



C.O.B.I.A.TM SYSTEMS

Chlorine On Board Integrated Automation

Operating Instructions

Chloration automatique intégrée - Mode d'emploi

Automation mit integrierter Chlorung - Bedienungsanleitungen

Clorazione grazie a un sistema automatico incorporato - Manuale di Funzionamento

Sistema automático de Cloro Integrado - Instruções de Funcionamento

Automatización Integrada de Cloro A Bordo - Instrucciones Operacionales



ENGLISH

Dear Customer,
Thank you for choosing our product for your pool. We hope that you will enjoy using your new robot to clean and sanitize your swimming pool for years to come. Before you begin to use your robot, please take a few minutes to carefully read these operating instructions. Again, thank you for choosing our product.

IMPORTANT

CAUTION: Do not plug in the power supply if the robot is not fully immersed in water. Operating the robot out of water will cause severe damage immediately and will result in loss of warranty.

Always remember to unplug the power supply from the power outlet before removing the robot from the pool.

WARNING: Your robot should not be used while people are swimming in the pool.

Safety Note

The robot must be supplied through a Ground Fault Current Interrupter (GFCI-USA) or a Residual Current Device (RCD-EUROPE) having a rated residual operating current not exceeding 30 mA

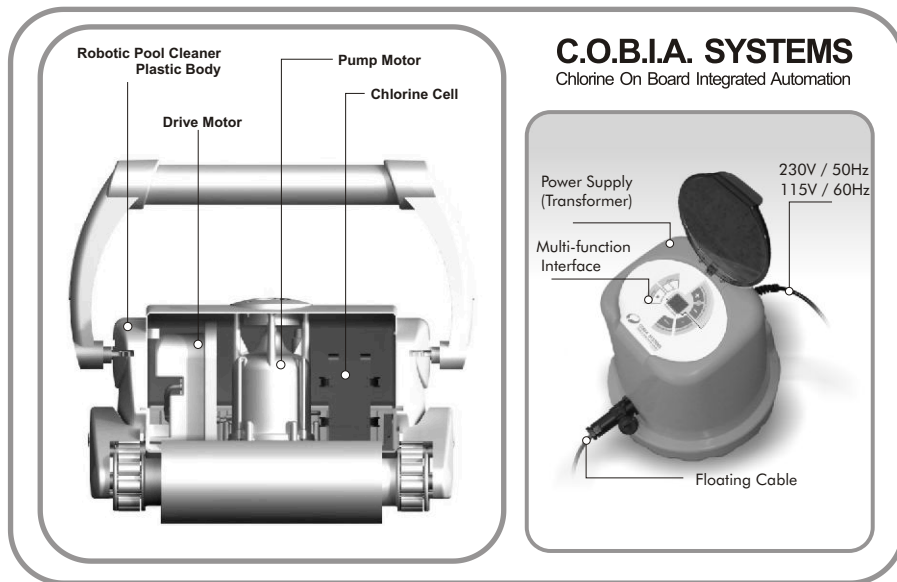
- The connection to the branch circuit should be consistent with the local and national wiring rules (electrical code).
- Mishandling of the robot can result in leakage of lubricants.
- If the supply cord is damaged, it must be replaced by the manufacturer's service agent or a qualified and trained person in order to avoid hazards.

How does the C.O.B.I.A system work:

C.O.B.I.A. uses a compact electrolytic cell to produce chlorine from sodium chloride (salt). The salt is added into the pool in advance by the pool owner. The chlorination process occurs as pool water passes between a series of titanium plates which make up the cell. These plates pass low current between them causing an electro-chemical reaction leading to the production of chlorine.

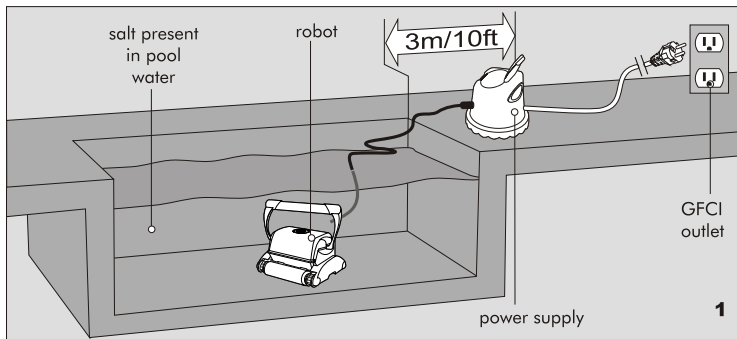
Once the power supply is plugged in to the outlet, the robot will begin to sanitize (chlorinate) the pool. The robot will automatically clean the pool intermittently throughout the sanitizing cycle. This allows for proper sanitizer distribution and thorough cleaning throughout the day. The multi-function user interface is located on the power supply and displays the chlorination time and notifies the user about system status. This interface has two separate LED lights indicating whether the robot is cleaning and/or sanitizing.

