Cell as water passes through inside.

Unions / Threaded Collars: These components allow the Cell Housing to connect to the pool's PVC return plumbing.

Templates (2)

Cutting Template: This overlay allows you to easily & accurately mark your PVC pipe during installation.

Mounting Template: This overlay allows you easily & accurately make marks to hang your Control Module.

Cleaning Vessel: Makes the process of cleaning the Cell convenient & helps mix the right amount of cleaning solution. The Cell will soak within the

Winter Cap: Makes winterizing or maintenance quick and convenient if you ever need to remove your salt chlorine generator cell but keep your plumbing sealed. Includes cap nut and o-ring to seal the top of the clear cell housing after removing the electrolytic cell.

Additional Items Required (Not Included)

- PVC Cement
- PVC Primer
- Hacksaw or Pipe Cutters
- Screwdrivers
- Permanent Marker

Recommended: Power drill and associated hardware for use when mounting Control Module (depending on the type of vertical surface available, e.g. masonry wall, wood fence, etc...)

Preparing the Pool Water



It is important that the pool's water chemistry is balanced before the **CORECONTROL** is powered on and used.

In order for the system to be able to work, **there must be a minimum level of salt in the pool water**, see "Salt Levels" below. In order to achieve normal pool operation, **it is required that the pool water chemistry first be balanced** according to the national standards listed under "Ideal Chemistry Levels" on page 9.

DO NOT add chemicals or salt directly to the skimmer. This may damage the cell. If the system has already been installed, it should not be turned on before adding salt. Additionally, leave the salt chlorinator off any time there is a chance of recently added chemicals going through the salt cell in a concentrated form.

For New Pools / Remodels: wait 30 days or longer if specified by your builder for plaster to cure before adding salt.

For Biguanide (Non-Chlorine) Pools: ensure any Biguanide-based chemicals have been removed prior to startup.

Ideal Salt Levels & Pool Size

The ideal salt level for operation is about 3500 ppm (parts per million), and it is suggested to keep the salinity between 3000-4000 ppm. To achieve this level of salinity, use the chart on page 8, which will help you add approximately 30 lbs of salt for every 1000 gallons of water (or 3.6 Kilograms of salt for every 1000 Liters). If you are unsure of the number of gallons in your pool, double-check with the following equations.

Calculating Gallons (Dimensions in Feet)

Rectangular Pool

Pool Width x Pool Length x Average Depth x 7.5 = Pool Gallons

Round Pool

Pool Diameter x Pool Diameter x Average Depth x 5.9 = Pool Gallons

Oval Pool

Pool Width x Pool Length x Average Depth x 6.7 = Pool Gallons

Example – 15' x 30' Rectangular Pool with 3' shallow end and 6' deep end.

15' wide x 30' long x 4.5' Average Depth x 7.5 = 15187 Gallons

Important Note: while the ideal salinity range is 3000-4000 ppm, the CORE CONTROL has a very wide operational range of 2000-7000 ppm in order to ensure consistent chlorination during the times that the pool's salinity may chance to be out of the ideal range.

Adding Salt

IMPORTANT: Before adding salt at any time, ALWAYS perform an independent water test to measure pre-existing salt levels.

		If the salt level (PPM) in your pool is currently...								
		0	500	1000	1500	2000	2500	3000	3500	4000
If your pool holds this many gallons...	4,000	117	100	83	67	50	33	17	0	OK
	6,000	175	150	125	100	75	50	25	0	OK
	8,000	234	200	167	133	100	67	33	0	OK
	10,000	292	250	209	167	125	83	42	0	OK
	12,000	350	300	250	200	150	100	50	0	OK
	14,000	409	350	292	234	175	117	58	0	OK
	16,000	467	400	334	267	200	133	67	0	OK
	18,000	525	450	375	300	225	150	75	0	OK
	20,000	584	500	417	334	250	167	83	0	OK
	22,000	642	550	459	367	275	183	92	0	OK
	24,000	701	600	500	400	300	200	100	0	OK
	26,000	759	651	542	434	325	217	108	0	OK
	28,000	817	701	584	467	350	234	117	0	OK
	30,000	876	751	626	500	375	250	125	0	OK
	32,000	934	801	667	534	400	267	133	0	OK
	34,000	992	851	709	567	425	284	142	0	OK
	36,000	1051	801	751	600	450	300	150	0	OK
38,000	1109	951	792	634	475	317	158	0	OK	
40,000	1168	1001	834	667	500	334	167	0	OK	
42,000	1226	1051	876	701	525	350	175	0	OK	
44,000	1284	1101	917	734	550	367	183	0	OK	
46,000	1343	1151	959	767	575	384	192	0	OK	
48,000	1401	1201	1001	801	600	400	200	0	OK	
50,000	1460	1251	1043	834	626	417	209	0	OK	

After measuring for any existing salt content in the pool, add salt according to the chart above. The chart allows you to cross-reference your existing salt level and your pool size to estimate the number of pounds of salt required to achieve 3500 ppm. Without the right amount of salt, the result will be reduced efficiency and a low level of chlorine production. In addition, operation at low salt levels will reduce the longevity of the cell.

When adding the salt to the pool, it is best to empty the required salt into the shallow end of the pool and run the filter and pump simultaneously in order to circulate the water and dissolve the salt (the Cell to remain off during this time period – **failure to do so will cause the fuse to blow**). Do not throw the salt bag into the water as chemicals and inks on the bag can interfere with water balance. **Salt may take 24 - 48 hours to dissolve** in summer, and longer in winter. Finer granules of salt will dissolve faster than compressed pellets.

The salt in your pool is constantly recycled and does not normally need to be replenished frequently. The loss of salt throughout the swimming season should be small, and is due primarily to the addition of extra water to replace water lost from splashing, backwashing, and draining. Salt is not lost due to evaporation.

Use only evaporated, granulated, non-iodized salt (Sodium Chloride). The purer the salt (at least 99%), the better the life and performance of the Electrolytic Cell. Water Softener salt (also known as Water Conditioning pellets) is an economical way to buy large quantities of salt. However, only salt that is at least 99% pure NaCl can be used. Pellets are compressed forms of evaporated salt that may take longer to dissolve. Avoid using salt with anti-caking agents (Sodium Ferrocyanide, also known as YPS or Yellow Prussiate of Soda) that could cause discoloration of fittings and surface finishes in pool. Do not use Calcium Chloride as a source of salt. Do not use Rock Salt; insoluble impurities mixed with the rock salt can shorten the life of the unit.

TIP: When adding *large* quantities of salt, independently test existing salt level and add in portions, retesting at each stage.

Ideal Water Chemistry Levels

Free Available Chlorine	1.0 - 3.0 ppm	Stabilizer (Cyanuric Acid)	30 - 50 ppm
Combined Chlorine	0 ppm	Saturation Index (LSI)	-0.2 to +0.2 (0 Best)
ORP	650-850 mV	Phosphates & Nitrates	None (0 Best)
Ideal Salinity	3000 - 4000 ppm	Metals	None
pH	7.2 - 7.8 (7.5 Best)	Calcium Hardness	200 - 400 ppm (Depending on LSI)
Total Alkalinity	80 - 120 ppm	TDS	<1200

It is important to maintain these chemistry levels in order to ensure that the pool can be enjoyed safely, to minimize the amount of effort required to sanitize the water, and to prevent corrosion or scaling. The only unique requirement for a pool with a chlorine generator is the low level of salt (salinity) to be maintained in the water. It may be helpful to provide this manual to any pool professional that you may have performing chemical testing or service, as requirements may vary from brand to brand.

CHEMISTRY TIPS:

Free Chlorine / Combined Chlorine: Free Chlorine is the unused residual sanitizer level which should **always** be maintained as a protective “shield” against algae / microorganisms.

Combined Chlorine (Chloramines) should not be present in pool water. When organic materials are not fully oxidized by Free Chlorine, Chloramines are formed. This ties up the Free Chlorine in your pool and does not allow the chlorine in your pool to disinfect. Chloramines also cloud pool water and burn the eyes. If measured, Free Chlorine is being used up as fast or faster than it is replenished; the pool’s chlorine demand may be increasing due to weather, pool usage, impurities / chemical imbalances. Address causes of increased chlorine demand, while increasing amount of chlorine generated and/or Super Chlorinate (shock) to remove Chloramines if present in the pool.

ORP (Oxidation-Reduction Potential): ORP is a key measurement of a pool's water quality and sanitation level, indicating whether more or less sanitizer is required. Note that changes such as pH, stabilizer, and addition of alternative sanitizers will affect the primary sanitizer residual level relative to ORP.

pH Levels: pH produced by the Electrolytic Cell is close to neutral pH. However, other factors usually cause the pH of the pool water to rise. As a result, the pH in a saltwater pool can tend toward approximately 7.8 - **pH levels above 7.8 drastically reduce the effectiveness of the chlorine**, and can also contribute to excessive mineral scaling. Maintain pH as close as possible to the target level of 7.5. It is important to also **maintain total alkalinity on a regular basis to ensure pH stability**.

Chlorine Stabilizer (Cyanuric Acid): Stabilizer is needed to maintain proper levels of chlorine; the sun’s UV radiation can destroy unstabilized chlorine in as quickly as 2 hours. Stabilizer should not typically be kept above 50 ppm, as excessive amounts can also reduce chlorine effectiveness. If pH/ORP sensors are used, up to 40 ppm of stabilizer may suffice.

Saturation Index (LSI): A calculated number used to predict the calcium carbonate stability of water. If the index is higher than +0.2, it can cause quick and excessive calcium scaling on the salt cell. If the index is lower than -0.2, it can cause the water to be corrosive and damaging to metals and minerals in the water, such as the titanium inside the Cell.

Nitrates and Phosphates: These chemicals are very common and can cause extremely high chlorine demands and can easily deplete your free chlorine levels to zero. Your local pool professional can test for Nitrates and Phosphates, levels should be at zero.

Metals: Metals can cause the loss of chlorine. Also, metals can stain your pool and tint your water. Have your local professional test and recommend methods of removal. Be sure to use a phosphate-free metal remover.

Total Dissolved Solids (TDS)
Adding salt to pool water will raise the TDS level. While this does not adversely affect the pool water chemistry or clarity, the pool professional testing for TDS must be made aware that salt has been added. The individual performing the TDS test will then subtract the salinity level to arrive at the correct TDS level.

OPERATION

How it works

Think of the **CORE CONTROL** as a chlorine generator; set it to create a steady supply of chlorine for the pool, instead of buying and adding chlorine by hand, so as to consistently achieve a residual free chlorine level of 1-3 ppm.

How it works: Using electrolysis, it creates chlorine from the salt molecules (NaCl) in your water in order to sanitize your pool. A small electric charge is applied across a set of titanium plates inside the Electrolytic Cell. This produces Sodium Hypochlorite (NaOCl). In water, Sodium Hypochlorite dissociates into sodium (NA+) and hypochlorite (OCl-) ions. It is the hypochlorite ions that form with the hydrogen (H+) ions (from the water) to form hypochlorous acid (HOCl), which is the active agent that destroys bacteria and algae, and oxidizes organic matter. This form of chlorine works quickly in the pipe, leaving only a mild residual in the pool. In addition, the Electrolytic Cell continuously “shocks” the incoming water- burning off any oils, organic matter, or other particles that need to be oxidized. Best of all, the process continuously recycles the salt: after cleaning the pool, the original molecules reform and the whole process begins again. The salt doesn't get used up!

Initial Start Up

Before starting the system for the first time, verify **1) that the pool water is chemically balanced** (see page 9) and **2) that all installation items are completed** (see page 31)

Press the power button on the **CORE CONTROL** controller while the circulation pump is running. This should activate the system and within moments the LED ring will change from red to blue, and a blue “Output” LED light should flash briefly while the system checks its status (if the pump is not running, you will see the red “No-Flow” system message). Once the system is ready to operate, the “Output” LED(s) will be lit solidly as the system confirms it has reached its chlorine generation set point. Note: the WiFi LED will flash until the system has gone through the pairing process.

