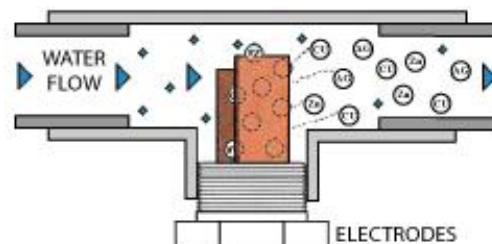


ATTENTION

- 1) For your ClearBlue Ionizer to work properly, these steps must be taken *before* installation:
 - i. Ensure the total **alkalinity** is between 80 and 120 ppm
 - ii. Ensure **hardness, pH and TDS** are within acceptable levels (see *Maintenance* section in operating manual for details)
 - iii. Excessive amounts of algae or bacteria should be controlled prior to installation
- 2) A residual of **0.6ppm** chlorine or bromine (equivalent to ½ tablet once a week) or alternative non-toxic oxidizer should be maintained to break down organics (sweat, hair, urine, make-up, sunscreen, etc.)
- 3) Keep your ion level between **0.2ppm – 0.4ppm**. Test your water with the Copper (Cu) Test Kit periodically to ensure ion level is within this range. **Do not reduce the amount of sanitizer used until the ion level reaches 0.2ppm.**
- 4) Shock may be required in cases of extreme weather conditions or increased bather loads resulting in high contaminants
- 5) Please carefully read the ClearBlue Installation Instructions/ Operating Manual *before* operation of this system
- 6) Install electrodes vertically in the tee and parallel to the water flow.





MODEL A-400, A-800 & A-850

ION RELEASING DEVICE

HELPS PREVENT ALGAE AND BACTERIA
GROWTH IN SWIMMING POOLS
AND SPAS

COMMERCIAL

WARNING: Excessive Amounts of Copper may cause staining of pool and spa surfaces.

A MAXIMUM OF 151,400 L (40,000 GALLONS) OF WATER CAN BE TREATED WITH THE CLEARBLUE™
SYSTEM

MADE IN CANADA

READ THE LABEL AND THE OPERATING MANUAL BEFORE USING

KEEP OUT OF REACH OF CHILDREN

REGISTRATION NUMBER 29954 PEST CONTROL PRODUCTS ACT



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www.clearblueionizer.com

INSTALLATION & OPERATION INSTRUCTIONS

PLEASE CAREFULLY READ AND SAVE THESE INSTRUCTIONS

Thank you for purchasing a ClearBlue Ionizer. This system was designed to assist in controlling bacteria and algae in pools and spas. This device will augment bactericidal and algicidal activity of primary disinfectants such as chlorine or bromine in swimming pools. Once the copper concentration has reached the required level, maintain 0.5 – 3ppm of free available chlorine. Regulated pools must follow state, provincial or municipal guidelines.

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IMPORTANT SAFETY INSTRUCTIONS

When installing and using this electrical equipment, basic safety precautions should always be followed. Please read all instructions before using this system.

- Do not reduce chemical usage until the ion level reaches 0.2-0.4 parts per million (ppm)
- Protect controller from direct elements (rain, sun). A weatherproof outdoor enclosure is recommended.
- To prevent corrosion and extend the longevity of your controller, add lithium grease to the inside of the pink connector before the electrodes are plugged in.
- To reduce the risk of injury, do not permit children to operate this device.
- Follow all aspects of the local and National Electrical Code(s) when installing this device.
- Install or locate this equipment only in accordance with the provided installation instructions.
- This unit is only water resistant when the black plug is plugged in or the electrodes are plugged in to the pink connector. Failure to do this may result in internal water damage.
- Use this equipment only for its intended use as described in this manual.
- This system should be serviced only by the manufacturer. Contact your retailer or the manufacturer for examination, repair or adjustment.
- Do not operate this system if it has a damaged cord or plug.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.