If at anytime you choose to run a complete cleaning cycle, press the ON/OFF button next to the word "clean".

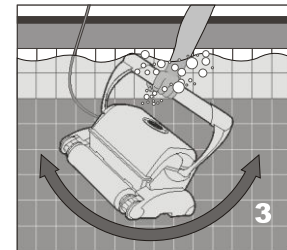
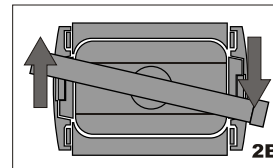
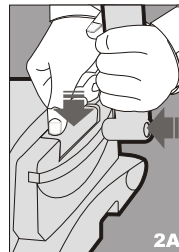


Operating the Pool Robot

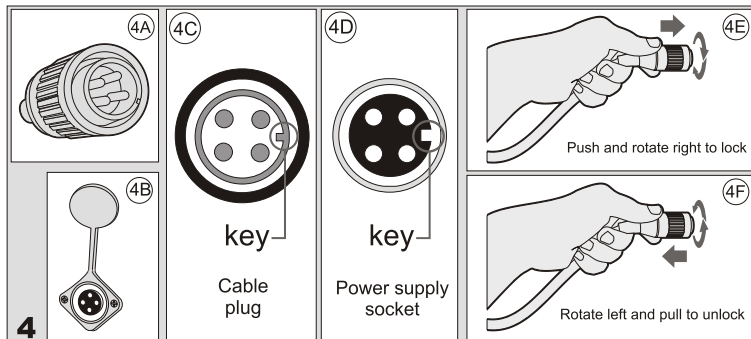
1. Place the power supply (transformer) at least three meters / ten feet from the pool and uncoil the cable (fig. 1, 1A). The power supply will provide low voltage to the robot.



2. For proper operation, lock the moveable handle diagonally across the top of the robot's body. Push down on the handle lock mechanism and slide the handle one slot before the end (recommended), then release the lock. The handle will remain fixed in this position. Repeat this process on the other side of the robot. Remember, the handle must be fixed diagonally (Fig. 2A, 2B).

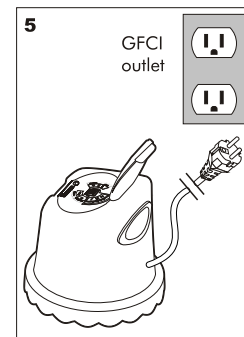


3. Place the robot in the water. Turn the robot side to side in the water to allow air to escape from the body and then let the robot sink to the bottom of the pool (Fig. 3). Then, spread the cable over the surface of the pool as evenly as possible (Fig. 1).



4. Plug the cable into power supply (Fig. 4):

- Prepare plug as seen in (Fig. 4C) with key exactly as shown.
- Align key from cable plug with corresponding key on the power supply socket (Fig. 4D).
- Push plug into the socket of the power supply, once plug is in, rotate the plug to the right to lock it in place (Fig. 4E).
- To remove the plug, rotate to the left to unlock, then pull out (Fig. 4F).
- Plug power supply into a grounded outlet. Ensure that the electrical outlet has been grounded (Fig. 5).



Your New Robotic Pool Cleaner contains:

- The robotic pool cleaner which includes the C.O.B.I.A. system
- The special Power Supply (Transformer)
- The caddy (Optional)

Adding SALT to the pool:

- Before adding salt, make sure the robot is unplugged and outside of the pool.
- Measure the existing salt level in the pool. Some pools may have residual salt from years of liquid chlorine use.
- Determine how much salt is needed to achieve **3,000 PPM** (Parts per Million). **See Salt Table below.**
- When adding salt, turn on the pool pump for 24 hours in order to keep the pool water circulating.
- Add salt directly to the pool making sure the salt is spread evenly. Brush the pool bottom to help dissolve the salt. Wait a minimum of 8 hours before testing again. **For optimum operation**, check salt level once per week.

Salt Table: Amount of salt needed to achieve 3000 ppm level in your pool.