Once powered on, you'll want to set its power level (Chlorine Output). To find the optimum Chlorine Output setting, start at a setting of 75% and adjust as needed over the initial start-up period. Measure your available chlorine in the pool after two to three days, and adjust the Chlorine Output level accordingly. If the available chlorine is too high, lower the Output level; if the available chlorine is too low, raise the Output level. It will take a few adjustments to find the ideal setting for your pool. Once set for the pool's current needs, it should only take minor adjustments of the system's power level and/or pump run times throughout the season.

General Operation

By familiarizing yourself with the operation of the **CORE CONTROL**, you can achieve the maximum performance for your pool. There are three main factors that you can control which directly impact the resulting free chlorine level in the pool:

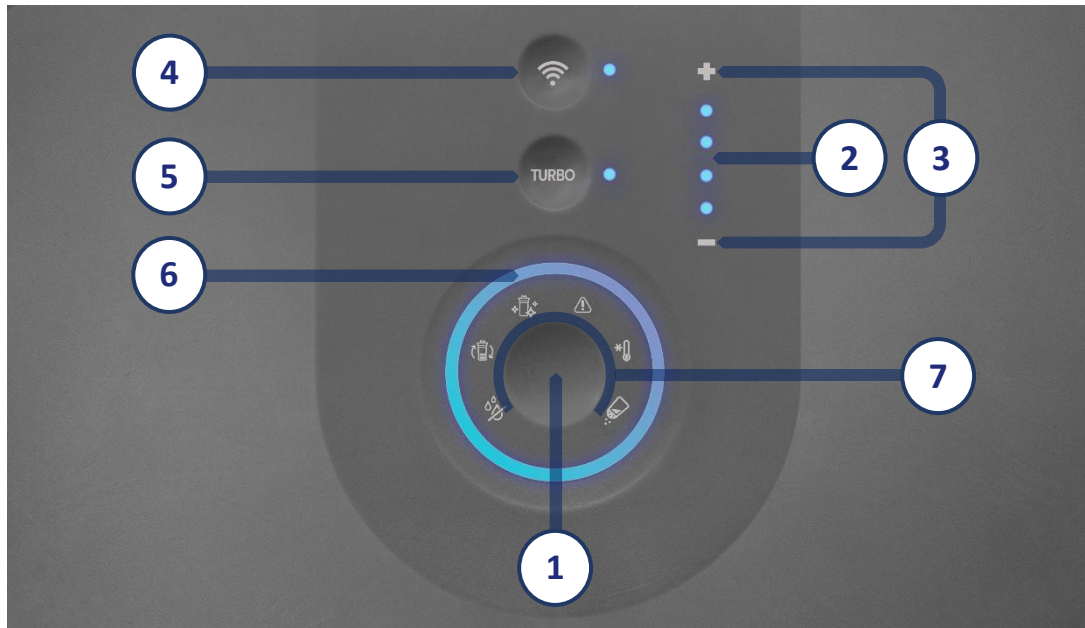
- 1) The chosen percentage of Chlorine Output** on the Control Module
- 2) Hours of pump run-time each day**
- 3) Water chemistry balance**

- Including the amount of salt in the pool and chemicals that affect chlorine demand, such as chlorine stabilizer, phosphates, nitrates, and more. See "Ideal Chemistry Levels" on page 9 for more important information.

After making the initial adjustments to your chosen Chlorine Output level, additional adjustments are typically only necessary due to changing seasonal temperatures, or changes in pool use and bather load. Like any pool, ensure that your pump runs long enough for all the pool water to pass through the filter 1.5x to 2x a day (usually at least 8 hours). This amount of time is typically more than sufficient for chlorination of the pool, but if the pool has high chlorine demand, running the pool pump longer allows for more chlorination. Measure your water chemistry and chlorine level on a regular basis.

As you use the system throughout the season, **make sure that you clean the Cell as frequently as needed** (see page 18). Once the system detects that the Cell needs to be cleaned, it will display a “Clean Cell” warning light, and then will not be able to effectively create more chlorine until all mineral scaling has been removed from the Cell.

Using the Control Module



- 1) **ON/OFF:** Use this button (center of circle) to manually activate / deactivate the system on or off.
- 2) **Chlorine Output Level:** Displays the system's chlorine output level that you have chosen (25%, 50%, 75%, 100% increments via button control, or finer increments via app control). The system gradually adjusts its chlorine production. A blinking light indicates the system is making adjustments, a solid light indicates steady operation.
- 3) **Increase / Decrease Chlorine Output:** Use the + button to raise the system's power setting (the rate of chlorine production) or use the - button to lower the system's power setting (the rate of chlorine production), in order to customize operation for your pool's needs.
- 4) **WiFi:** Use this Button to restart / turn off or on the WiFi Module. (Press and hold)
- 5) **Turbo:** Press **TURBO** to boost Chlorine Output to maximum power of 100% for 12 hours (or 12-72 hours in app)
- 6) **LED Ring Color (System Status)**
 - **BLUE:** System is ON
 - **ORANGE:** No communication with Cell; disconnected or improperly connected Cell
 - **RED:**
 - Entirely Red: When the entire LED Ring is red, the system is OFF.
 - Partially Red: When the LED Ring is red next to a System Message, that Message is active.
- 7) **System Messages:** These red LED lights display important information about the operations of your system.
 - **NO FLOW:** When this LED is illuminated, the system has detected an insufficient amount of water in the Cell. This causes the Cell to stop generating chlorine. Verify that you have proper water flow without air bubbles in the Cell housing, and verify that water flow is fully pressing the flow switch away from its resting center position. In case you have a variable speed pump with low RPM settings, increase flow settings until the LED turns off.

System Messages (Continued)



- **LOW SALT:** When this LED is illuminated, salt may need to be added to the pool. This LED will occur at salinities under 2000 ppm (ideal range is 3000-4000 ppm, see more on page 7). First, inspect the Cell for mineral scaling and clean if necessary. If this does not solve the problem, manually check the salinity of the pool water and add salt according to the table on pages 7-8.



- **COLD WATER / WINTER MODE:** To protect the Cell, the Control Module is programmed to automatically decrease chlorine production when it senses low temperatures. In case of low water temperature below 68°F the unit reduces chlorine production to 45%. Below 59°F the unit reduces chlorine production to 15%. Below 53°F the unit stops chlorine production.



- **CLEAN CELL:** When this LED is illuminated, it indicates that the Cell requires cleaning. Refer to page 18 of this manual to see how to clean the blades of the Cell.



- **CELL LIFE LOW:** This LED is illuminated as a helpful reminder that the Cell may be reaching the end of its typically expected lifespan, based on how much usage the cell has received. Cell lifespan will ultimately be unique to your pool's conditions, usage, level of maintenance, etc... This light DOES NOT mean that your system is non-operational. Instead, it is an indicator which lets you know that, based on the number of hours of use you have put on the cell, you are beginning to approach a point where the cell may become depleted; the system's maximum set point may be affected. This illuminates so that you can be prepared for future cell replacement. Allow your system to run and generate chlorine as needed for the pool to get the most out of the cell's possible lifespan, until the required setpoint can't be reached or other lights indicate that it is no longer able to generate chlorine. Replacement cells are readily available for purchase from a local dealer or at www.circupool.com

Important Note: The Cell Life Low LED illuminates based on operational time that the system tracks (hours of usage put on the cell). If this LED illuminates sooner than you may have expected, this means that one or more of the following may have been occurring: A) the system may be under-sized, B) the pool may have been receiving heavier swim usage than the system sizing is intended for, C) the water balance has not been properly maintained, causing higher-than-normal chlorine demand, D) the system has been over-used and creating more chlorine than necessary (ex: running at too high of a setting and/or for more hours than necessary). Take this opportunity to evaluate what may have been causing unnecessary usage and optimize operation so that only a minimal amount of chlorine generation is required.

How do I know when my cell needs replacement? See "Replacing the Cell" on page 20 for more information about how to know when you may need to replace the cell.



- **SYSTEM ERROR:** This LED is illuminated when the system is not able to produce chlorine. Please refer to the "Troubleshooting" section on page 33.

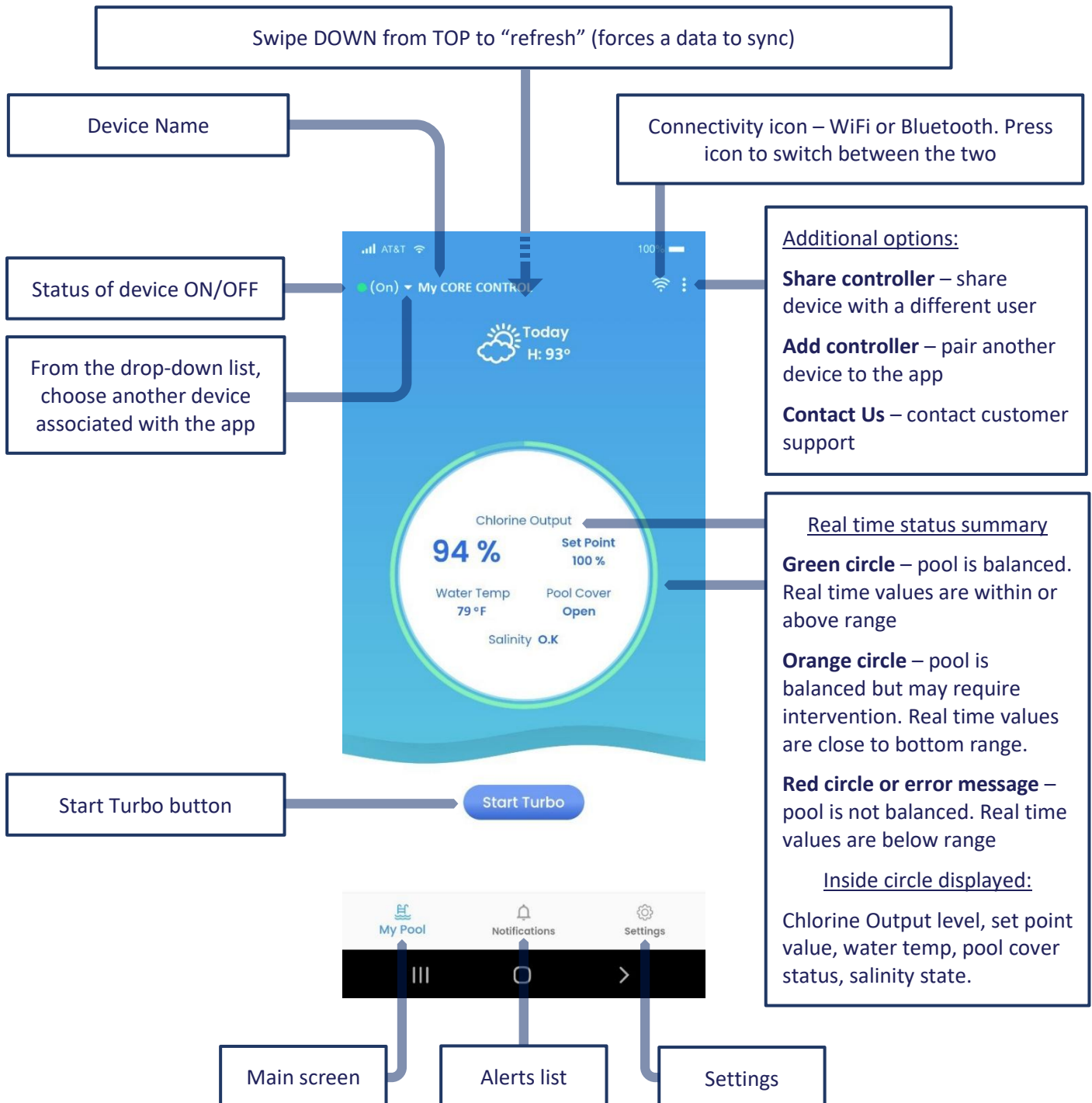
USING MY-POOL APP



See page 27 for first-time instructions on installing the My-Pool app and pairing the **CORE CONTROL** system.

Main Screen – Status Screen

Note: data sync occurs quickly between the unit and the app but is not immediate. Please allow time for this to occur.

