

Electronic Chlorine Generator

Owner's Manual

Jeavle®



Our Brands

Jeavle® | **Zenhagu®** | **FOX LUX®** | **Generalman®** | **Pondvita®**

Manufacturer: Foxlux Pool Products Group Limited

Customer Service: Customer@foxluxpool.com

Made in China

Online Website: www.foxluxpool.com

Youtube: www.youtube.com/@FoxluxPool

IMPORTANT SAFETY INSTRUCTIONS

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

- READ AND FOLLOW ALL INSTRUCTIONS
- Disconnect all AC power during installation.
- **WARNING** - To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
 - A green colored terminal marked "Earth Ground" is located inside the wiring compartment. To reduce the risk of electric shock, this terminal must be connected to the grounding means provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors supplying the equipment.
- **WARNING** - Risk of Electric Shock. Connect only to a grounding type receptacle protected by a ground-fault circuit-interrupter (GFCI). Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI.
 - Do not bury cord. Locate cord to minimize abuse from lawn mowers, hedge trimmers, and other equipment.
- **WARNING** - To reduce the risk of electric shock, replace damaged cord immediately.
 - **WARNING** - To reduce the risk of electric shock, do not use extension cord to connect unit to electric supply; provide a properly located outlet.
- Two bonding lugs are provided on the exterior enclosure, one to be used for US installations and both for Canadian. To reduce the risk of electric shock, connect the local common bonding grid in the area of the swimming pool, spa, or hot tub to these terminals with an insulated or bare copper conductor not smaller than 8 AWG US / 6 AWG Canada.
- All field installed metal components such as rails, ladders, drains, or other similar hardware within 3 meters of the pool, spa or hot tub shall be bonded to the equipment grounding bus with copper conductors not smaller than 8 AWG US / 6 AWG Canada.

SAVE THESE INSTRUCTIONS

Operation

The Electronic Chlorine Generator is an automatic chlorine generation system for pool or spa sanitation. The operation requires a low concentration of salt (sodium chloride) in the pool water. These levels are low enough that it normally will not be tasted. The Electronic Chlorine Generator automatically sanitizes your pool by converting the salt into free chlorine which kills bacteria and algae in the pool. Chlorine will revert back to sodium chloride after killing bacteria. These reactions will continuously recycle virtually eliminating the need to add sanitizing chemicals to your pool. The only time you may need to add more salt to the pool is when water is replenished due to backwashing, draining, or splashing (not evaporation).

NOTE: Before installing this product as part of a saline water purification system in a pool or spa using natural stone for coping or for immediately adjacent patios/decking, a qualified stone installation specialist should be consulted regarding the appropriate type, installation, sealant (if any) and maintenance of stone used around a saline pool with electronic chlorine generator in your particular location and circumstances.

NOTE: The use of dry acid (sodium bisulfate) to adjust pool pH is discouraged especially in arid regions where pool water is subject to excessive evaporation and is not commonly diluted with fresh water.

Dry acid can cause a buildup of by-products that can damage your chlorinator cell.

Water Chemistry

The table below summarizes the levels that are recommended by The Association of Pool and Spa Professionals (APSP). The only special requirements for the Electronic Chlorine Generator are the salt level and stabilizer. It is important to maintain these levels in order to prevent corrosion or scaling and to ensure maximum enjoyment of the pool. Test your water periodically.

CHEMICAL	IDEAL LEVELS
Salt	2700 - 3400 ppm
Free Chlorine	1.0 - 3.0 ppm
pH	7.2 - 7.6
Total Alkalinity	80-120 ppm
Cyanuric Acid (Stabilizer)	US: 30 - 50 ppm Outdoor, 0 ppm Indoor Canada: 20 - 30 ppm (if necessary)
Calcium (Hardness)	US: 200 - 400 ppm Canada: 125 - 250 ppm
Metals	0 ppm
Saturation Index	-2 - .2 (0 best)

Saturation index

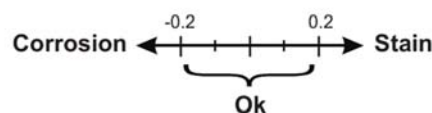
The saturation index (Si) relates to the calcium and alkalinity in the water and is an indicator of the pool water "balance".