Pool Size in Gallons/ (Cubic Meters)	Salinity (ppm) measured in pool						
	0	500	1000	1500	2000	2500	3000
10,000 (38m ³)	250 lbs/ (114 kg)	210 lbs/ (95 kg)	170 lbs/ (76 kg)	125 lbs/ (57 kg)	85 lbs/ (38 kg)	40 lbs/ (19 kg)	0
12,000 (45m ³)	300 lbs/ (136 kg)	250 lbs/ (114 kg)	200 lbs/ (91 kg)	150 lbs/ (68 kg)	100 lbs/ (45 kg)	50 lbs/ (23 kg)	0
14,000 (53m ³)	350 lbs/ (159 kg)	290 lbs/ (132 kg)	235 lbs/ (106 kg)	175 lbs/ (79 kg)	120 lbs/ (53 kg)	60 lbs/ (26 kg)	0
16,000 (61m ³)	400 lbs/ (182 kg)	335 lbs/ (151 kg)	270 lbs/ (121 kg)	200 lbs/ (91 kg)	13 lbs/ (61 kg)	70 lbs/ (30 kg)	0
18,000 (68m ³)	450 lbs/ (204 kg)	375 lbs/ (170 kg)	300 lbs/ (136 kg)	225 lbs/ (102 kg)	150 lbs/ (68 kg)	75 lbs/ (34 kg)	0
20,000 (76m ³)	500 lbs/ (227 kg)	420 lbs/ (189 kg)	335 lbs/ (151 kg)	250 lbs/ (114 kg)	170 lbs/ (76 kg)	85 lbs/ (38 kg)	0
22,000 (83m ³)	551 lbs/ (250 kg)	459 lbs/ (208 kg)	367 lbs/ (167 kg)	275 lbs/ (125 kg)	184 lbs/ (83 kg)	92 lbs/ (42 kg)	0
24,000 (91m ³)	601 lbs/ (273 kg)	501 lbs/ (227 kg)	401 lbs/ (182 kg)	300 lbs/ (136 kg)	200 lbs/ (91 kg)	100 lbs/ (45 kg)	0
26,000 (98m ³)	651 lbs/ (295 kg)	542 lbs/ (246 kg)	434 lbs/ (197 kg)	325 lbs/ (148 kg)	217 lbs/ (98 kg)	108 lbs/ (49 kg)	0
28,000 (106m ³)	701 lbs/ (318 kg)	584 lbs/ (265 kg)	467 lbs/ (212 kg)	351 lbs/ (159 kg)	234 lbs/ (106 kg)	117 lbs/ (53 kg)	0
30,000 (114m ³)	751 lbs/ (341 kg)	626 lbs/ (284 kg)	501 lbs/ (227 kg)	376 lbs/ (170 kg)	250 lbs/ (114 kg)	125 lbs/ (57 kg)	0
32,000 (121m ³)	801 lbs/ (363 kg)	668 lbs/ (303 kg)	534 lbs/ (242 kg)	401 lbs/ (182 kg)	267 lbs/ (121 kg)	134 lbs/ (61 kg)	0
34,000 (129m ³)	851 lbs/ (386 kg)	709 lbs/ (322 kg)	567 lbs/ (257 kg)	426 lbs/ (193 kg)	284 lbs/ (129 kg)	142 lbs/ (64 kg)	0
36,000 (136m ³)	901 lbs/ (409 kg)	751 lbs/ (341 kg)	601 lbs/ (273 kg)	451 lbs/ (204 kg)	300 lbs/ (136 kg)	150 lbs/ (68 kg)	0
38,000 (144m ³)	951 lbs/ (432 kg)	793 lbs/ (360 kg)	634 lbs/ (288 kg)	476 lbs/ (216 kg)	317 lbs/ (144 kg)	159 lbs/ (72 kg)	0
40,000 (151m ³)	999 lbs/ (454 kg)	835 lbs/ (379 kg)	668 lbs/ (303 kg)	501 lbs/ (227 kg)	334 lbs/ (151 kg)	167 lbs/ (76 kg)	0

Recommended Operation Hours of Cobia-II vs. Size of the pool

Gallons	40,000	36,000	32,000	28,000	24,000	20,000
Time (hours per day)	22	20	18	16	13	11

Sanitizing (Chlorinating) - Operating Instructions

Adjusting the (Chlorine Timer) on the Power Supply

- Press (+) or (-) buttons to adjust the chlorine time per day. The HOURS PER DAY selected will flash several times, making a beeping sound to inform the chlorine time setting is saved. The (Chlorine Timer) setting is stored in the memory and will not change until you decide to increase or decrease it again.
- The (Chlorine Timer) setting in the memory will remain even if you unplug the power supply.
- The (Chlorine Timer) can be adjusted at any time, even during the chlorination process. The default time is set at 10 hours of chlorination per day but you may need to increase or decrease hours based on the volume of water, weather conditions, pool cleanliness, number of people in the pool, etc.
- The robot will turn off automatically after sanitizing and cleaning the pool. In case you want to turn the machine OFF during operation, push the ON/OFF buttons next to the word "clean" or "chlorine". The LEDs should turn off.
-  After each chlorine or cleaning operation, the robot will show this symbol on the display notifying the user that the robot is finished for the day and awaiting the next timer cycle. This is perfectly normal and does not require any attention.

Shocking Your Pool

At some point, you may need to shock your pool. The COBIA is not designed to disperse large amounts of chlorine at one time. Use your local dealer for the correct shock additive for your pool.