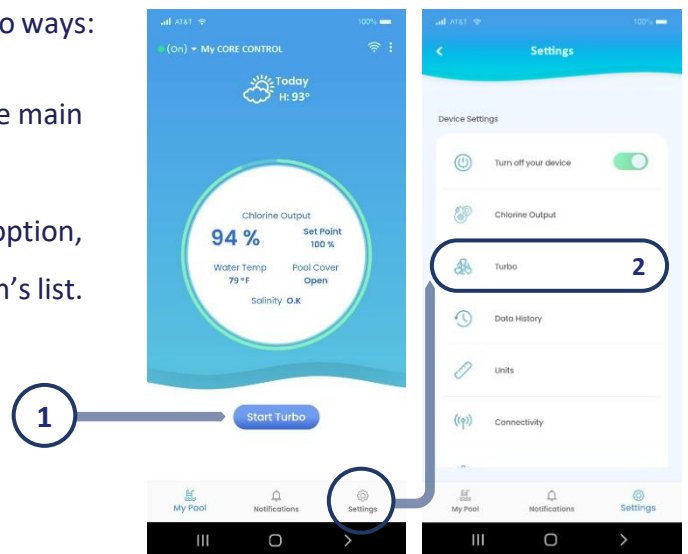


Note: Real-time pool data is only monitored when the equipment is turned on. Do not be alarmed that sensors are shown as N/A.

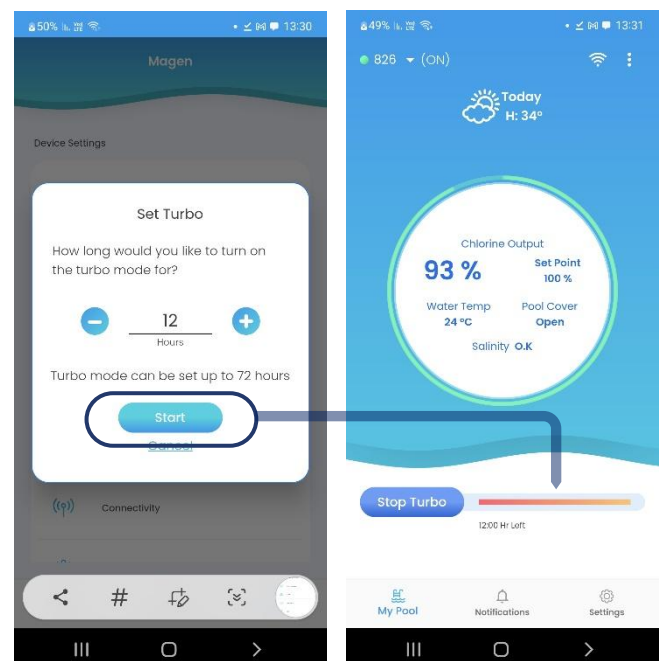
Turbo Mode

In the app, turning on the TURBO mode can be done two ways:

- 1) Directly press the “Start Turbo” button from the main Status screen
- 2) Or, under the main Status screen’s “Setting” option, the “Turbo” choice is present on the next screen’s list.

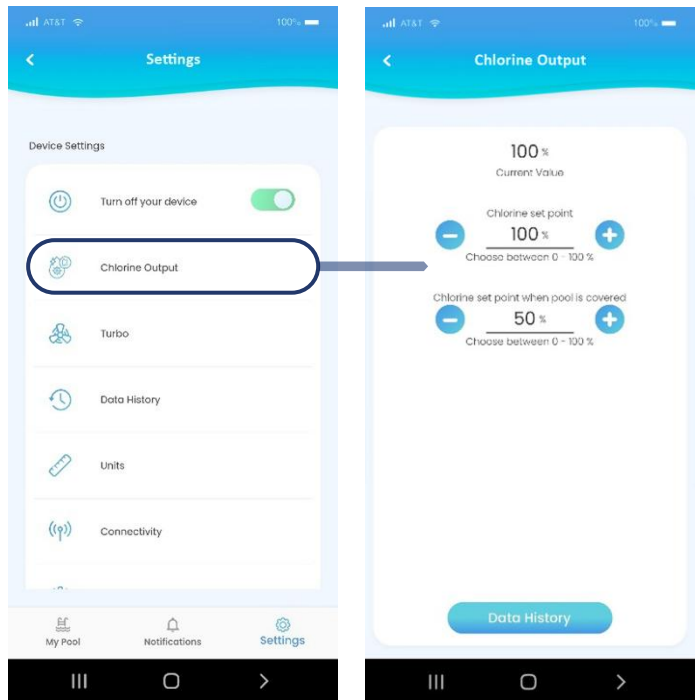


- Press + or - to increase/decrease number of hours 12-72 for Turbo mode to function.
- Press “Start” to begin.
- Turbo is active, and the remaining duration is visible on screen.



Chlorine Output

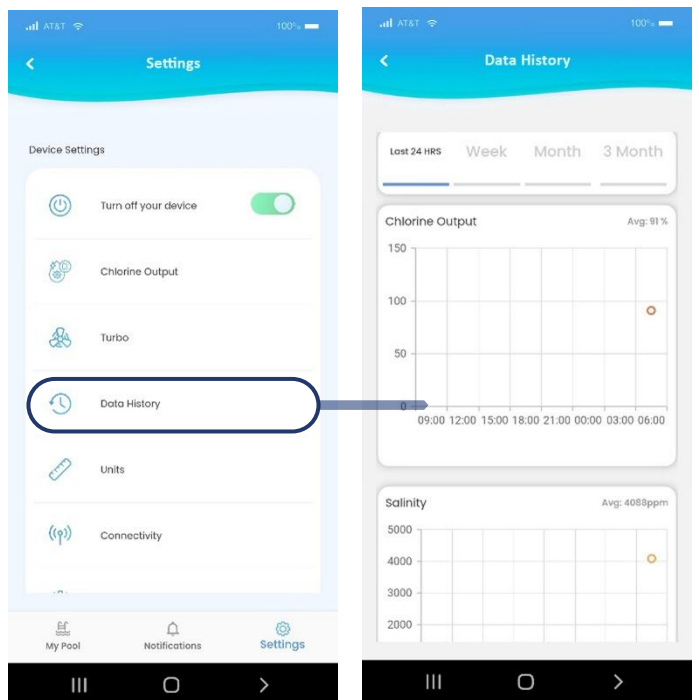
Enables control of chlorine output levels by defining the chlorine set point as well as chlorine output set point when pool is covered (if a cover sensor is connected and in use).



Data History

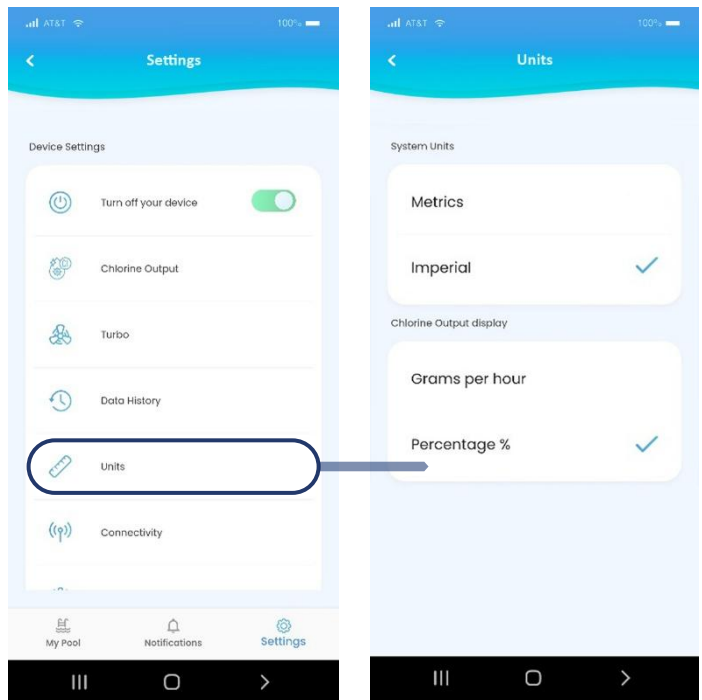
Chlorine output, Salinity levels, and Water temperature values are presented in a graph in varying time periods from one day to 3 months.

For new installations, please allow time for this data to populate.



Changing Units

Choose Imperial / Metric units according to your preference.

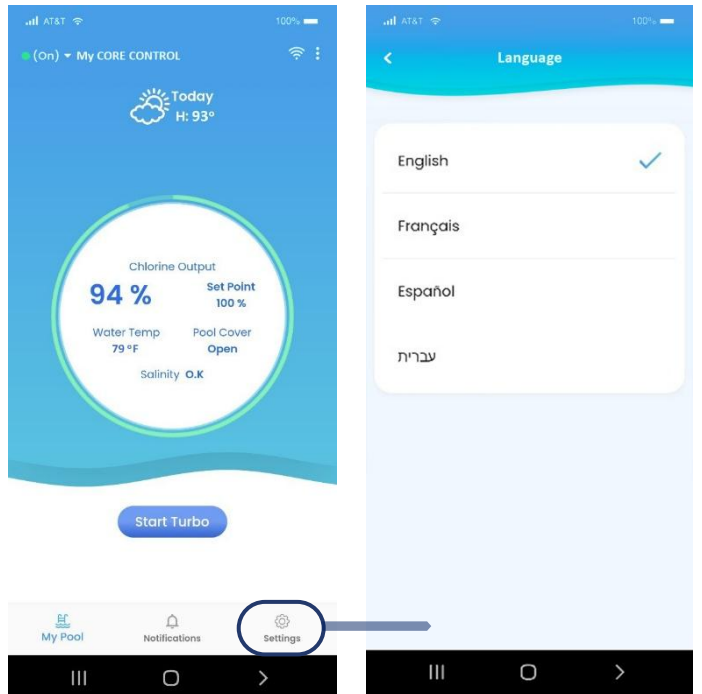


Language

From the main status screen, press the “settings” button. Located on the bottom right of the screen.

Scroll the list all the way down and press “Language”.

From the list, choose the language you wish to have the app communicate with you.



Connectivity



See page 27 for first-time instructions on installing the My-Pool app and pairing the **CORE CONTROL** system.

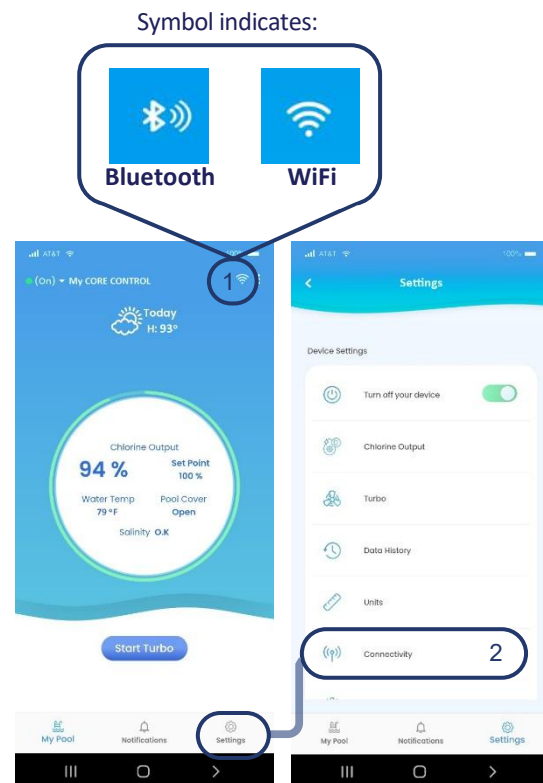
If you wish to choose a different WiFi network or switch to Bluetooth communication or vice versa this can be done in two ways:

One, from the icon on the Status screen:

- From the Status or Monitoring screens press the WiFi/Bluetooth icon (top right corner).
- Pressing on it will direct you to the connectivity screen.

Two, alternatively from the Settings screen:

- Press Settings
- From the list, choose connectivity



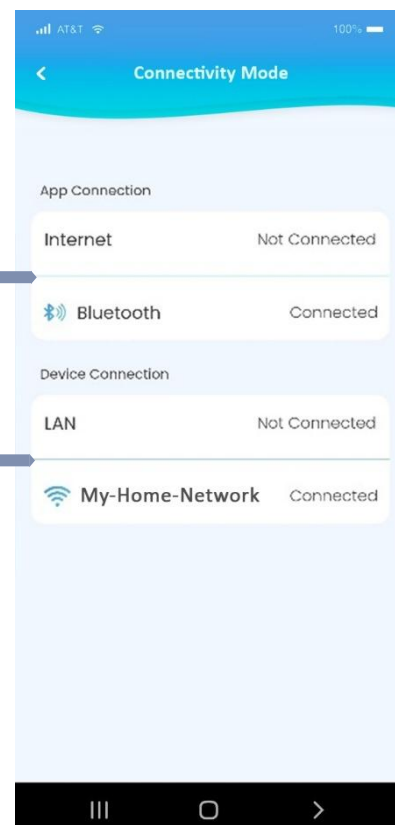
The next screen displays the network device that is connected and how the app is connected to it (Bluetooth or WiFi).