Your water is properly balanced if the Si is $0 \pm .2$. If the Si is below -0.2 , the water is corrosive and plaster pool walls will be dissolved into the water. If the Si is above $+0.2$, scaling and staining will occur. Use the chart below to determine the saturation index.

$$\text{Si} = \text{pH} + \text{Ti} + \text{Ci} + \text{Ai} - \text{TDS}$$

°C	°F	Ti	Hardness Calcium	Ci	Total alkalinity	Ai	Total Dissolved Solids	TDS
12	53	0.3	75	1.5	75	1.9	0-1000	12.10
16	60	0.4	100	1.6	100	2.0	1001-2000	12.29
19	66	0.5	125	1.7	125	2.1		
24	76	0.6	150	1.8	150	2.2		
29	84	0.7	200	1.9	200	2.3	2001-3000	12.35
34	94	0.8	250	2.0	250	2.4		
39	102	0.9	300	2.1	300	2.5	3001-4000	12.41
			400	2.2	400	2.6		
			600	2.4	600	2.8	4001-5000	12.44
			800	2.5	800	2.9		

Use: Measure the pH of the pool water, the temperature, water hardness, total alkalinity, and total dissolved solids. Use the table above to determine Ti, Ci, Ai, and TDS in the formula shown above. If the Si is equal to 0.2 or more, stains may appear. If the Si is equal to -0.2 or less, corrosion or deterioration may occur.



Salt Level

Be aware that there may already be salt in your pool from prolonged use of chlorine. Test your pool, then add the correct amount.

The ideal salt level is between 2700-3400 ppm (parts per million) with 3200 ppm being optimal. A low salt level will reduce the efficiency of the Electronic Chlorine Generator and result in low chlorine production. A high salt level can cause the Electronic Chlorine Generator to shut down and may begin to give a salty taste to your pool (generally, the salt will begin to be tasted at a level of about 3500-4000 ppm). The salt in your pool/spa is constantly recycled and the loss of salt throughout the swimming season should be small. This loss is due primarily to the addition of

water because of splashing, backwashing, or draining (because of rain). Salt is not lost due to evaporation.

Type of Salt to Use

It is important to use only sodium chloride (NaCl) salt that is greater than 99% pure. This is common food quality or water softener salt and is usually available in 40-80 lb. bags labeled "Coarse Solar Salt". It is also acceptable to use water conditioning salt pellets, however, it will take longer for them to dissolve. Do not use rock salt, salt with yellow prussiate of soda, salt with anti-caking additives or iodized salt.

How to Add or Remove Salt

For new plaster pools, wait 10-14 days before adding salt to allow the plaster to cure. Turn the circulating pump on and add salt directly into the pool. Brush the salt around to speed up the dissolving process--do not allow salt to pile up on the bottom of the pool. Run the filter pump for 24 hours with the suction coming from the main drain (use pool vac if there is no main drain) to allow the salt to evenly disperse throughout the pool. The salt display may take 24 hours to respond to the change in salt concentration.

The only way to lower the salt concentration is to partially drain the pool and refill with fresh water.

For outdoor pools, always check stabilizer (cyanuric acid), when checking salt. These levels will most likely decline together.