To shock your pool:

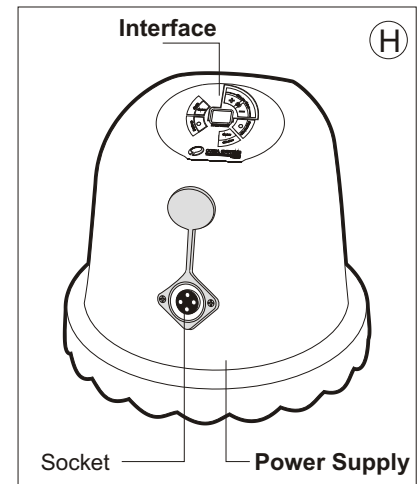
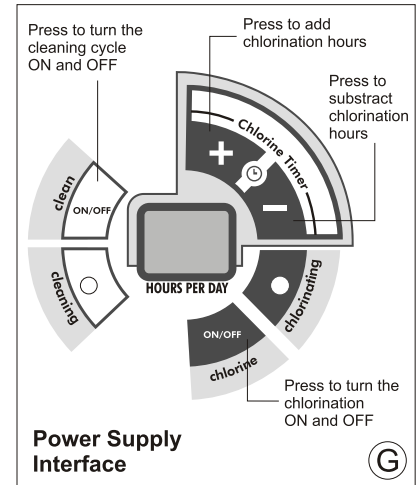
- 1) (IMPORTANT) Remove your COBIA from the pool before shock treatment.
 - a. Leaving your robot in the pool while shocking will void the warranty.
- 2) Add shock additive per manufacturer instructions.
- 3) Return the COBIA to the pool only when pool is safe for swimming.

The C.O.B.I.A. system has a built-in Timer

The Cobia will turn itself ON every day in order to sanitize and clean the pool. Once you plug the power supply into the outlet, the robot remembers the exact time of day and will work at that same time each day. If you would like to choose the time of day to run your Cobia, simply plug in the power supply into the outlet at the time of day you desire.

Power Outage:

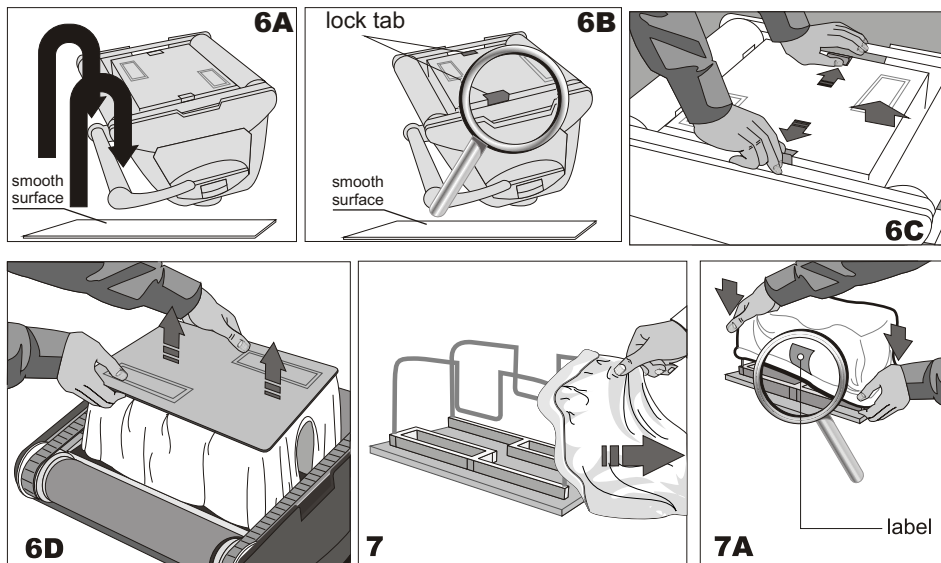
In the event of a power outage, it may be necessary to once again re-adjust your timer by plugging in the robot at the time of day you desire. If you don't choose to re-adjust the timer, the robot will work each day at the time of day when power was restored.



Maintenance and adjustment

CLEAN THE FILTER BAG AFTER EVERY CLEANING CYCLE

- Unplug the power supply. Please keep the plug away from contact with water.
- If the robot is in the pool, gently pull it toward you using the cable until the handle is within reach. Use the handle (not the cable) to pull the robot out of the pool after allowing most of the water to drain.
- Lay the unit on its back on a smooth surface (in order to prevent scratches on the robot body), release the lock tabs and remove the bottom lid assembly (Fig.6A, 6B, 6C, 6D).
- Remove the filter bag from the support bars, turn it inside out and wash off all the dirt with a garden hose or in a sink. Squeeze the bag gently until the rinse water is clear. If necessary, machine wash the bag using only cold water with **NO DETERGENT!** (Fig.7).
- Re-install the bag on the support bars with the **label** in the center of one of the long sides of the bottom lid (Fig.7A).
- Re-install the bottom lid assembly in the body. Push down on it until lock tabs will snap into place properly.