Switch to/from Bluetooth/WiFi. Press the alternate method or choose a different WiFi network from the one chosen.

Choose connection (Internet/WiFi or Bluetooth)

Configure Internet connection (LAN or WiFi)

Note: a 2.4 GHz WiFi Network is required.



Expected Maintenance

Maintaining your **CORE CONTROL** maximizes the performance and lifespan of the chlorine generator cell and minimizes the amount of work needed to keep the pool in good shape.

Maintaining the Pool Water Chemistry Balance



Perform regular independent tests of your pool water. It's critical to test pool water at least monthly, ideally weekly.

Ensure the water chemistry measured is in line with ideal levels outlined on page 9, promptly correct unbalanced levels. Ensure that the chlorine generator is set to consistently maintain 1-3 ppm free chlorine levels. Monitor your pool's salinity level as frequently as you check your other water chemistry levels - salt levels do not get depleted and should not need frequent adjustment, but a proper salinity is critical for the system to generate the chlorine required by the pool. Ensure test reagents are not expired / digital tests are calibrated. Record water chemistry tests for future reference.

Maintaining the Control Module

The **CORE CONTROL** unit should simply be kept clean, using a soft cloth to wipe off any dust or debris.

Maintaining the Electrolytic Cell

The clear Cell Housing allows easy inspection for scale and calcium build-up. **Inspect the cell every month for scale** (white flakes or crust on or between the plates). After the system has run for a time, your cell will eventually need to be cleaned due to natural mineral scaling. The system will notify you of this by turning on the "CLEAN CELL" light. When illuminated, follow the cleaning instructions below under "Cleaning the Electrolytic Cell".

The frequency of cleaning depends on your water chemistry and the Saturation Index of the water. For most people, cleaning is only necessary a handful of times per season. More rapid mineral build up is a sure sign of a chronically high Saturation Index; it is possible for imbalanced chemistry to cause scaling to occur quite rapidly. Consult a pool professional for additional help. Proper cleaning does not damage the Cell; if in doubt, the Cell should be cleaned.

Cleaning the Electrolytic Cell

Once substantial deposits have built up on the titanium plates in the Cell, the "CLEAN CELL" light will illuminate, and the mineral scaling must be removed. To do so, follow these steps; follow all instructions of the acid manufacturer.



Important Precautions: When cleaning the Cell always wear adequate protection, such as rubber gloves and eye protection. Always add acid to water, do not add water to acid. Always work in a well-ventilated area. Splashing or spilling acid can cause severe personal injury and/or property damage.

Caution: Do not insert anything or use metal or other hard objects to clean the cell. This will void the warranty.

Important: Ensure the electrical connector on the top of the Cell does not come in direct contact with water or acid. If this occurs, rinse immediately with freshwater, then rinse with rubbing alcohol and allow to dry thoroughly.

Before removing the Cell for cleaning or replacement:

- 1) Turn off all pool equipment, disconnect unit from all electrical sources, close supply line valves if applicable.
- 2) Unplug the Cell cable from the Control Module. Make sure the electrical connection does not get wet at any point.
- 3) Remove the Cell from the plumbing by unscrewing the Threaded Collar at the top of the clear Cell Housing. Set Threaded Collar aside in a secure place, so that it is ready to be used again to reattach the Cell to the Cell Housing.
- 4) Remove entire Cell from the Cell Housing. Ensure the Cell O-ring is secure and free of debris or damage.

Cleaning the Electrolytic Cell (Continued)

To clean the Cell of mineral buildup:

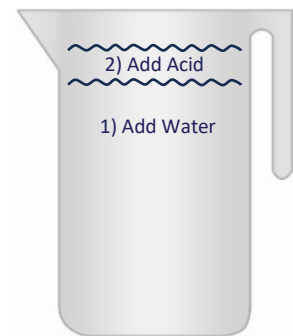
- 1) In the Cleaning Vessel, mix one part muriatic acid into ten parts water. ALWAYS ADD ACID TO WATER – NEVER ADD WATER TO ACID. Ensure that there is enough cleaning solution to cover the Cell blades. Be sure that the Cleaning Vessel is stable so as to remain upright and prevent spilling.
- 2) Lower Cell into Cleaning Vessel, ensuring that cleaning solution covers Cell blades. Make sure that the cell's electrical plug does not ever come into contact with water and acid.
- 3) Wait for foaming to stop. Allow solution to soak for no more than fifteen minutes.
- 4) Safely dispose of acid solution by pouring it into your pool, and use a hose to generously flush any remaining debris out of the Cell.
- 5) Look inside the cell to check that no debris or scaling remains. Repeat steps 2-4 if necessary.

Note: If mineral build-up is severe, more than one cleaning may be necessary to dissolve remaining solids. Inspect cell plates closely with a bright light after cleaning. If you see any remaining scaling, debris, or physical blockages through Cell, repeat the cleaning process as needed. If "CLEAN CELL" comes back on soon after cleaning, verify salinity and then clean cell again.

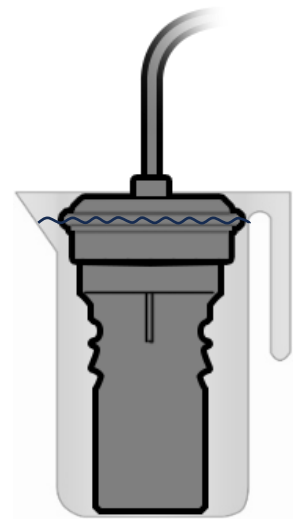
To reinstall the Cell:

- 6) Insert the Cell back into the Cell Housing. Note: it can only fit in one direction into the Cell Housing, so be gentle and flip the other way if necessary.
- 7) Pass the cable coming out of the top of the Cell back through the threaded collar which attaches the Cell to the Cell Housing. Screw the threaded collar on to the assembled Cell & Cell Housing firmly (hand tight only, do not use tools)
- 8) Reconnect the Cell's cable to the Control Module. Push firmly until a "click" sound is heard. Check that connection is secure by pulling gently on Cell cable.
- 9) Restore power to the Control Module and turn it ON. Make sure there are no leaks from the Cell once circulation is restored.

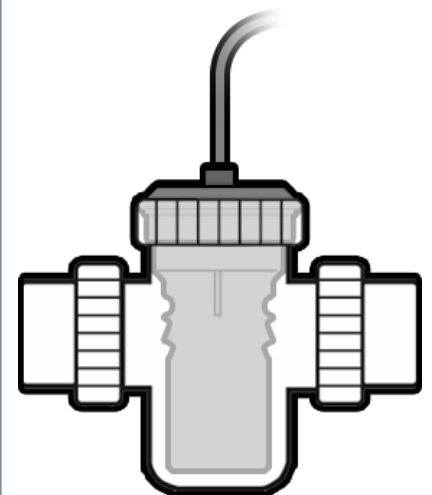
Cleaning Vessel



Mixing Solution



Cleaning Process



Reinstalling Cell

General Maintenance

Winterizing

Very little chlorine is necessary at low temperatures. The **CORE CONTROL** will not produce normal chlorine levels at cold temperatures, see "COLD WATER / WINTER MODE" on page 12. This feature extends the lifespan of the Cell.

If you "close" your pool for the winter, you can continue to follow all standard procedures for your local area. If you super-chlorinate your pool water during your area's winterization process, allow the chlorine generator to produce as much of the chlorine as possible that your pool may need for this process.

The Electrolytic Cell will be damaged by freezing water just as your pool plumbing would. In areas which experience severe or extended periods of freezing temperatures, be sure to drain all water from the pump, filter, supply and return lines before any freezing conditions occur. As an additional precaution, the CORE Winter Cap can be utilized to allow the removal of the Electrolytic Cell; the Winter Cap takes the place of these items and screws on to the top of the Cell Housing (which remains in the plumbing). The Control Module is capable of withstanding any winter weather and does not need to be removed. If sensors are in use, they should be prepared for storage and protected from freezing temperatures as outlined in their instructions.

Spring

Start-up

When opening the pool after a period of inactivity, do not power-on and use the chlorine generator until the pool's water chemistry has been balanced and brought to ideal levels. Salt must be added if water has been drained over the winter.

Replacing

the

Cell

When the titanium blades inside the Electrolytic Cell have reached the end of their lifespan, replacements are readily available so that the whole system does not have to be replaced. Replacements are available at www.circupool.com and are easily switched out. To ensure quality and value, only genuine CircuPool replacement parts may be used.

How do I know when I need to replace my Cell? After years of use, the plating on the chlorine generator's Electrolytic Cell will finally become depleted. When the cell reaches the end of its life, it will reach the point where it can no longer pass power through the cell and chlorine generation will cease. Since power can't pass normally through the cell at this point, a warning will also trigger on the chlorine generator (for example, to check the salinity or the cell). First, follow all normal troubleshooting procedures outlined in this manual (see page 33). The following checklist will generally eliminate most other common possibilities and allow you to be confident that the Cell needs to be replaced.

- Perform independent tests to ensure that the pool water's salinity is in range (recommended: titration-based chemical test, or else a recently-calibrated digital test).
- Ensure that the cell is fully cleaned (multiple times in a row if necessary, so that when fresh cleaning solution is added there is no "fizzing"). Flush cell thoroughly with a hose-end nozzle.
- Ensure that all connections and cables are fully tight, fully seated, and free of debris or damage.
- Ensure that water is completely filling the Cell throughout daily operation, esp. if getting daily repetitive warnings.
- Ensure that the controller has not inadvertently been changed to a different cell-type setting (if applicable).
- Ensure that the water is within normal operating temperatures.
- Power the unit off and on to confirm; if the cell is depleted, and all other issues have been resolved, any warning will come on within the first 1-5 minutes or so of turning the unit on.