GROUNDING INSTRUCTIONS



Caution: This system must be grounded while in use to protect the operator from electric shock. If it should malfunction or break down, grounding provides a path of least resistance for electric



current to reduce the risk of electric shock. This system is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

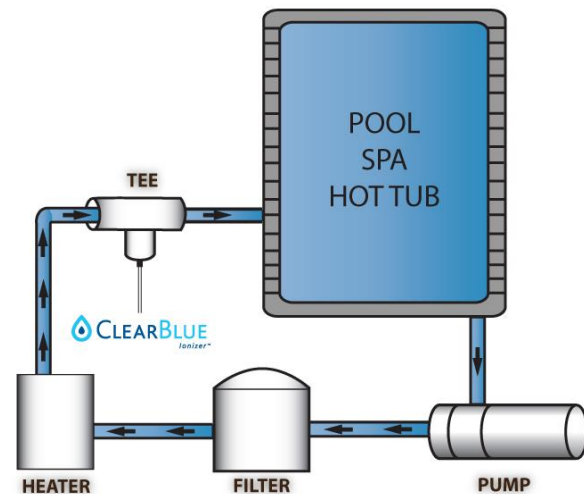
Electrical Requirements

Check Installation Instructions for proper location for the power supply. The electrical requirements are a 120 or 240 volt 60 Hz, AC only, 15+ amp protected electrical supply. Please check the label on the back of the ionizer for voltage requirement. The retailer and manufacturer cannot accept any liability for damage to the equipment or personal injury resulting from failure to observe the correct electrical connection procedures.

INSTALLATION INTRUCTIONS

ClearBlue can be easily installed in under 30 minutes. The ion chamber (PVC tee) is usually installed in the pool circulation system after the pump, filter and heater. It is recommended that you install the tee as close to the pool as possible. If that location does not work for some reason you may install anywhere between the pump, filter or heater. Please follow these instructions:

1. **Ensure the total alkalinity is between 80 and 120 ppm.** Also ensure hardness, pH and TDS are within acceptable levels (see maintenance section) Excessive amounts of algae or bacteria should be controlled prior to start-up.
2. Turn off the pump.
3. Plan the placement of the tee (so electrodes are vertical, facing upwards), controller and plug ensuring there is adequate room and all parts reach designated power source. A qualified electrician can extend the electrodes line cord if required using standard 18/3 cable.
4. Drain the water pipe in which you have chosen to install the tee.
5. Cut out a 3" section of the horizontal run of pipe where you have chosen to install the tee.
6. Replace this part of the pipe with the tee assembly and fasten with standard PVC glue making sure that the electrodes are vertical in order to allow maximum contact with water and to avoid dirt formation or air pockets around the electrodes.
7. Mount the controller with the screws provided on a suitable surface.
8. Connect cable from electrodes and wire from power supply into the controller.
9. Wrap Teflon tape around the threads on the electrodes six to ten times or enough to cover the threads. Use your hand to turn the electrodes clockwise into the Tee until it is secure. To ensure even wearing of electrodes, turn until they sit parallel to the water so water flows between the two metal prongs evenly.
10. Plug into suitable ground fault protected outlet.
11. **Do not stop using your current sanitizer until the ion level reaches 0.2 ppm or higher**



THE DIGITAL DISPLAY



Ionizing

When the “ionizing” light is illuminating, it confirms the system is ionizing the water. To illuminate, the electrodes must be fully submersed in water, and at least 80mA of current must be flowing from the electrodes into the water. The more ions that are being released into the water, the faster the light will blink. The light will look solid at maximum dose.

Ion/Action

This user defined setting represents the percentage of time in each hour the ionizer is on for. The suggested ion setting follows in the operating instructions.

Large Dose

Press this button to release the maximum amount of ions for the number of hours you choose. There is a 24 hour default setting. The display will count down the amount of hours left. The system will return to the previously set ion/action setting when the large dose ends. Use this function at your discretion whenever a large increase in ions is required. You may choose to use this when the ionizer is first installed, upon re-filling, or during large amounts of rain or spillage.

“-”

This button will *decrease* the setting for Ion/Action or large dose hours.