IMPORTANT TIPS:

- Shut off and unplug the power supply every time you remove the cleaner from the water.
- Clean the filter bag after every cleaning cycle.
- Reverse the handle after every cleaning cycle to avoid tangling the cable.
- Periodically straighten out the floating cable.
- Replace worn brushes to ensure maximum cleaning performance.
- Make sure that your robot positions itself properly on the wall. The robot handle must rest parallel to the water line upon reaching the surface of the water.
- Save your robot's packaging for off-season storage or for shipping the robot to your dealer if service is required.
- Do not leave your robot in direct sunlight when not in use.
- Never leave the power supply in direct sunlight and avoid leaving it in the rain.
- Occasionally, you should rinse your robot in clean, fresh water. This will lengthen the service life of the drive belts, drive tracks and scrubbing brushes.
- Clean the propeller once a month (see next page for details)
- Remove robot from the pool when adding chemicals.
- Ensure stabilizer level is at 60 PPM (minimum).
- Remove your COBIA from the pool before shock treatment. Leaving your robot in the pool while shocking your pool will void the warranty.

Maintain and Repair Robot

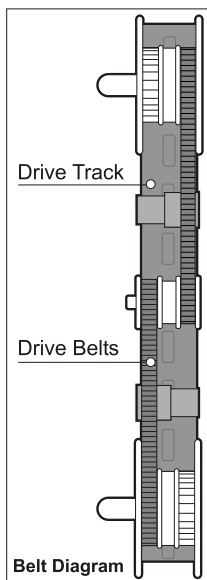
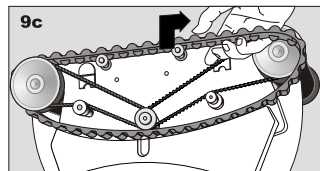
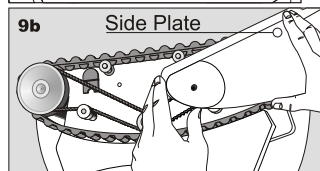
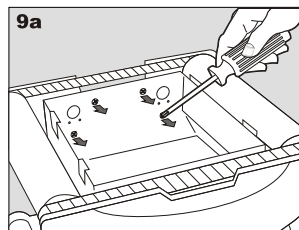
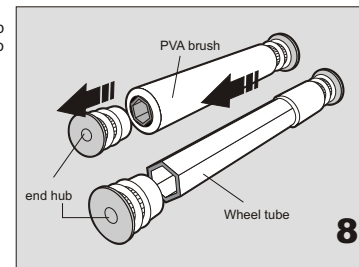
PVA BRUSHES CARE:

This special brush material is most efficient when wet. Any discoloration is normal in the drying process when exposed to open air. Please allow brushes to absorb pool water for about 20 minutes before initial use, each season. The brushes will absorb the water, discoloration will disappear and the brushes will be ready to scrub your pool.

CHANGING BRUSHES

Depending upon how frequently you use the robot, it will be necessary to replace the brushes when they are worn out. Worn out brushes will impede robot's scrubbing, climbing the walls or general performance.

1. See Fig.11 for protection of your robot.
2. Detach one of the side plates, unscrewing the four screws (Fig.9a).
3. With side plate detached, take out the wheel tube from the machine (Fig. 8).
4. Open the end hub and pull out the worn PVA brush.(Fig.8)
5. Place the new PVA brush on to the hexagonal tube and close it with the end hub (Fig.8).
6. Re-install the wheel tube and place back the side plate. Re-attach the four screws (Fig.9a).



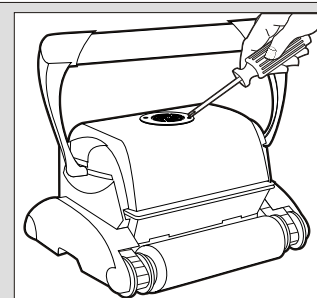
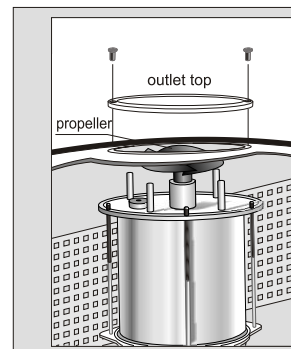
CHANGING THE DRIVE BELTS

Depending on usage, the drive belts (located behind the side plate) will stretch. When this happens, in order to maintain the optimum performance of the robot, the drive belts have to be changed or robot must be sent to a service center.

- 1) Turn the robot upside down and remove the bottom lid assembly (Fig. 6a,6b,6c,6d).
- 2) Remove the 4 screws on the drive motor side and remove the side plate (Fig. 9a, 9b).
- 3) Remove the drive track. Before removing the drive track, study how the drive belts are positioned for re-assembly (Fig. 9c).
- 4) Remove the old drive belts and **install** new ones. To re-assemble, reverse steps c and d.