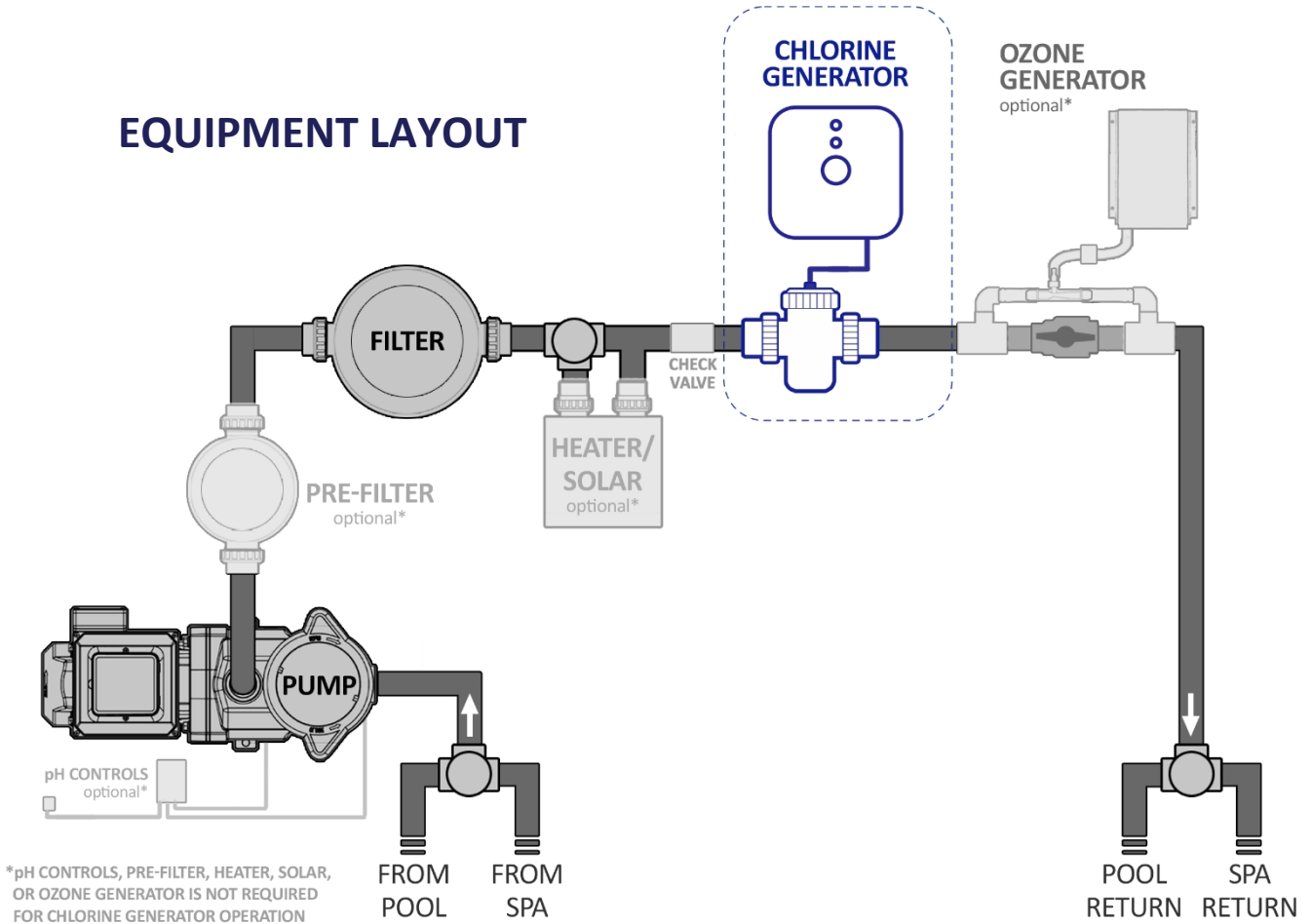
Finally consider timing, as this should typically be years down the road. A cell's lifespan is ultimately unique to its particular usage, but with normal usage, care, and proper sizing, a cell will operate normally and consistently for years. Additionally, the **CORE CONTROL will turn on its "Cell Life Low" light** (see page 12) as a helpful reminder that the system has tracked enough hours of use that you may want to be prepared with another replacement cell. On its own this does not mean that the cell requires immediate replacement, but if 1) lit along another warning light which can't be resolved through troubleshooting, or 2) its output lights continuously blink indicating that it is no longer able to reach the necessary level of chlorination set by the user, this may indicate that the cell has finally reached the end of its usable lifespan. The cell should continue to be used until it is no longer able to generate chlorine.

EQUIPMENT INSTALLATION

SAFETY MEASURES: See important safety instructions on page 3. **IMPORTANT:** If you haven't already done so, it is necessary to balance the pool's water chemistry before the **CORECONTROL** is powered on and used. See pages 7 - 9 for more information.

Installation should only be performed by a qualified individual who also has working knowledge of basic pool service operations. These instructions are for the typical installation using 2" plumbing. If 1.5" plumbing exists, standard reducers can be used to adapt the system; be sure to note the changes to any listed measurements or dimensions that the addition of reducers may cause.

Overview



The system must be installed on the return line as the last piece of equipment the water passes through before returning to the pool: always after the pump, filter, heater (if applicable), etc. If a heater is present, all equipment must be a minimum distance away, according to heater manufacturer recommendations. The system should be installed before any Tees in the return line. Be sure to install the system so that is easily accessible and serviceable. Note that the system's orientation is reversible; it can be installed with water flow passing through it in either direction.

IMPORTANT: Do not block the vents of the unit, located on the rear/top of the Control Module case. The Control Module is weather safe and has sealed electronics featuring an IP65 rating.

CAUTION: Ensure that the pool pump and all electrical power are turned off before installation.

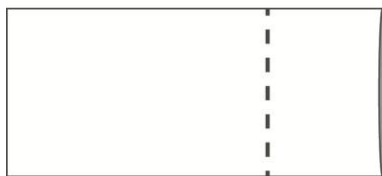
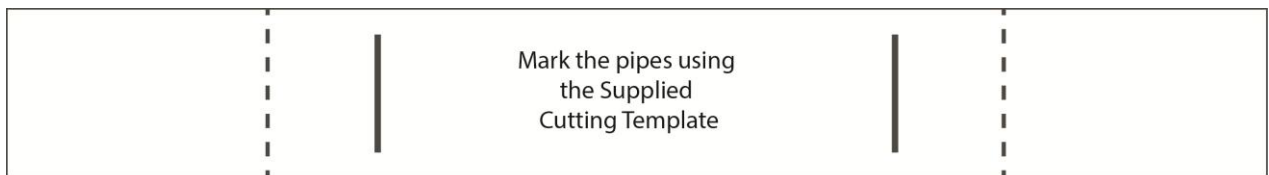
TIP: Lay out your equipment and confirm placement and measurements first before cutting and gluing.

TIP: When gluing PVC, parts will slip in place easier once glue is applied. Be sure to apply firm, constant pressure between both glued parts for up to a minute to prevent potential slippage.

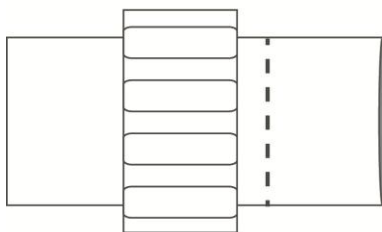
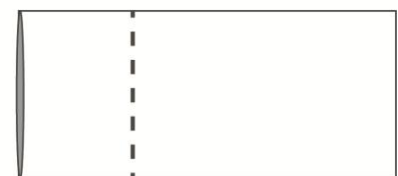
Connecting to Plumbing

Note: To ensure that flow switch gets properly triggered, maximize the amount of straight pipe before Cell, at least 6".

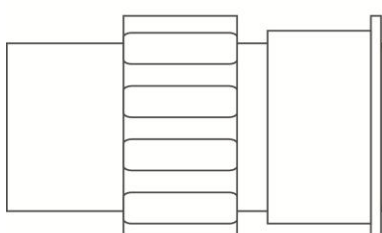
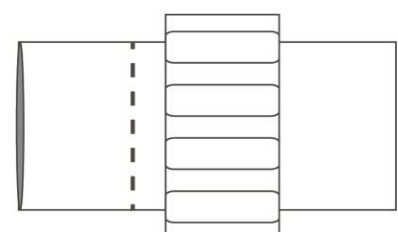
1. 12 inches of straight pipe length are required for the installation.
2. On the section of pipe where the cell will be installed, use the Cutting Template supplied with the unit to mark two lines 7.6" apart. This is the pipe area that will be removed. (Template is for 2" plumbing only)
3. Cut the pipe at the marked lines using a hacksaw or pipe cutter. Make sure that the cut is parallel and straight.
4. **Slip the Threaded collars onto each end of the cut pipe** (with threaded ends facing center).
5. Clean pipe and inside of Barrel Unions with PVC Primer. Apply glue to cleaned surfaces and slide the Barrel Unions fully onto pipe. Be sure to follow all directions on glue & primer, and wipe any excess glue.
6. After the glue had sufficient drying time (minimum 10 minutes), place the system with the o-rings into the opening between the two ends of the pipe and tighten the unions (hand-tight only)



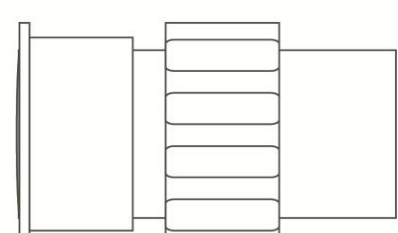
Cut the pipes on the solid line and clean shavings



Slide barrel nuts onto pipes
Clean pipe and inner face of the slip connection with PVC cleaning solution



Apply glue to the cleaned surfaces; slide the slip connection over the pipe until the marked line.
Wipe any excessive glue and wait for the glue to cure (minimum 10 minutes).



Mounting the Control Module

Mount the Control Module as close to the pump and filtration system as possible. The Control Module must be mounted vertically on a flat surface. Mount it at a comfortable level, at least 3 feet above ground level. For safety concerns, do not install the Control Module within 5 feet of the pool edges (or more, following all applicable codes). **Verify that all cables can reach the Control Module from the section of pipe selected for plumbing.**

CAUTION: Do not mount the control box over a heater or inside a tightly enclosed area. This can overheat and damage the system. Do not block the vent slots of the control box, located at its back.

IMPORTANT: The Control Module is fully rated for outdoor use; it is weather safe and has sealed electronics featuring an IP65 rating. Common sense considerations such as minimizing direct exposure to rain, sunlight, water runoff, and lawn sprinkler systems will enhance longevity.

1. Select a location for the control box that is no more than 10-11 feet from the Cell to ensure enough cable is available.
2. Using the supplied mounting template for the Control Module, mark the position of the three screws required to secure the control box to the wall.
3. Drill the three holes into the wall and insert the screw anchors into the holes. Drill in the screws into the two top screw anchors so the screws are sticking out a bit from the wall.
4. Remove the service panel cover of the Control Module. Hang the Control Module over the two top screws.
5. Insert and screw the third and final screw through the service panel into the anchor.
6. The Control Module is now secured to the wall.



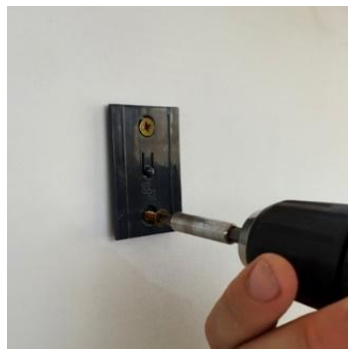
Mounting the WiFi Module

Determine the best position for the WiFi Module. Its chosen position must have optimal WiFi reception. A mobile device can help determine the strength of the WiFi signal at a chosen location.

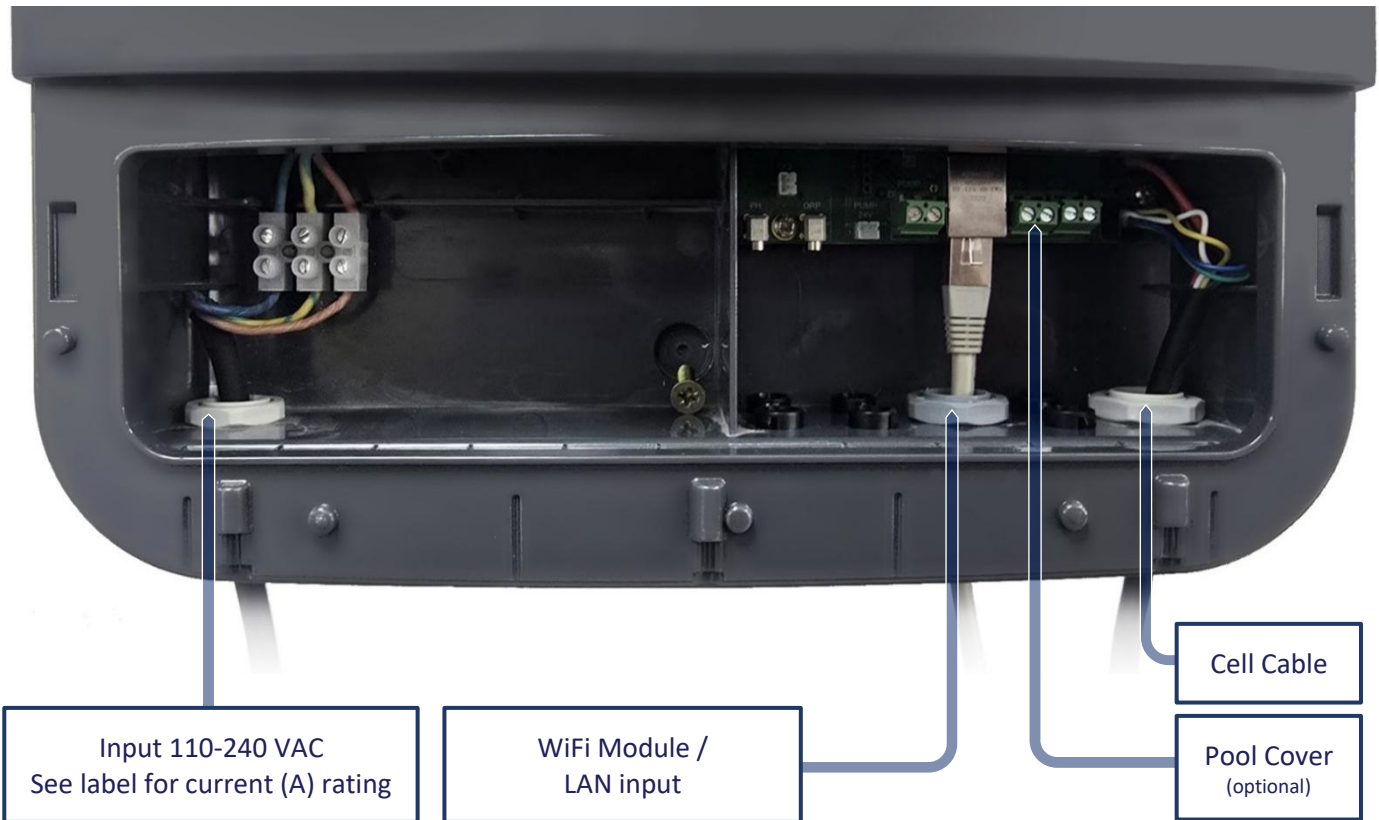
TIPS: Line of sight to the WiFi signal is always preferred. A reasonable maximum distance from typical home WiFi routers is 150ft in open areas. **The system requires a 2.4 GHz WiFi network;** WiFi networks with a 2.4 GHz band have a better range and penetration through walls, making it preferable for outdoor setups. For greater distances, consider adding commonly available WiFi extenders or mesh systems. Factors that can obstruct WiFi signals include: positions low to the ground, locations behind dense or metallic objects, or being in near proximity to strong electrical components or motor drives. Keep the ethernet cable between the WiFi Module and the Control Module separate from high voltage wires to prevent interference.