“+”

This button will *increase* the setting for Ion/Action or large dose hours.

Program Lock

This feature will lock the controller at the currently programmed settings. To lock the program, hold down the “-” button and the “+” button simultaneously for 20 seconds, you will see “PL” (program lock) appear on the screen. To unlock, use the same process.

OPERATING INSTRUCTIONS

1. **Power Up** Plug in controller. The digital display should turn on.
2. **Program** Press the “Ion/Action” button to set the ion cycle time. Follow the guidelines below based on the gallons you are ionizing.

3. Optional Press the “Large Dose” button to set the hours of large dose. You may set from 1 to 99 hours. 24 hours will activate as the default setting. Follow the guidelines below. When the large dose cycle is finished it will return to the previously set ion duty cycle.

Model A-400 (Max 2,500 gallons)

Liters	Gallons	Ion/Action	Large Dose
1900	500	18	20
3800	1,000	35	37
5700	1,500	53	55
7550	2,000	72	75
9500	2,500	90	95

Model A-800 (Max 25,000 gallons)

Liters	Gallons	Ion/Action	Large Dose
1,900	500	8	3
5,700	1,500	15	6
37,850	10,000	32	40
56,800	15,000	55	58
75,700	20,000	72	75
94,650	25,000	90	95

Model A-850 (Max 40,000 gallons)

Liters	Gallons	Ion/Action	Large Dose
37,850	10,000	20	24
75,700	20,000	45	48
113,560	30,000	70	72
151,400	40,000	95	96

Please note these are only **general guidelines**. You will need to adjust the levels based on your copper test kit readings. See the maintenance section for more information.

Based on the ion output, it will take approximately 4 days to attain the minimum copper residual of 0.2ppm and 9 days to attain the copper residual of 0.4ppm in the maximum pool volume stated on the label.

MAINTENANCE

- Copper (Cu) Ion Test:** Using a copper test kit, ensure ions are between 0.2 p.p.m. - 0.4 p.p.m.; spa applications can increase ion level up to 0.6 p.p.m. Test the ion level at least once a week until you have found the proper Ion/Action setting for your pool or spa. Increase or decrease the Ion/Action setting as required. Carefully read and follow the instructions for your Cu test kit. Check the expiry date of the Cu test kit as test results may be inaccurate if used after that date.

2. **Electrodes:** Electrodes that deliver current to the water need only be checked once per season and typically last for one year (2,160 “on” hours) under normal use conditions. You can purchase additional electrodes from your authorized dealer. To replace your electrodes, simply turn old electrodes counter clockwise to release them from the tee. Wrap Teflon tape around the threads of the new set of electrodes six times. Use your hand to turn the electrodes clockwise into the Tee until it is secure. To ensure even wearing of electrodes, turn until they sit parallel to the water so water flows through them evenly.
3. Occasionally, you will need to **oxidize** the water to help break down excess organic matter (i.e. sweat, urine, makeup, suntan oils). We suggest running your ionizer system in conjunction with 0.6 p.p.m. chlorine which is equivalent to ½ chlorine puck once a week. Chlorine pucks are recommended before liquid shock as they are extremely stable and slow releasing. Or, you may prefer a non-chlorine oxidizer such as Spaboss Energize which is pH neutralized (or equivalent brand).
4. **Keep the total alkalinity between 80 and 120 ppm. (Most important!)**
5. **Keep pH between 7.2 -7.6.** Unlike chlorine, ions are pH neutral so they will not change the pH level of the water. But your choice of oxidizer or environmental factors may.
6. **Keep calcium hardness between 200 and 300 ppm.**
7. **Keep total dissolved solids (TDS) between 500 and 2,000 ppm.**
8. Ensure **phosphates** are at 100ppb or less by testing phosphates on an algae free pool (chlorine must be below 5ppm). If phosphates are above 100ppb use **PHOSfree** to remove the bulk of the phosphates. Once the phosphates are below 100ppb then begin maintenance with **Pool Perfect+PHOSfree**. If phosphate levels continue to rise, the following may be the cause: fertilizers, organics, metal sequestering products, scale products, or extreme rainfall. The above will cause phosphates to continue to rise above what **Pool Perfect+PHOSfree** can maintain. It is important to reduce/eliminate the source of the phosphates for **Pool Perfect+PHOSfree** to work properly. If possible, prevent runoff from gardens and lawns from entering the pool. Remove leaves from the pool regularly and promptly.
9. As with chlorinated pools, you may need to add a **clarifier or flocculent** if you see extremely fine particles in the water which the filter cannot separate. This clarifier makes these fine particles clump together and sink to the bottom when your pump is off. When the particles have settled on the bottom of the pool they are easily removed by vacuuming. This is not a dangerous chemical and it is used in small quantities. Please follow the directions on the product label.