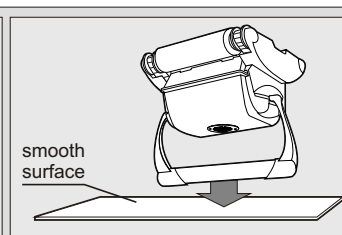
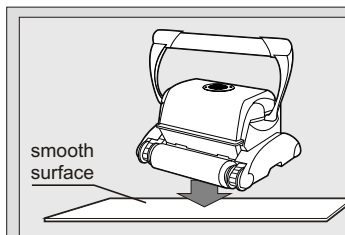
Cleaning the pump propeller:

- 1) Remove the 4 screws from the outlet top (Fig. 10).
- 2) Remove the outlet top and remove any hair and other debris around propeller.





CAUTION:



To avoid scratches and other blemishes appearing on your robot, simply find a smooth surface for it to rest on when cleaning the debris bag or performing minor adjustments. These scratches could produce changes in the robots soft and smooth edges resulting in potential damage to some flexible pool surfaces.



Troubleshooting Guide

- IF YOU SEE ANY FAULT CODE ON THE DISPLAY, PLEASE SHUT THE POWER SUPPLY (OFF) THEN (ON) AGAIN.
- IF THE FAULT PERSISTS, SEE THE BELOW TABLE IN ORDER TO CLEAR THE FAULTS, BEFORE CALLING YOUR SERVICE CENTER.
- (Important) Before troubleshooting, the robot must be disconnected from the power supply and the power supply must be unplugged from the electrical outlet to prevent damage to the robot and possible personal injury.
- "PART REF. #" Signifies reference numbers located on the last page.
- "REPAIR PAGE #" Signifies any page number in this manual.

WARNING CODE	SOLUTION	Part Ref. #	Repair Page #
	This symbol indicates that the pool is most likely low on salt. Check your salt level. If necessary, add salt to the pool using the table in the Appendix. Scaling on the cell can also trigger a low salt warning. Please refer to fig. 12-18 for inspecting and cleaning the scaling on the cell. If salt level is sufficient, the temperature of the water can also trigger a low salt reading on your power supply. Make sure the water temperature is always above 12°C (54°F). Using the robot for chlorination below these temperatures will shorten the lifetime of the cell resulting in loss of warranty.		Page 3
	This symbol indicates your salt is too high. You need to decrease the salt level to 3000 PPM. To decrease the salt level you need to remove some water from your pool and add fresh water. You may have to repeat this process until the proper salt level has been met.		

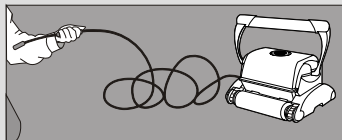
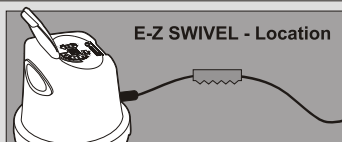
FAULT CODES	SOLUTION	Part Ref. #	Repair Page #
	Did you just add salt? If so, turn power supply off for 24 hours, then turn on again.	24 and 22	Page 3
	Check and clean the filter bag of any foreign objects.	16	Page 5
	Check for any foreign objects near or on chlorine cell.	10	
	Check and clean the filter bag of any foreign objects.	16	Page 5

Troubleshooting Guide

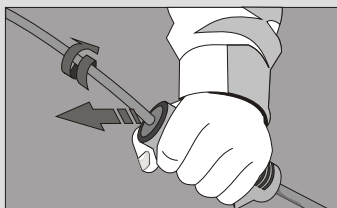
Fault Codes	Solution	Part Ref. #	Repair Page #
E 3	<p>Ensure floating blue cable is correctly plugged into the power supply.</p> <p>Is the machine completely submersed?</p> <p>Is the salt level correct?</p>	11 and 21	<p>Page 2</p> <p>Page 2</p> <p>Page 3</p>
E 4	<p>Check the pump propeller, it should move freely.</p> <p>Check for obstructions caught in propeller.</p>	<p>1</p> <p>1</p>	<p>Page 6</p> <p>Page 6</p>
E 5	<p>Power supply should be placed in a shaded area.</p> <p>Make sure power supply base is well ventilated on a flat surface</p> <p>Make sure ventilation inlet on the back of the power supply is clear from debris.</p>	20	
E 6	<p>Ensure floating blue cable is correctly plugged into the power supply.</p> <p>Is the robot completely submersed?</p> <p>Check for obstructions in propeller or broken propeller.</p>	<p>11 and 21</p> <p>1</p>	<p>Page 2</p> <p>Page 2</p> <p>Page 6</p>
E 7	<p>Check the pump propeller, it should move freely.</p> <p>Check for obstructions caught in propeller.</p>	<p>1</p> <p>1</p>	<p>Page 6</p> <p>Page 6</p>
E 8	<p>Ensure pool has enough salt.</p> <p>Is the robot completely submersed?</p>		<p>Page 3</p> <p>Page 2</p>
E 9	<p>Ensure floating blue cable is correctly plugged into the power supply.</p> <p>Is the robot completely submersed?</p>	11 and 21	<p>Page 2</p> <p>Page 2</p>

Troubleshooting Guide

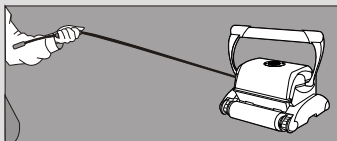
Twisted cable



Place the Robot on the ground and unplug the cable from the transformer. With one hand, holding the E-Z Swivel, walk away from the Robot, pulling the cable to its full length.