The length of cable provided from the WiFi module to control box is 32 feet long. If needed, the cable can be replaced. For instructions on how to replace the WiFi module's cable (if it is not long enough to reach a location where you have optimal WiFi signal), please refer to page 37. Note that the Control Module can also be directly connected to a LAN connection via an ethernet cable if desired.

1. Position the WiFi Module wall mount clip on the wall and mark the position of the holes.
2. Drill into the wall and insert screw anchors.
3. Screw the wall mount clip into place.
4. Hang the WiFi Module over the wall mount clip. WiFi Module is now secured to the wall.



Basic Wiring Overview

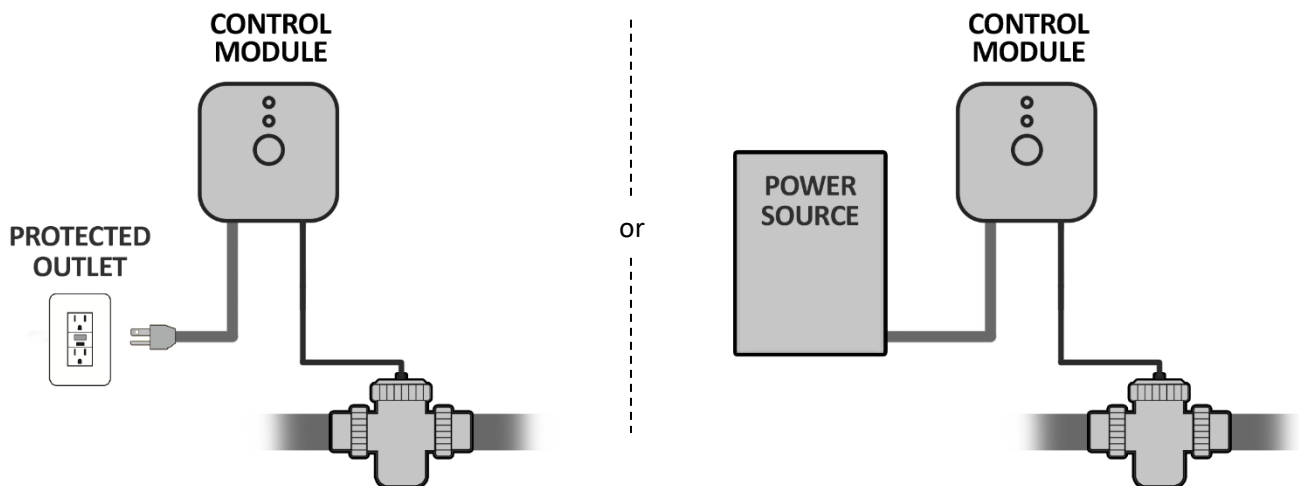


Wiring to Power

CAUTION! Disconnect the power supply to the main power source before hardwiring the input voltage cable.

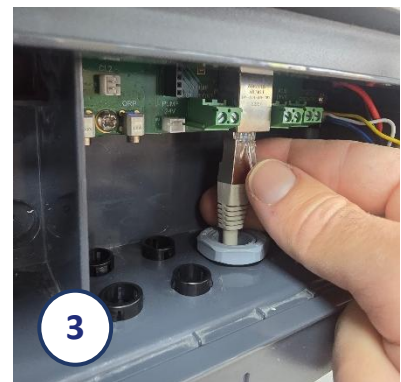
Warning! All electrical work must be performed by a licensed electrician and conform to all national, state, and local codes. Improper use or installation can badly harm the unit and its surroundings. When installing and using electrical equipment, basic safety precautions should always be followed!

The unit is dual voltage (110-240VAC) and auto-detecting. For most installations, simply plug the unit into a 110-120VAC outlet with covered outdoor protection, which is also protected by a ground fault circuit interrupter (GFCI) safety outlet or ground fault circuit breaker (GFCB). Alternatively, the unit can be hardwired into a nearby power source (110-240VAC).



Wiring WiFi Module to Control Module

1. Remove the nut from the PG connector that is attached to the cable coming out of the WiFi module.
2. Insert the cable into the middle and largest hole at the bottom of the control box. Press on the transparent clasp to allow the connection through. Position the locking nut over the cable and tighten the PG connector to secure the cable in place.
3. Connect the WiFi connector as seen in the picture “3”.



Wiring Cell to Control Module

1. Take the black connector coming out of the control box and connect it to the cable coming out of the top of the cell/cartridge assembly.
2. Align the raised arrows, push the connectors firmly towards one another until a ‘click’ sound is heard.
3. Gently pull to confirm that connection is secure.



(To disconnect the Cell cable, turn the collar on the Cell cable’s connector so the raised arrows no longer align, and then gently pull the cable connectors apart.)

Wiring Pool Cover

Hardwire two wires that deliver dry contact signal from the pool cover control to the “pool cover” terminals in the lower part of the control box. Make sure to use a proper strain relief (PG/Heyco) that will prevent the cable from being pulled out from the control box.

MY-POOL APP INSTALLATION & PAIRING

The equipment installation is complete at this point. Be sure that the Control Module is properly connected to power and turned on.

Initially, the WiFi LED on the Control Module and LED on the WiFi Module will blink and continue blinking until connection is established.

About the My-Pool App

Download the “My-Pool” app from the Google Play or Apple app store. Once installed, open the app (tap on My-Pool app)



In control, anytime, anywhere
via the My-Pool APP

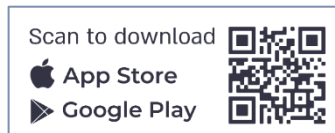
The My-Pool app allows you to have access to your pool’s **CORE CONTROL** system from a mobile device. Get real-time alerts, see current system status and check levels, change how your system runs on demand and more.

The app saves your pool system history and allows you to track its performance. Share your pool system with other members of the household or pool professionals. With the My-Pool app, the **CORE CONTROL** system puts *you* in control.

Download & Install App

Download the “My-Pool” app from the Google Play or Apple app store. Once installed, open the app (tap on My-Pool app)

Search your device’s app store, or scan the QR code included here to be taken to a landing page where you can choose the app listing for your device’s app store.

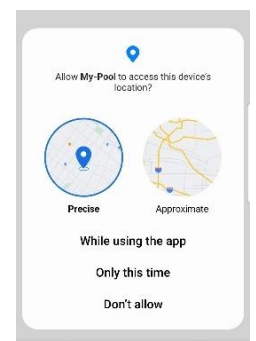


Initial App Startup

Permissions:

During initial startup of the app, it will request your approval for permissions that are **critical** to the operation of the app:

- App will prompt you to allow access to mobile device location. **Please allow.**
- App will prompt you to allow it to send notifications. **Please allow.**



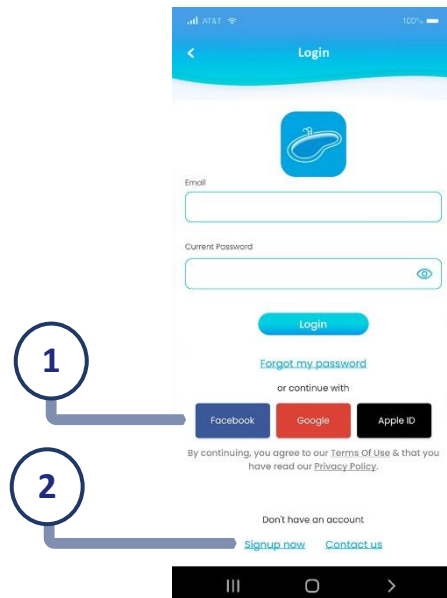
Initial App Startup (Continued)

User setup:

In order to use the My-Pool app, please **create a user**.

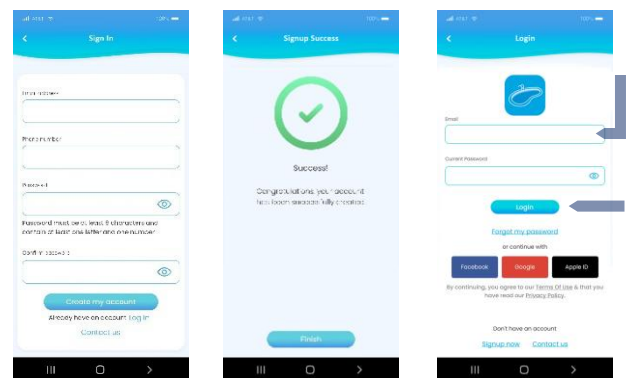
For fast, streamlined process, create a user using by signing in to Facebook / Google / Apple using an existing account that you already have. (Option 1)

Alternatively, use the **“Signup now”** link at bottom to create a user based on an email address that you have. (Option 2)



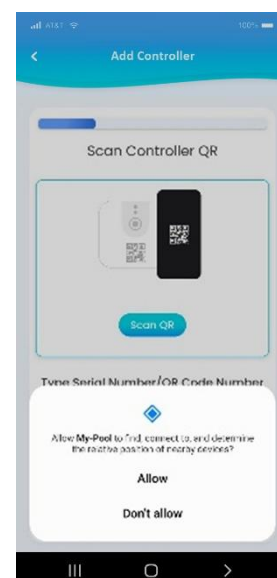
Using the “Signup now” Button:

- Type your details in the required fields
- Press “Finish”
- Login screen will show up
- Type in the email address and password that you just set
- Press “Login”



The My-Pool app will request to connect to and determine relative position of nearby devices. **Please allow**.

In order to continue with pairing, make sure **Bluetooth communication is activated on your device**. If **Bluetooth is not currently enabled on your mobile device**, turn it on now.



Initial Pairing

Ensure that Bluetooth is currently enabled on your mobile device; if needed, activate it now in order to proceed.

There are 3 methods to achieve the initial connection to your **CORE CONTROL** system via the My-Pool app.

Location of QR code sticker:



Option A

Scan the QR code by pressing the “Scan QR” button. QR code is located on the side of the Control Module. Scan the QR sticker in the app.



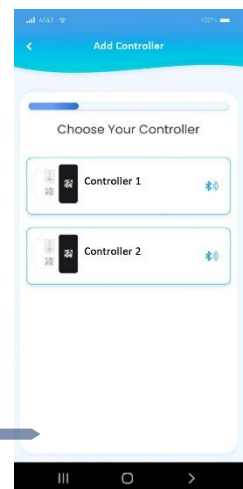
Option B

Locate the QR code on the side of the Control Module. Manually type the number that appears on the QR sticker. Then press the blue arrow button next to it.