POUNDS and (Kg) OF SALT NEEDED FOR 3200 PPM

Current salt level ppm	Gallons and (Liters) of Pool/Spa water																
	8,000 (30,000)	10,000 (37,500)	12,000 (45,000)	14,000 (52,500)	16,000 (60,000)	18,000 (67,500)	20,000 (75,000)	22,000 (82,500)	24,000 (90,000)	26,000 (97,500)	28,000 (105,000)	30,000 (112,500)	32,000 (120,000)	34,000 (127,500)	36,000 (135,000)	38,000 (142,500)	40,000 (150,000)
0	213 (97)	267 (121)	320 (145)	373 (170)	427 (194)	480 (218)	533 (242)	587 (267)	640 (291)	693 (315)	747 (339)	800 (364)	854 (388)	907 (412)	960 (436)	1013 (460)	1067 (484)
200	200 (91)	250 (114)	300 (136)	350 (159)	400 (182)	450 (205)	500 (227)	550 (250)	600 (273)	650 (295)	700 (318)	750 (341)	800 (363)	850 (385)	900 (408)	950 (430)	1000 (453)
400	187 (85)	233 (106)	280 (127)	327 (148)	373 (170)	420 (191)	467 (212)	513 (233)	560 (255)	607 (276)	653 (297)	700 (318)	747 (339)	793 (360)	840 (382)	887 (403)	933 (424)
600	173 (79)	217 (98)	260 (118)	303 (138)	347 (158)	390 (177)	433 (197)	477 (217)	520 (236)	563 (256)	607 (276)	650 (297)	693 (317)	737 (337)	780 (358)	823 (378)	867 (398)
800	160 (73)	200 (91)	240 (109)	280 (127)	320 (145)	360 (164)	400 (182)	440 (200)	480 (218)	520 (236)	560 (255)	600 (273)	640 (291)	680 (310)	720 (328)	760 (346)	800 (364)
1000	147 (67)	183 (83)	220 (100)	257 (117)	293 (133)	330 (150)	367 (167)	403 (183)	440 (200)	477 (217)	513 (233)	550 (250)	587 (267)	623 (283)	660 (300)	697 (317)	733 (333)
1200	133 (61)	167 (76)	200 (91)	233 (106)	267 (121)	300 (136)	333 (152)	367 (167)	400 (182)	433 (197)	467 (212)	500 (227)	533 (243)	567 (258)	600 (274)	633 (289)	667 (304)
1400	120 (55)	150 (68)	180 (82)	210 (95)	240 (109)	270 (123)	300 (136)	330 (150)	360 (164)	390 (177)	420 (191)	450 (205)	480 (218)	510 (232)	540 (246)	570 (259)	600 (263)
1600	107 (48)	133 (61)	160 (73)	187 (85)	213 (97)	240 (109)	267 (121)	293 (133)	320 (145)	347 (158)	373 (170)	400 (182)	427 (195)	453 (207)	480 (219)	507 (231)	533 (243)
1800	93 (42)	117 (53)	140 (64)	163 (74)	187 (85)	210 (95)	233 (106)	257 (117)	280 (127)	303 (138)	327 (148)	350 (159)	373 (169)	397 (180)	420 (190)	443 (201)	467 (211)
2000	80 (36)	100 (45)	120 (55)	140 (64)	160 (73)	180 (82)	200 (91)	220 (100)	240 (109)	260 (118)	280 (127)	300 (136)	320 (145)	340 (154)	360 (163)	380 (172)	400 (181)
2200	67 (30)	83 (38)	100 (45)	117 (53)	133 (61)	150 (68)	167 (76)	183 (83)	200 (91)	217 (98)	233 (106)	250 (114)	267 (121)	283 (129)	300 (137)	317 (144)	333 (152)
2400	53 (24)	67 (30)	80 (36)	93 (42)	107 (48)	120 (55)	133 (61)	147 (67)	160 (73)	173 (79)	187 (85)	200 (91)	213 (98)	227 (104)	240 (110)	253 (117)	267 (123)
2600	40 (18)	50 (23)	60 (27)	70 (32)	80 (36)	90 (41)	100 (45)	110 (50)	120 (55)	130 (59)	140 (64)	150 (68)	160 (73)	170 (77)	180 (81)	190 (86)	200 (90)
2800	27 (12)	33 (15)	40 (18)	47 (21)	53 (24)	60 (27)	67 (30)	73 (33)	80 (36)	87 (39)	93 (42)	100 (45)	107 (48)	113 (51)	120 (54)	127 (57)	133 (60)
3000	13 (6)	17 (8)	20 (9)	23 (11)	27 (12)	30 (14)	33 (15)	37 (17)	40 (18)	43 (20)	47 (21)	50 (23)	53 (24)	57 (26)	60 (27)	63 (29)	67 (30)
3200	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal
3400	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
3600+	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute

POUNDS and (Kg) OF STABILIZER (CYANURIC ACID) NEEDED FOR 30 PPM

Current Stabilizer Level (ppm)	Gallons and (Liters) of Pool/Spa water																
	8,000 (30000)	10,000 (37500)	12,000 (45000)	14,000 (52500)	16,000 (60000)	18,000 (67500)	20,000 (75000)	22,000 (82500)	24,000 (90000)	26,000 (97500)	28,000 (105000)	30,000 (112500)	32,000 (120000)	34,000 (127500)	36,000 (135000)	38,000 (142500)	40,000 (150000)
0 ppm	2.0 (.9)	2.5 (1.1)	3.0 (1.3)	3.5 (1.5)	4.0 (1.8)	4.5 (2.0)	5.0 (2.2)	5.5 (2.4)	6.0 (2.7)	6.5 (2.9)	7.0 (3.1)	7.5 (3.3)	8.0 (3.6)	8.5 (3.8)	9.0 (4.0)	9.5 (4.3)	10.0 (4.5)
10 ppm	1.8 (.8)	2.2 (1.0)	2.6 (1.2)	3.0 (1.3)	3.4 (1.5)	3.8 (1.7)	4.3 (2.0)	4.8 (2.2)	5.3 (2.4)	5.7 (2.6)	6.1 (2.8)	6.5 (2.9)	6.9 (3.1)	7.3 (3.3)	7.7 (3.5)	8.2 (3.7)	8.7 (4.0)
20 ppm	1.5 (.7)	1.9 (.9)	2.3 (1.0)	2.6 (1.2)	3.0 (1.4)	3.3 (1.5)	3.8 (1.7)	4.1 (1.8)	4.5 (2.0)	4.9 (2.2)	5.3 (2.4)	5.6 (2.5)	6.0 (2.7)	6.4 (2.9)	6.8 (3.1)	7.2 (3.3)	7.5 (3.4)

