

AQUA LOGIC'S COMPACT MEGA UV (ALCMUV)
**INSTALLATION & OPERATING INSTRUCTIONS FOR
ALL ALCMUV UNITS**



Please read all instructions before installing and using this unit.

Rev. 1/1/09

IMPORTANT SAFETY INSTRUCTIONS

WARNING:

To guard against injury, basic safety precautions should be observed including the following:

DO:

- Read and follow all safety instructions on unit and in these instructions.
- Save these instructions.
- Take special care to avoid possible electrical shock since water is employed in the use of this equipment.
- Use a ground fault interrupter (GFI) on all electrical equipment used near water.
- Carefully examine this unit after installation. It should not be energized if there is water on parts not intended to be wet.
- Immediately remove power from the sterilizer if it shows any signs of leakage.
- Make sure unit is mounted securely before operating it.
- Always remove power from unit when not in use, before taking off or installing any parts and before cleaning.

DO NOT:

- **DO NOT TOUCH** THE STERILIZER if it is exposed to open water.
- **DO NOT** attempt to use the equipment if it has been exposed to open water.
- Do not operate this unit if it has a damaged cord or plug, if it is malfunctioning or if it has been dropped or been damaged in any manner.
- Do not attempt repairs on the unit except those listed in these instructions.
- Do not operate UV sterilizer for more than a minute or two without water running through it.
- **NEVER** allow eyes or skin to be directly exposed to the ultraviolet lamp rays--**severe burns may result!!!** Always remove power from unit when there is a possibility of direct exposure.
- Do not allow UV sterilizer to be exposed to freezing temperature. Allowing the unit to be exposed to freezing temperatures may result in breakage to the lamp, the quartz sleeve or to the PVC chamber.
- Do not operate this unit if you suspect that the lamp or quartz sleeve may be broken inside. Be safe: remove and inspect lamp or sleeve if you are not sure.
- Do not attempt to change lamp or quartz sleeve without using appropriate safety gear.
- Do not exceed the maximum pressure rating of **50 psi**.

DO NOT exceed this maximum rating or serious damage may result.

Thank you for selecting an Aqua Logic,® Inc. Ultraviolet (UV) Sterilizer. Each model has been designed and built to provide years of reliable service and has been fully tested under pressure before it leaves the factory. Aqua Logic has been manufacturing UV sterilizers for nearly 15 years. Aqua Logic UV sterilizers are used by aquarists, aquaculture, public aquariums, educational institutions, government agencies, industry and research organizations across the US and around the world.

Aqua Logic offers free technical information by telephone [(858) 292-4773] or by FAX [(858) 279-0537] M-F 8:00 am to 4:30 pm except selected holidays. Information is also available on the internet at our website (www.aqualogicinc.com) and by email: info@aqualogicinc.com.

- How many hours per day should I use a UV on my system?

We recommend that the UV sterilizer be placed in continuous operation for 24-hours-per-day 7-days-per-week after the biological filtration systems are established (typically about 4 weeks after starting or restarting a system).

- How often should I change the lamp?

The average life expectancy of lamps in Aqua Logic UV sterilizers is 12 months of continuous operation for all ALCMUV units. Even though the lamp may still be glowing with blue light after 12 months, the lamp may no longer produce the kill-rate you desire.

- What are the maximum working pressures that I can use on Aqua Logic UV sterilizers?

ALCMUV models may be used in applications up to a maximum of 35 psi.

WARNING: Never use Aqua Logic UV sterilizers on systems which are connected to municipal water systems since the available pressure may exceed the maximum ratings of the equipment and serious damage or injury may result.

- Can I use an Aqua Logic UV sterilizer outdoors?

ALCMUV sterilizers may be used in outdoor applications if protected from wet weather or is subjected to freezing temperatures.

WARNING: Never allow any UV sterilizer be exposed to freezing temperature. Allowing the unit to be exposed to freezing temperatures may result in breakage to the lamp, the quartz sleeve or to the PVC chamber. Damage to the unit caused by freezing is not covered under warranty.

Assembly and Installation:

- Upon receipt of your UV sterilizer, inspect the packaging for obvious damage. Be sure to note any damage on the shipper's manifest in case you need to file a claim.
- Open the package and inspect for concealed damage (for example, broken lamps or sleeves, etc.). Claims for damage must be filed with the carrier promptly.
- Place the unit where you want to install it. Make sure to install the unit in an upright position. If you wish to install the unit on a wall, you must put it on a sturdy shelf. Do NOT attempt to screw or bolt the unit directly to the wall.
- Allow at least 20" of clearance above the unit so that lamps and/or quartz sleeves can be replaced without having to disconnect the unit from your system.
- **Install flow switch to either the water outlet or inlet. [see picture]**
- We recommend installing valves and union disconnects (not included) to by-pass the water inlet and outlet of the unit. This isolates the unit for maintenance purposes. And also this allows the unit be removed from your system if necessary.
- Be sure to allow the power cord to loop below the UV ballast box and the power outlet so that water cannot drip down the power cord into either the UV or the power outlet.
- Connect unit to your system.
- Apply power to pump. Check system carefully for leaks.