Option C

Press the “I don't have QR code” button. This will scan for Controllers nearby (using Bluetooth.) If multiple controllers are present, more than one may appear.



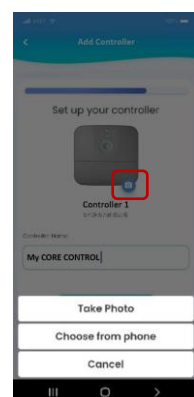
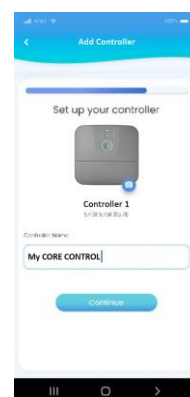
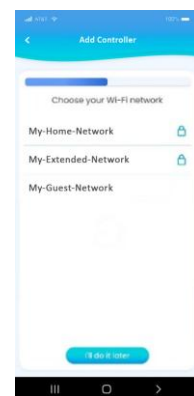
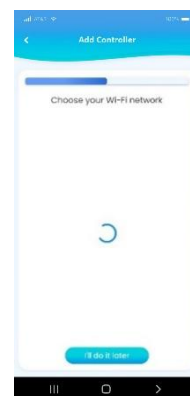
Connecting Control Module to WiFi network:

As soon as the QR code is identified / app achieves a local connection to the Control Module, the app will then search for WiFi networks. **THIS MAY TAKE UP TO A MINUTE.**

NOTE: A 2.4 GHz WiFi network is required.

- Choose the WiFi network you wish to connect to.
- Input password.
- Choose a unique name for the device and type it in the “Controller Name” input field.
- Take a picture for quick identification by pressing the camera icon on the bottom right corner of the device picture. It is possible to take a picture using the mobile device's camera, or choose a picture from the photo gallery.

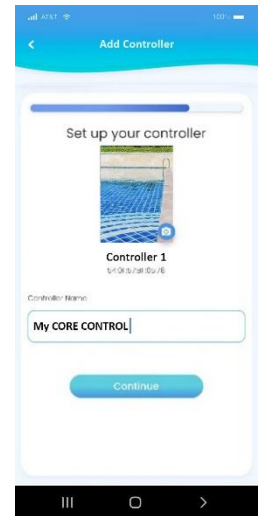
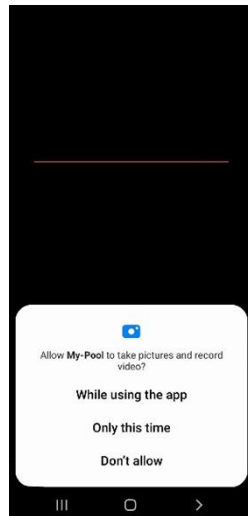
WiFi (or LAN) connection is recommended. Note that if using a Bluetooth-only connection, the app can only access the equipment when within range. Not all data, notifications, or features will be available to the app in this case.



Initial Pairing (Continued)

- Allow the app to access your image gallery and camera.
- Take / choose a photo.
- Press “Continue”

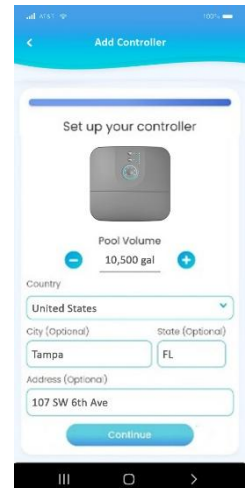
Adding a picture can be extremely convenient if you have multiple properties / pools with multiple devices, or if your device will be shared with a pool professional who would benefit from being able to distinguish between accounts more easily.



Programming Your Pool's Details:

Lastly, you'll enter in important information about your pool that the system will use to ensure correct pool system operation and optimal performance.

1. Use the + and – buttons to define the pool's volume.
 2. From the drop-down menu, choose the country where the device is installed.
 3. Add the city and address where the device is located (recommended).
- Once completed, press “Continue”

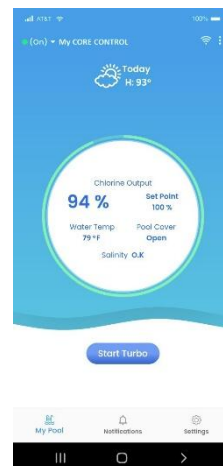


Initial App Setup and Pairing Complete

Your **CORE CONTROL** system and My-Pool app are now paired to your account.

When your system is on and connected via WiFi or LAN, you'll now be in control and able to get actionable alerts when you may need to make adjustments to your system or check for needed maintenance.

Note: Real-time pool data is only monitored when the equipment is turned on. Do not be alarmed that sensors are shown as N/A.



INSTALLATION CHECKLIST

- Sufficient salt has been added and fully dissolved and circulated throughout pool water.
- Pool has properly balanced water chemistry.
- Cell Unions installed and glued into pipe work.
- O-rings in place in Cell Housing. Threaded Collars on either side of the Cell Housing are hand tight.
- You have checked all connections and joints for leaks.
- Control Module is wired correctly and powers on.
- WiFi Module is mounted in a location with strong signal strength and is connected to Control Module via ethernet cable, or, Control Module is connected directly via LAN.
- Connection to Control Module has been established via My-Pool app, using either WiFi, LAN, or Bluetooth connectivity, and app account has been created
- QR Code for Owner Support has been applied to the face of the Control Module, to enable easy access in the future for replacement parts and customer service.
- Winter Cap and Cleaning Vessel are stored in a known location and are available for future use.

HELPFUL HINTS

For more detailed information and useful tips, visit www.circupool.com/help.

Proper operation of the chlorine generator can be easily verified by checking the lights on the control panel, as well as by in-app diagnostics. However, if the pool remains cloudy, or the chlorine residual tests low, then the chlorine being produced is being lost due to high chlorine demand or improper water conditions (chlorine is being consumed quicker than it is being replenished).

To reduce the chlorine demand, check the pH and Stabilizer (Cyanuric Acid) reading – these should not be too high or too low. Check for phosphates and nitrates, which should ideally be 0 and commonly contribute to severe chlorine demand. Ensure there is no organic matter, debris, dirt, or algae in the pool. If all other tests show correct levels, there may be excess organic waste and a shock treatment with an oxidizer agent is advised. Generally, superchlorination is not necessary as a matter of course if the pool is consistently maintained at correct levels.

Recommended List

- Read and keep your manual in a safe place.
- Check full water chemistry regularly to ensure consistent performance, ideally weekly and at least once a month.
- The best time to chlorinate the water is in the early morning and after 4PM, when there is less UV to destroy the chlorine produced, allowing chlorine in the pool to more effectively oxidize microorganisms and unwanted foreign matter.
- Optimize your pool system's run time to achieve the following balance: ensure your circulation system has enough run time to achieve 1-2 "turnovers" daily through your pool filter, while providing a run time and chlorine output setting for the chlorine generator that consistently keeps the free chlorine between 1-3ppm. Pool system operation past these parameters can waste energy and shorten equipment lifespan.
- Increase Chlorine Production when temperature goes up or when number of guests goes up.
- Increase Chlorine Production temporarily after bad weather. Check water chemistry at this time as well.
- Ensure maximum chlorine effectiveness, achieved at 7.5 pH & stabilizer (Cyanuric Acid) within a 30-50ppm range typically; eliminate any level of phosphates/nitrates, and ensure organic debris is not allowed to remain in the pool.
- Mount Control Module in shade or out of the direct sunlight whenever possible using common sense precautions.
- Inspect Cell at least monthly for mineral scaling and/or debris that has made it past the filter
- Decrease Chlorine Production when temperature or usage goes down.

Not Recommended List

- Do not over-chlorinate your pool or regularly keep the free chlorine over 3ppm. Especially in cooler months, do not run the system at an output level that is higher than necessary; **doing so can proportionately shorten the life of your cell unnecessarily.**
- Do not let salinity level drop below 3000 ppm.
- Prevent Phosphates or Nitrates, treat if present to completely remove them from the water. Do not allow fertilizer anywhere near your pool and prevent water run-off; this is a common but one of many sources that contain Nitrates or Phosphates, which cause severe chlorine demand in pool water.
- Never use dry acid to adjust pH. A build-up of by-products can damage the Cell.
- Do not add any chemicals (including salt) to the skimmers. Keep Cell off until any concentrated chemicals are dissolved.

Definitions:

Algae

Plant-like organisms which grow in water. Especially active in summer conditions, where chlorine disinfectant level is too low to destroy them. Algae may be green, brown, pink, or black (Black Spot) in color.

Chlorine Demand

The amount of chlorine that should be added to the water to provide proper bacteria and algae control.

Chlorine Residual

The amount of chlorine left over, after the "demand" has been met.

Combined Chlorine

Weak chlorine which is combined with the contaminants in the water.

Free Chlorine

Active chlorine in the water with the potency to destroy contaminants.





Shock Treatment / Superchlorination



The removal by means of oxidation of those materials that have chlorine demand. An extra-large amount of chlorine added to the water.

TROUBLESHOOTING

For more information or troubleshooting, visit www.circupool.com/help
All troubleshooting and/or service should be performed by a qualified individual.

SCENARIO:	POSSIBLE CAUSE:	SUGGESTED ACTION:
Low or no chlorine residual in pool (Also cloudy water, green pool)	Insufficient Chlorine Output Level	Increase Output Level. This is often required seasonally with increasing temperatures.
	Insufficient run time	Increase run time to at least 1 hour per 10° ambient temp. Ensure 1.5-2x filter turnover.
	Heavy pool use, inclement weather, organic matter	Increase Output Level, activate Super CL mode, and/or chemically shock pool.
	Water chemistry issues, such as: Low Chlorine Stabilizer Low salt in pool Phosphates in pool Nitrates in pool	Contact pool professional, ensure all chemicals on page 9 are within range.
	Cell is dirty, clogged, or has excessive scaling or mineral build-up	Remove Cell from plumbing, inspect and clean (see page 18).
	Inactive unit, error light triggered	Troubleshoot specific error indicated.
	Inactive unit, power is off	Turn on system, or see “No Power”
Low or no Chlorine residual in pool after recent installation	Water chemistry was not balanced prior to system installation and a high chlorine demand persists	Contact pool professional, ensure all chemicals on page 9 are within range, chemically shock pool if necessary. Run system at maximum output.
	System hasn't been running	Double check all connections, verify system runs in sync with circulation pump.
LED ring light doesn't turn ON - No Power	System is not connected to power	Connect to power. Check wiring connections. Check breaker leading to the pool equipment.
	Problem with input power, voltage, or configuration of system wiring	Have a professional test input power & ensure correct wiring configuration & connections.
	Reset has tripped	Allow one hour to cool.
	Other malfunction in unit	Contact customer support.
LED ring light is BLUE	System is turned ON	This is normal expected behavior, no action req.
LED ring light is RED	System is turned OFF	Press the power button if to activate the unit.
LED ring light is ORANGE	No communication between the Cell and the Control Module	Ensure Cell has proper connection to Control Module. If connected, disconnect and reconnect, Check that connection is clean and tight.
Pairing device to My-Pool app fails	Network does not have internet access / WiFi reception / poor signal	Verify network has internet access. Search for a better position with optimal WiFi reception. Connect to the device via Bluetooth communication as outlined on page 17, or connect to the device via a hardwired LAN connection.
	WiFi network password is incorrect	Check that you have typed in the correct password. Verify your password on your router or in your saved password. Check that any saved password you might be using is the most up-to-date version. Contact app support via the “Contact Us” link in-app.