Controls Main Switch

AUTO: For normal operation, the Main Switch should be left in the AUTO position. In this position the Electronic Chlorine Generator will produce chlorine according to the "Desired Output %" adjustment setting for the entire filtering/pumping cycle.

SUPER CHLORINATE: When you have an abnormally high bather load, a large amount of rain, a cloudy water condition, or any other condition which needs a large amount of purification to be introduced, put the Main Switch in the SUPER CHLORINATE position. This electronically "super chlorinates" (shocks) the water for 24 hours (filter pump must be on during this time) or until the power has been turned off, whichever comes first. At the end of the super chlorinate time, be sure to put the switch back into the AUTO position.

OFF: The OFF position prevents the Electronic Chlorine Generator from energizing the electrolytic cell. In this position there is no chlorine generation. NOTE: To service any of the pool equipment or the Electronic Chlorine Generator, turn the power off at the circuit breaker.

Indicator LED's

POWER: When illuminated, the Electronic Chlorine Generator has input power.

GENERATING: This LED is on steady during normal operation. When flashing, the pool water is too hot or cold to operate.

SUPER CHLORINATE: Illuminates during super-chlorination. See description above.

REMOTELY CONTROLLED: When illuminated, indicates that a remote pool automation control is controlling the Electronic Chlorine Generator --the main switch and "Desired Output %" adjustment are inactive. When flashing, a remote pool automation control is in SERVICE or TIME-OUT mode and the Main Switch and "Desired Output %" adjustment are active.

NO FLOW: When illuminated, the flow switch has detected no water flowing and the Electronic Chlorine Generator has stopped generating chlorine. A flashing LED indicates a 15-60 second time delay period.

CHECK SALT: When flashing, the salt level is low (below 2700 ppm) and Electronic Chlorine Generator is generating at low efficiency. When illuminated steady, the salt level is too low and Electronic Chlorine Generator has shut down. Before adding large quantities of salt, it is advisable to have your salt level professionally checked.

HIGH SALT: When illuminated, the salt level is too high and Electronic Chlorine Generator has shut down.

INSPECT CELL: A flashing indicator signifies that either the cell efficiency is reduced or that it is time for regularly scheduled cell inspection. In either case, inspect

cell and clean if necessary. When illuminated steady, cell efficiency is greatly reduced and the Electronic Chlorine Generator has stopped producing chlorine. Inspect, clean or replace if necessary.

To Set Turbo Cell Type

Because this replacement mainboard is used to replace various models, it must be configured to operate your pool's Turbo Cell before operation. After installing the board, refer to the steps below to correctly configure the board for use with the installed Cell. Failure to perform this step may result in inaccurate salt readings, improper operation, and possible system shutdown.

Determine the model of the installed Turbo Cell which can be found on its colored label. Refer to the following information and steps below to set the Turbo Cell type.

"t-3" = T-CELL-3 (for 15,000 Gallons)

"t-5" = T-CELL-5 (for 20,000 Gallons)

"t-9" = T-CELL-9 (for 25,000 Gallons)

"t-15" = T-CELL-15 (for 40,000 Gallons)

1. Slide the Main Switch to the "Auto" position.
2. Push the Diagnostic button repeatedly until "t-xx" appears on the display ("t-15" is the factory default). If the desired cell type is displayed skip to step 4.
3. To change to a different cell type, slide the Main Switch from "Auto" to "Super Chlorinate" and back to "Auto". Repeat this process until the desired cell type is displayed.
4. Push the Diagnostic button to exit.

Desired Output %" adjustment knob

The "Desired Output %" adjustment knob is located in the lower center of the Electronic Chlorine Generator control panel. This setting is used to control the amount of chlorine the Electronic Chlorine Generator generates. Raise this setting to increase chlorine level and lower it to decrease chlorine level. Note: The "Desired Output %" adjustment will not function when the Electronic Chlorine Generator is being controlled by a remote pool automation control.