Note: Do not use a stain & scale preventing sequestering agent with this system. You should not use a sequestering agent with an ionizer. Stain & scale preventing sequestering agents are useful if you have source water with high concentrations of iron, calcium, lime etc. Although these products are designed to remove iron and calcium, they will also remove the copper, silver and zinc. If you have a serious staining and scaling concern you can treat the water at the source using a *Metal Trap* filter. This filter can be attached to any garden hose and will remove contaminants before they enter the pool or spa.

If you have already added a sequestering agent to your pool or spa, it will combine with minerals and get collected by the filter and will dissipate within a month. You can use your ionizer after a one month period without depleting the copper, silver and zinc ions, as long as you do not add additional sequestering agent.

CLEANING & CARE

Electrodes: Cleaning will remove oxidization. Some deposits have a tendency to form on the electrodes depending on the water conditions. Clean the flat face of the electrodes using a smooth file and some water. The surface does not have to be “polished”; simply remove any traces of oxidization and other sediments. Remove the old Teflon tape, use new tape and wrap it around six times.

Exterior Housing: The housing of the ionizer is made from a durable PVC plastic. Clean the outside with a mild soap and water; rinse and dry with a soft cloth. Do not use any type of household or abrasive cleaner.

System Controller: Care should be taken in cleaning the controller. If the controller becomes soiled, wipe the panel with a cloth dampened slightly with water only. Dry with a soft cloth. Do not scrub or use any sort of chemical cleaners.

WARRANTY

All ClearBlue ionizers carry a full five (5) year limited warranty to be free from all manufacturing defects. This warranty does not include replacement electrodes, which are subject to normal wear and must be replaced periodically. You must obtain a Return Materials Authorization (RMA) number from Customer Service before returning a product. The device will be repaired or replaced within fifteen business days following a claim. This warranty is in effect starting the date of purchase and is only applicable to those units with an unopened enclosure and a serial number that is in its original unaltered state. This warranty does not apply to the following incorrect operating procedures, breakage, or (transport/impact) damages caused by fault, abuse, misuse, carelessness, misapplication, alteration, modification, improper maintenance, over voltage of the unit as well as act of God, fire, chemical (alteration) or natural corrosion or any other casualty. This warranty does not apply to the spa or pool but solely to the components manufactured by ClearBlue Ionizer Inc.

SPECIFICATIONS

Input Voltage: 120 or 240 Volts AC
Input Frequency: 50 to 60 Hertz
Output Voltage: 12 VDC
Output Current: 2 AMP Max
Outside Dimensions: 5" x 3" x 2.5"
Controller: 0-99 variable settings
Flow Rate: 10 to 80 GPM
Tee: Slip x Slip x 1 ½" FIP S40 PVC Tee
Electrode Size: 3" x ½" x 5/16" Each x (2) Bars
Electrode Weight: 8 ounces
Typical Electrode Life: 2,160 “on” hours
Capacity: Max 25,000 or 40,000 Gallons

REPLACEMENT PARTS & ACCESSORIES

Description / Part No

Replacement Electrodes (anodes) / A-750E
Copper test kit / A-CUI
Copper test kit liquid refills / A-CUI-R
1 ½" PVC tee / PLA-85150
2" PVC tee / PLA-85142