		My-Pool app version is not up to date	Download the most recent My-Pool app version from Google Play or Apple app store.
Clean Cell LED is on		It is time to clean the Electrolytic Cell.	The Cell must be cleaned (see page 18 for instructions).
		Salinity is out of range	Verify salinity (see pages 7-8).
		Cell efficiency has been greatly reduced	Inadequate water flow exists, or Cell must be replaced.
Low Salt LED is on		Salinity is out of range	Manually verify salinity (see pages 7-8).
		Cell is dirty or clogged	Inspect and clean Cell if necessary.
No Flow LED is on		Insufficient waterflow from pump to Cell	This can be normal at initial startup or if there is air in the pipes. Check for low waterflow in system, clean filters and strainer baskets. If variable speed pump is in use, increase waterflow until LED turns Blue. Check for closed valves, pump cavitation, faulty pump operation. Ensure flow rate is above 22 GPM.
		Obstruction build-up in or around flow sensor paddle	Remove Cell from Cell Housing and remove debris to free the paddle.
		Gas protection activated	Observe the cell and make sure no air/gas bubble is confined in cell. Ensure air is not entering plumbing upstream of cell. Increase pump's flow rate.
Water leak		O-Ring improperly seated	Ensure O-Rings are clean and in good condition.
		Threaded collars are cross-threaded or pipes are misaligned	Inspect threads for damage, ensure that each screws back on without resistance.
Cell frequently has mineral buildup		This is due to imbalanced water chemistry and a high Saturation Index	Ensure that your Saturation Index is at or near zero, in order to avoid damage or premature cell failure. (page 9)
Cell never or rarely has mineral buildup		Water may be corrosive due to imbalanced water chemistry and a low Saturation Index	Ensure that your Saturation Index is at or near zero, in order to avoid damage or premature cell failure. (page 9)
Cold Water LED is on		Winter Mode is activated	Water temp is less than 68°. This lifespan-extending feature will deactivate once temperatures rise into a normal range. See page 11 for more information, as well as "Chlorine Output LED Blinking" below
Chlorine Output LED blinking		The level has been increased/decreased, the amount of chlorine generation measured by the system is currently different than the chosen Output level.	This is normal after pressing +/-, or during low temperature. This is also normal during cold water temperatures. A flashing LED indicates the "setpoint" chlorine output level you have chosen for the system. As the system detects and confirms that it is generating chlorine at the setpoint, the Output LED(s) will turn solid.
Chlorine Output level does not reach 100%		Cell is dirty or clogged	Clean Cell (see page 18).
		Not enough salt in the water	See Low Salt
		Low pool water temperature	See Cold Water
		Overheating protection	In extreme conditions, when the unit identifies overheating it will automatically reduce chlorine production to protect itself.

		Worn cell	Clean Cell (see page 18) multiple times to ensure no scale or debris is present, independently verify salinity is in proper range. If problem is not resolved, cell may be worn and requiring replacement.
Cell Life Low LED is on		The system has recorded that the amount of usage that has been placed on the cell will likely indicate that the system is nearing the later stages of its lifespan.	No immediate action is required. Cell is reaching its working capacity limit. Replace cell when system displays errors or power lights blink indicating output cannot reach the chlorination set point (see page 12). Replacement cells are readily available for purchase from your local dealer or at www.circupool.com
System Error LED is on		Cell blades are dirty or worn	Inspect Cell for debris or scaling, clean if necessary. Replace Cell if damaged or worn.
		Salinity is greatly out of range	Manually verify salinity (see pages 7-8).
		A more serious error has occurred	Contact Customer Support.

For more information or troubleshooting, visit www.circupool.com/help

CIRCUPOOL LIMITED WARRANTY

CircuPool CORE CONTROL Series Electronic Chlorine Generators carry the following Limited Warranty should failure occur due to faulty manufacture or materials, during normal use and service. For residential use, the manufacturer warrants to the original purchaser that the equipment shall be free of manufacturer's defects at the time of sale, and upon examination shall provide replacement parts for the control module, wifi module, and chlorine generator salt cell in accordance with the following schedule:

Year One -	No charge for parts.	Year Five -	Parts supplied at 80% of base price.
Year Two -	No charge for parts	Year Six -	Parts supplied at 80% of base price.
Year Three -	Parts supplied at 40% of base price.	Year Seven -	Parts supplied at 80% of base price.
Year Four -	Parts supplied at 60% of base price.	Year Eight -	Parts supplied at 80% of base price.

Sensors, pH/ORP probe, dosing acid pump, relays, and accompanying components are warranted against defect for a period of one year.

For Commercial use (any pool that is not for private single-family use, or the use of which is subject to regulation), parts are warranted against defect for a period of sixty days.

This limited warranty is subject to the following terms, conditions, and exclusions:

1. To obtain the benefits of this warranty, contact the warranty department for troubleshooting. You may obtain current contact information at www.circupool.com/help. Warranty claims must be initiated in a timely manner. Upon discovery of a defect, the warranty department will issue a Return Merchandise Authorization (RMA), and defective items and parts are to be shipped by customer to an authorized service representative, freight prepaid.

Upon examination, the determination of the cause of failure shall be made solely by CircuPool Products. The date upon which the claim is submitted, and an RMA is issued shall solely serve to determine at what point the claim falls within the schedule of warranty proration, in comparison with the original purchase date. **No packages will be accepted without an RMA number.**

2. Should a defect in any item or part covered by the warranty become evident during the warranty's term, CircuPool Products will at its sole discretion repair or replace such item or part. CircuPool Products reserves the right to replace defective parts with new or refurbished parts. This warranty does not include the cost of labor or transportation charges for equipment or component parts to or from CircuPool Products, or the removal, reinstallation, or any such costs incurred in obtaining warranty replacements or repair.

3. This warranty extends to the original retail purchaser and original installation site only, beginning at the original date of purchase, and is non-transferable.

4. The warranty contains the following exclusions. O-Rings, rubber gaskets and seals, electrical fuses, and circuit-breaker components are normal replacement items subject to wear and are excluded from the warranty. Product discoloration, or any other cosmetic or superficial damage or deterioration, regardless of its cause, is not covered by this warranty. The warranty is not applicable to problems arising from circumstances outside the control of CircuPool Products, including, but not limited to the following:

- A. Damage or premature wear due to improper pool chemistry, and failure to maintain pool water chemistry in accordance with the recommendations contained in the owner's manual.
- B. Damage due to improper installation or connection to improper voltages, including materials and workmanship supplied by others.
- C. Damage due to negligence or failure to properly maintain equipment, including operation with insufficient water flow or the maintenance of clean and tight electrical connections.
- D. Damage due to improper service, as well as unauthorized equipment modifications and use of non-genuine replacement parts.
- E. Damage due to misapplication, improper sizing, misuse, abuse, or failure to operate equipment as specified in the owner's manual and overuse.
- F. Problems resulting from tampering, accident, fire, flood, freezing, lightning, insects, or other natural elements, or other circumstances beyond the control of CircuPool Products.
- G. Damage due to over-tightening of threaded components or excessive pressure or stress.

The liability of CircuPool Products shall not exceed the repair or replacement of defective items or parts under the referenced limited warranty terms. There are no implied warranties of merchantability or fitness for a particular purpose that apply to this equipment. Under no circumstances shall CircuPool Products, its agents, employees, and affiliates be liable for any loss, damage, injury, inconvenience or loss of time, incidental expenses such as labor and material charges, or any other incidental, special, or consequential damages, which may result from the use, installation, removal, or reinstallation of its equipment and parts.

Disclaimer: This limited warranty is the entire warranty. No other warranties apply, expressed or implied. This warranty is valid only in the United States of America. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state. This warranty supersedes all previous publications. Any dispute between the original purchaser and CircuPool Products will be settled by binding arbitration, conducted in Harris County, Texas, under the rules of the American Arbitration Association.

Appendix 1 – Replacing WiFi Module communication cable

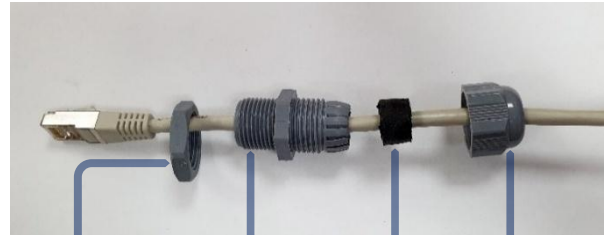
If the WiFi Module’s communication cable which was supplied with the product requires replacing or is too short to reach an area when you have a strong enough WiFi signal, please follow these detailed instructions:

Please take note of the components of the PG Connector which will need to be taken apart and put back together.

Assembled PG Connector



Disassembled PG Connector



Lock nut

PG body

Sealing ring

Cap nut

Replacement Steps

Illustrations

In the Control Module: open the **locking nut** of the largest and most central PG connector that is holding the communication cable in place.

Push on the transparent clasp of the connection on the head of the cable and pull it out from the connection of the control panel and through Control Module’s box itself.

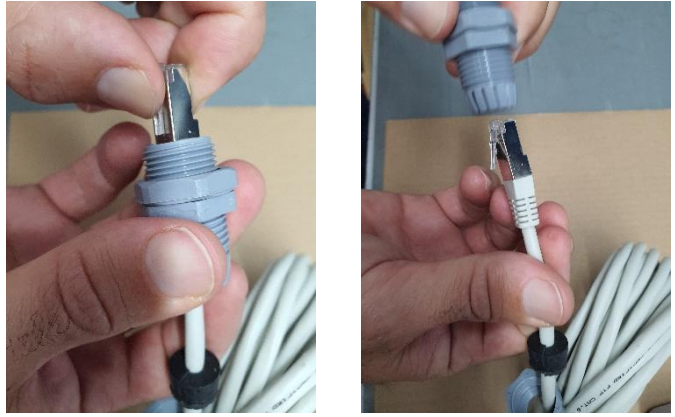


Open the Cap nut and pull it back.

Pull out the black sealing ring from inside the PG body



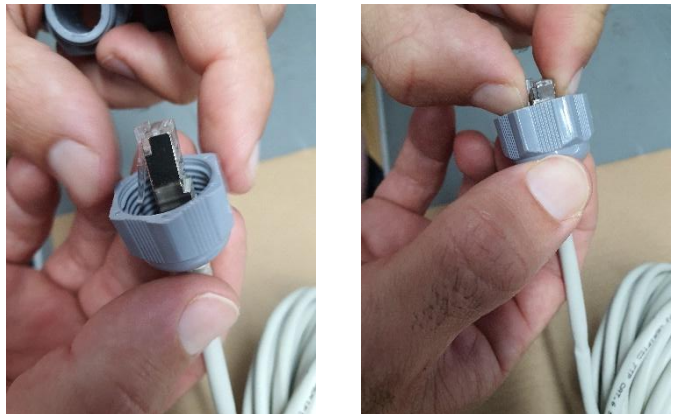
While pressing the transparent clasp of the cable head, pull the cable out of the PG connector body



Look for the slit in the sealing ring and remove it from the cable



Pull the cable out of the cap nut. If required, push the transparent cap of the cable's head to allow the cable to push through.



The PG connector is now fully removed from the end of the old cable which was connecting to the Control Module.



On the WiFi Module box: Using a screwdriver, remove all 4 screws holding the box together.

Remove the back of the box.



Open the cap nut of the PG connector attached to the WiFi Module box and pull it back.



While holding the transparent clasp of the communication's cable head, pull back the cable and out of the box.



Remove the black sealing ring from the PG connector body and pull out the cable from the box.



Look for the slit in the sealing ring and remove it from the cable.

Then pull the cap nut from the cable.



On the new cable, first, insert the cable through the Cap nut.

Then connect the black sealing ring over the cable.



Insert the connectors' head through the PG body that is connected to the WiFi Module box. Push it into the box so the cables head is inserted into the communication connector of the circuit and a 'click' sound is heard.



Push the black sealing ring into the PG body. Make sure the teeth of the PG body are not broken or folded.



Close the lock nut and the cap nut over the connector to secure the cable in place.



Make sure the black seal on the back of the box is inside its recess.



When closing the lid, pay attention to the hole that correlates to the raised plastic tooth of the box.



Close the lid of the box and screw back the screws diagonally.



Pull the Cap nut over the other end of the new cable meant to connect to the Control Module.



Wrap the black sealing ring around the cable, then insert the cable gently through the PG body. If needed, push down the transparent clasp of the cable's head.



Push the sealing ring gently in between the teeth of the PG body. Make sure the teeth of the PG body are not broken or folded.



Pull over and close the Cap nut on the PG connector.



Remove the lock nut from the connector



Insert the cable through the central largest hole located on the bottom of the Control Module.

Put the locking nut over the cables head.



Then Insert the cables' head into the connector until a 'click' sound is heard.



Using both hands, hold both the lock nut and the cap nut and close them tightly to secure the cable in place.