Lamp installation:

- To help to protect the quartz sleeves and lamps from damage during shipment, the lamps have been individually wrapped. You will need to do the following:
 - Unwrap the lamp(s). We recommend using a dry lint-free cloth to handle the lamps to avoid getting oils from your skin on the lamps.
 - Follow the "Lamp Replacement" procedures on page 6 to install the lamps.
 - Apply power to UV sterilizer and check for proper operation of all UV lamps

Note: Some UV models have the lamps and quartz sleeves installed at the factory.

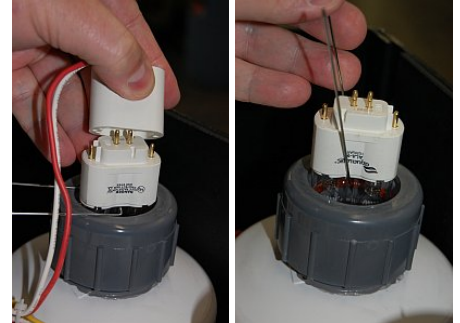
Lamp Removal and Installation

We recommend using a clean oil-free cloth to protect lamp from skin oils.

Lamp Removal:

WARNING: Be sure to wear protective gloves and goggles!!

- Disconnect power from UV sterilizer.
- Turn off pump.
- Remove screws from UV lid and remove the lid.
- Lift wire retainer to expose the lamp pin socket. Carefully remove the socket from lamp as shown in right picture and then carefully lift lamp from quartz sleeve. [see Photo's]



Lamp installation:

- Carefully slide lamp into chamber.
- Attach medal wire retainer on the lamp as shown in the picture.
- Push pin socket down on lamp until it snaps on lamp and let the lamp slide down into the sleeve as shown in the picture.
- Replace UV sterilizer lid and install screws.
- Turn on pump.
- Apply power to UV Sterilizer
- The view port should show a blue light after a few seconds.



Replacing the quartz sleeve:

WARNING: Be sure to wear protective gloves and goggles!!

- Unplug or remove power from UV sterilizer.
- Turn off pump.
- Isolate UV from main plumbing and drain the unit.
- Remove screws from UV lid and remove the lid.
- Carefully remove lamps form quartz sleeves as shown in picture above.
- Carefully use your hand or a wrench to turn counter-clockwise and remove the 2" nuts on top and bottom of chamber.
- Carefully slide quartz sleeve out of the chamber.
- **Important:** Look for cracks or chips on the flange on the new or old quartz sleeve. *If damaged, do not use the sleeve.*
- Slide new quartz sleeve in the top of the chamber with "O" rings attached. *We recommend using a clean oil-free cloth to protect quartz from skin oils.*
- Carefully tighten quartz compression nut by hand. **Do not over tighten the nut!!! Damage to the quartz sleeve could occur.**
- Attach medal wire retainer to the lamp as shown in the picture above.
- Carefully slide lamp into quartz sleeve. *We recommend using a clean oil-free cloth to protect lamp from skin oils.*
- Push lamp pin socket down on lamp as shown in the picture above.
- Apply power to pump. Check system carefully for leaks.
- Replace UV sterilizer lid and install screws.
- Apply power to the UV sterilizer.
- The view port should show a blue light after a few seconds.



Scheduled Maintenance:

1 Month Scheduled Maintenance (all models):

- Look through the view port in lid of unit to see if the lamp is glowing.
- Open air bleed to release trapped air in uv chamber.
- Carefully inspect the UV and plumbing for leaks.

1 Year Scheduled Maintenance:

- Replace lamp(s) [see page 5].

Maintenance as Required:

- Replace quartz sleeves every four years or as needed. [see page 5].
- Replace ballast as needed.
- Clean organics from quartz sleeve assembly [see page 7].

Other Maintenance:

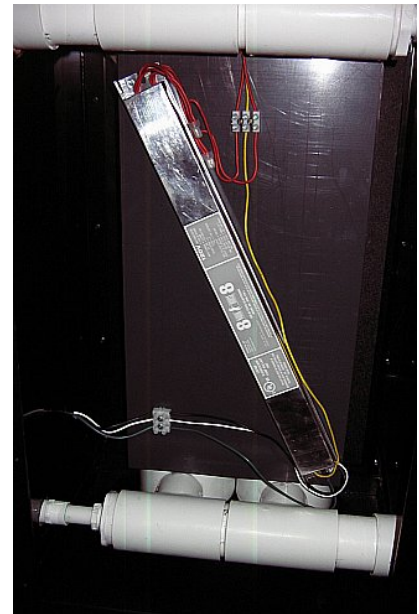
Replace the Ballast:

- Remove power from UV sterilizer.
- Remove screws from UV lid and front cover.
- Place new ballast near UV.
- Remove screws which hold ballast to unit.
- Remove old ballast.
- Mount new ballast with screws.
- Strip approximate 3/4-inch insulation from ends of wires on ballast and attach wire connectors on the ends.
- Replace UV sterilizer lid and front cover. Install screws.
- Apply power to UV sterilizer.
- The view port on the UV chamber should show a blue light after a few seconds.