Holding with one hand the E-Z Swivel.

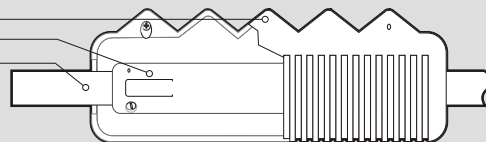


The core will rotate inside the cover and in this way will untangle the cable.

CABLE CARE

The cable may become twisted after a period of time in use. To correct this condition, simply lock the moveable handle on the top of the cleaner in the opposite diagonal direction. The pool cleaner will now travel in the opposite direction while cleaning your pool and the cable will uncoil. Check the cable periodically for external damage. If the problem persists, use the E-Z Swivel device.

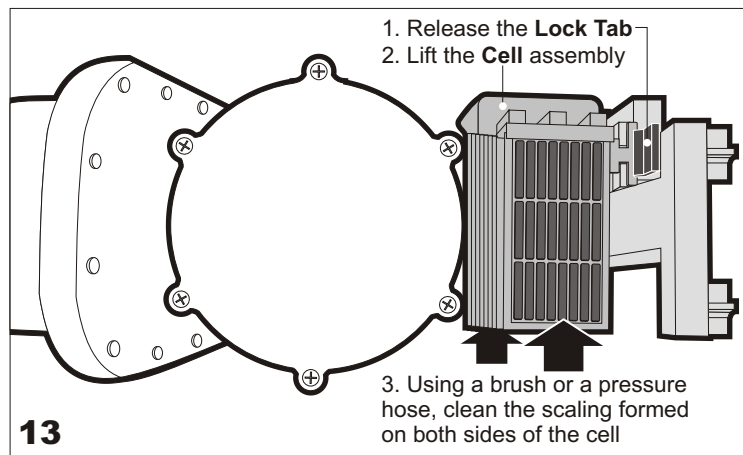
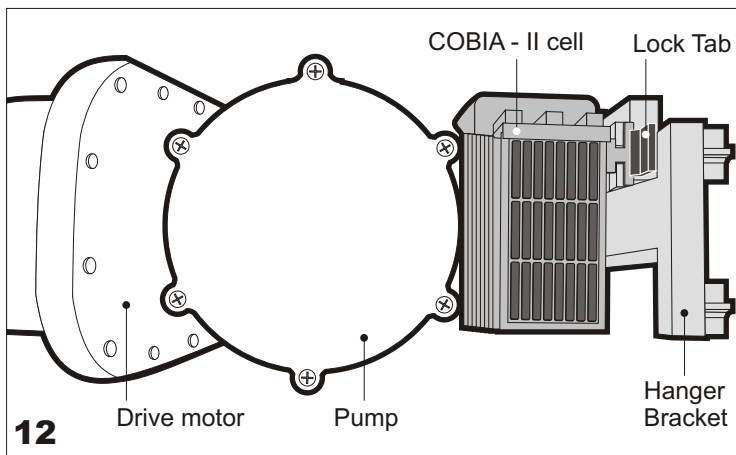
Handle Cover
Core
Cable Assy



patent pending

Cleaning the cell

The cell should be checked periodically for calcium deposit. In order to eliminate the calcium, the cell should be removed from the robot (Fig. 12&13). Calcium can be easily removed with water pressure and using your hand.