Salt Display

Refer to the Water Chemistry section for recommended salt levels as well as how to add/remove salt. The Salt Display shows the average salt level of the pool water. The

factory default display is in English units (ppm). If Metric units (grams per liter) are preferred, follow the procedure under Temperature Display. When the Electronic Chlorine Generator is displaying grams per liter, the readout will show a decimal point. (ex. 3.2 g/l = 3200ppm).

Temperature Display

The Temperature Display shows the current temperature of the pool water. The factory default display is in °F. Both the Temperature Display and the Salt Display can be programmed to display in Metric units. To display temperature in °C and salt level in g/l, perform the following steps:

1. Slide the Main Switch from "Off" to the "Auto" position.
2. Push the Diagnostic button repeatedly until "°F" appears on the display.
3. Slide the Main Switch from "Auto" to "Super Chlorinate" and back to "Auto".
4. Push the Diagnostic button to exit.

Instant Salinity

The Instant Salinity display is the measured salt level of the pool water at that moment. If salt has recently been added, the Instant Salinity may show the change while the Salt Display (average salt level) may take some time before the changes can be seen. Under these circumstances, you may want to "update" the Salt Display to the new Instant Salinity value. This action will clear the Salt Display and substitute the Instant Salinity value. To do this, follow the steps below:

1. Slide the Main Switch from "Off" to the "Auto" position.
2. Push the Diagnostic button repeatedly until "-xxxx ppm" appears on the display.
3. Slide the Main Switch from "Auto" to "Super Chlorinate" and back to "Auto".
4. Push the Diagnostic button to exit.

Operation

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

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

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

To find the optimum "Desired Output %" setting, start at approximately 50%. Test the chlorine level every few days and adjust the dial up or down accordingly. It usually takes 2-3 adjustments to find the ideal setting for your pool/spa and after that, it should only take minor, infrequent adjustments.

Because the chlorine demand of the pool increases with temperature, most people find they have to adjust the dial up at the peak of the summer and down during the colder periods. The Electronic Chlorine Generator automatically stops generating when the pool water temperatures drops below 50°F. This is usually not a problem because bacteria and algae stop growing at this temperature. You can override this low temperature cutoff by switching to SUPER CHLORINATE for a day.

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

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

Maintaining the Electronic Chlorine Generator

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

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

Servicing and Cleaning the cell

Turn off power to the Electronic Chlorine Generator before removing the electrolytic cell. Once removed, look inside the cell and inspect for scale formation (light colored crusty or flaky deposits) on the plates and for any debris which has passed through the filter and caught on the plates. If no deposits are visible, reinstall. If deposits are seen, use a high pressure garden hose and try to flush the scale off. If this is not

successful, use a plastic or wood tool (do not use metal as this will scratch the coating off the plates) and scrape deposits off of plates. Note that a buildup on the cell indicates that there is an unusually high calcium level in the pool (old pool water is usually the cause). If this is not corrected, you may have to periodically clean the cell. The simplest way to avoid this is to bring the pool chemistry to the recommended levels as specified.