Note: Aqua Logic recommends that a qualified electrician to be call in to replace or change the electrical components on the UV unit.



Optional Ballast Box



Standard Ballast

REMOVING ORGANICS FROM THE UV:

WARNING: Be sure to wear protective gear for your hands and eyes!!

- Turn UV power switch off on control box.
- Isolate UV from main plumbing and drain the unit.
- Make a pure chlorine bleach solution (1 cup bleach to 1 quart water)
- Connect the flush kit hoses to the drain and air bleed of the UV sterilizer.
- Cycle the solution through the UV sterilizer for 5-10 minutes.
- Drain the bleach solution from the UV sterilizer.
- Rinse or flush the unit thoroughly to remove all chlorine. Continue to flush until you can no longer smell chlorine. You may wish to add a few drops of a dechlorinator to insure that all chlorine has been neutralized.
- Reconnect the UV to the plumbing.
- Apply power to pump and open air bleed to release trapped air in the uv chamber. Check system carefully for leaks.
- Apply power to UV sterilizer.
- The view port should show a blue light after a few seconds.



REMOVING MINERAL DEPOSITS FROM THE UV:

WARNING: Be sure to wear protective gloves and goggles!!
DO NOT COMBINE chlorine bleach with muriatic acid or equivalent. The resultant gases may be poisonous.

- Follow procedure as above except that you use muriatic acid or equivalent. Be sure to follow product instructions carefully.



Parts Listing:

All replacement parts are available directly from Aqua Logic, Inc.

No	Catalog number	Description
		Lamp:
1	UV-BULB-095W-1	ALA-95ST Watt Lamp
		Ballast:
2	UV-BAL-95W-1	WH8-2 120V Self-Starting Ballast for two 95 watt lamps
3	UV-BAL-95W-2	FEP-4 120V Self-Starting Ballast for four 95watt lamps
		Quartz Sleeve:
4	UV-QTZ-Q95T	ALSV-Q24T, Replacement Quartz Sleeve Test Tube
		Miscellaneous:
5	UV-SOC-95STEP	ALA-95S, Step Pin Socket
6	UV-OR-SIL-RED	8820-200-326 Quartz Sleeve "O" Ring
8	MUV-CAP	Quartz Compression Nut
9		Stainless Lamp Retainer Wire -DISCONTINUED
10	UV-OR-SPLIT	9560K84, 2" Compression Nut Split PTFE O-Ring
	FT-R-PLUG-000-1	Plug, tapered rubber grommet –NOT PICTURED

Limited Warranty Terms (PLEASE READ CAREFULLY):

All UV Sterilizers manufactured by **AQUA LOGIC, INC.** (hereafter called **AQUA LOGIC**) are warranted against defects and workmanship for a period of one (1) year from the date of purchase by the original purchaser/end-user. Any **AQUA LOGIC** product found to be defective within the warranty period will be repaired or replaced at the option of **AQUA LOGIC**.

Warranty **EXCEPTIONS**:

- All UV Sterilizer chambers are warranted for life against leakage caused by UV degradation.
- UV lamps are warranted for a period of ninety (90) days from date of purchase.
- The warranty applies only to the original end-user and is not transferable.
- The limited warranty may not be modified by verbal statements by the manufacturer, distributors, retailers, their agents nor any other party.
- The warranty covers only the repair or replacement of the **AQUA LOGIC** product. **AQUA LOGIC** denies all liability for any other loss including but not limited to loss of equipment, income, livestock or personal injury.
- **AQUA LOGIC** does not warrant the suitability of the product for the end-user's application.
- All warranties are voided by the following:
 - Product labels defaced or removed.
 - Product improperly installed or maintained by user or their agent.
 - Product abused, misused, or damaged by user.
 - Product misapplied to application.
 - Product damage caused by electrical surges, spikes, brownouts or improper voltage.
 - Product damage caused by freezing, extremely cold or extremely high temperatures.
- **AQUA LOGIC** shall not be liable for the cost of field repairs, inspection, installation, replacement, etc., without prior written authorization and/or valid authorization number.
- **AQUA LOGIC** shall not be liable for shipping damage or loss.
- **AQUA LOGIC** shall not be liable for unauthorized shipping costs to return warranty items to **AQUA LOGIC**.