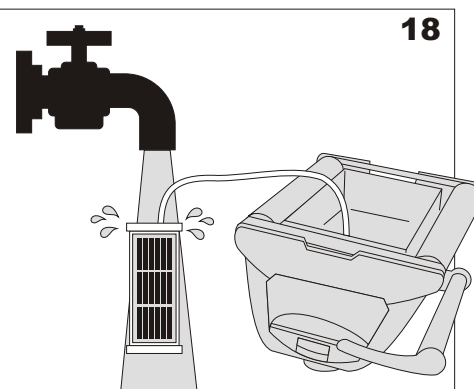
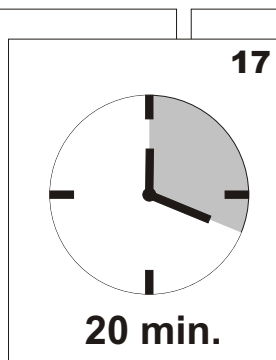
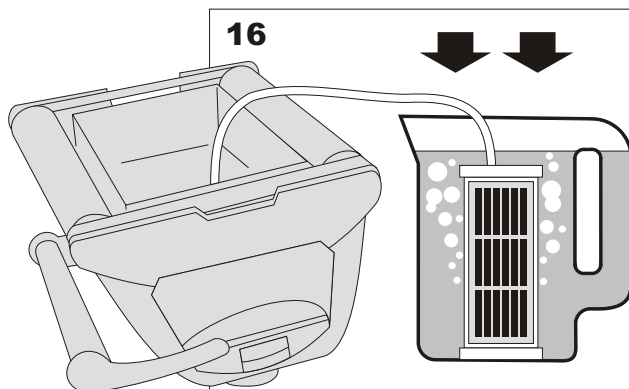
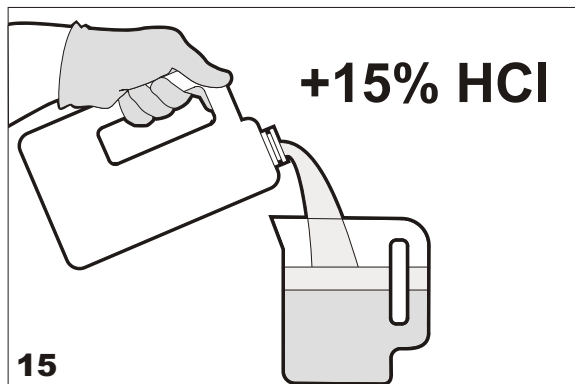
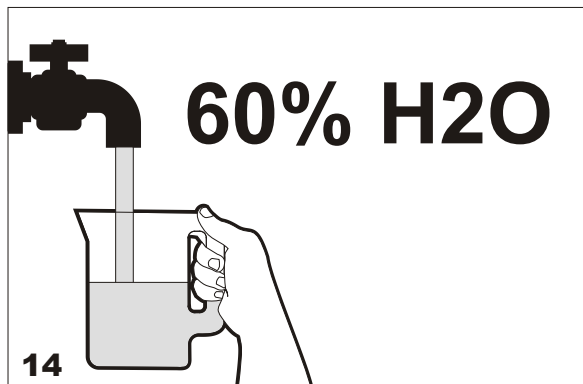


Troubleshooting Guide

Cleaning the cell (cont.)

If the calcium deposit is excessive, the cell should be placed into a cup of diluted muriatic acid. ALWAYS ADD ACID TO WATER and not the other way around.

1. Take a large cup and fill it 60% with water.
2. Add acid until the cup is 75% full. Be sure not to fill the cup too high to prevent overflow when cell will be inserted.
WARNING: Always wear Latex gloves and eye protection when handling acid!
3. Insert the cell into the solution.
4. Wait for the solution to stop bubbling (20 mins).
5. Rinse cell with fresh water and insert back into the robot.



Your C.O.B.I.A is designed to Clean and Chlorinate your pool.

You will still need to check the chemistry of your pool regularly.

The table below shows the recommended balanced levels for normal pools. Maintaining these levels will provide a safe and enjoyable pool environment. If your water chemistry is not in balance, contact an authorized dealer (pool professional) or pool store and they can provide you with the proper chemicals and procedures.

FACTORS	RECOMMENDED LEVELS
Salt	3000 to 4000 ppm (Parts per Million)
Free Chlorine	1 to 3 ppm (Parts per Million)
pH	7.2 to 7.8
Total Alkalinity	110 to 180 ppm (Parts per Million)
Stabilizer (Cyanuric Acid)	60 to 80 ppm (Parts per Million)
Nitrates	0 ppm (Parts per Million)
Metals	0 ppm (Parts per Million)
Phosphates	0 ppm (Parts per Million)
Calcium Hardness	Level established for each pool surface

TROUBLESHOOTING TIPS

Evaluating the possible cause for each problem from top to bottom will avoid any extra labor or downtime.

PROBLEM	POSSIBLE CAUSES	POSSIBLE SOLUTIONS
CHLORINE LEVEL LOW OR NO CHLORINE	Chlorine generator is off Low salinity Chlorine Timer too short Low stabilizer Chemical imbalance	Is the Chlorination light on the power supply (ON)? Check the salinity level. Make sure it is at least 3000 ppm Increase the hours of Chlorine Timer then re-check chlorine level Check stabilizer (Cyanuric Acid) level. Make sure it is 60 – 80 ppm Check pool chemistry and balance accordingly or consult a pool professional
GREEN POOL WATER	Chlorine Level too low Chemical imbalance	Increase the hours of Chlorine Timer then re-check chlorine level Check pool chemistry and balance accordingly or consult a pool professional
CLEANER STOPPED & NO CHLORINATION	No power feed to the power supply unit	Check floating power cord connection Check GFI receptacle and circuit breaker Check external timer (if applicable)
SALINITY HIGH	Too much salt added to the pool	Drain some pool water and refill the pool with fresh water and re-check. Salt level should be 3000 ppm