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

Winterizing

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

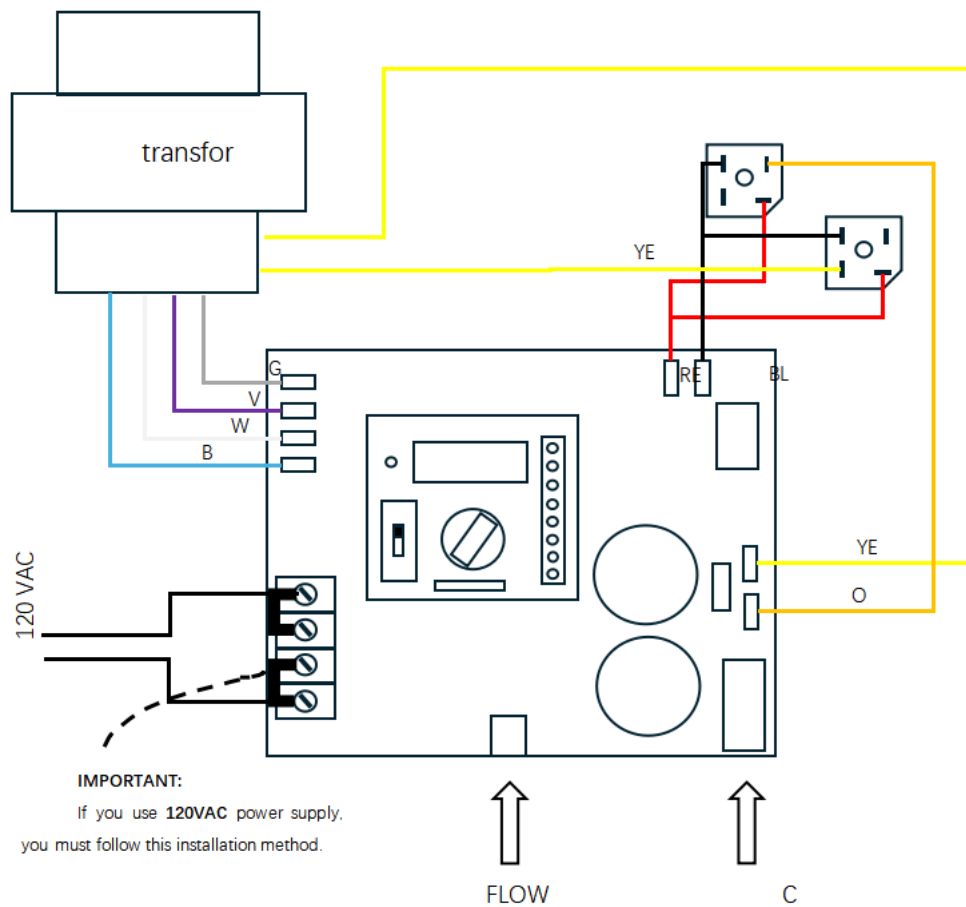
Mounting the Electronic Chlorine Generator

The Electronic Chlorine Generator is contained in a raintight enclosure that is suitable for outdoor mounting. The control must be mounted a minimum of 5 ft. (2 meters) horizontal distance (or more, if local codes require) from the pool/spa.

The control is designed to mount vertically on a flat surface with the knockouts facing downward. Because the enclosure also acts as a heat sink (disperses heat from inside the box), it is important not to block the four sides of the control. Do not mount Electronic Chlorine Generator inside a panel or tight enclosed area.

Input Power For stand alone operation:

Refer to the wiring label on the Electronic Chlorine Generator as well as the diagram below to determine correct wiring connections. The Electronic Chlorine Generator is shipped from the factory with the configuration jumpers in 120VAC position.



Electrolytic Cell and Flow Switch: The electrolytic cell and flow switch cables are terminated with connectors which plug into the Electronic Chlorine Generator, for easy attachment and removal. The door of the Electronic Chlorine Generator must be open to access the cell cable connector. The flow switch plugs into a connector (similar to a telephone jack) located outside, on the bottom of the enclosure. Refer to the diagram below for the location of these connections.

Troubleshooting

Diagnostic Displays

Sequential pushes of the small "diagnostic" button next to the LCD display will cause the Electronic Chlorine Generator to display the following information:

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

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

Common Problems and Solutions

1. "Power" LED not on

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

2. "Generating" LED flashing

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

3. "No Flow" LED illuminated

The Electronic Chlorine Generator has sensed a no flow condition and has stopped generating chlorine. Check that the flow switch is plugged into the connector on the bottom of the control unit and that the wire is not cut or damaged. Make sure you have at least 12" of straight pipe before the flow switch. If there is adequate flow and the LED is still on, check that the arrows on the flow switch (on top of hex) are pointing in the direction of flow.

4. "Check Salt" LED illuminated or flashing

Be sure that the correct model Cell has been selected. Check salt level in pool/spa. If salt level is low, add salt according to chart. Before adding large quantities of salt, it is advisable to have your salt level professionally checked.

5. "High Salt" LED illuminated

Be sure that the correct model Turbo Cell has been selected. Check salt level in pool/spa. If salt level is too high, lower salt level by draining some of the pool water out of the pool and replace with fresh water. Continue until the salt concentration is at recommended levels.

6. "Inspect Cell" LED flashing

Be sure that the correct model Turbo Cell has been selected. Inspect and clean cell. When done, press the "diagnostic" button for 3 seconds to stop the "Inspect Cell" LED flashing.

7. "Inspect Cell" LED illuminated

Be sure that the correct model Cell has been selected. Remove and inspect the cell for scale. If the cell is scaled, follow the directions on page 10 for cell cleaning. If the pool has the proper amount of salt and the "Inspect Cell" LED is still illuminated, the cell may be worn and need replacement.

8. Possible causes of little or no free chlorine residual

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

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

A possible Printed Circuit Board fault has been detected.