



AQUARIST UV STERILIZER INSTRUCTIONS

Rev 1-05

Please read all instructions before installing and using this unit

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 plugged in if there is water on parts not intended to be wet.
- Immediately unplug the sterilizer if it shows any signs of leakage.
- Make sure unit is mounted securely before operating it.
- Always unplug unit when not in use, before taking off or installing any parts and before cleaning.

DO NOT:

- **DO NOT REACH FOR THE** STERILIZER if it falls into the water. Unplug it and then retrieve it.
- **DO NOT** attempt to use the equipment if it has been dropped into 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.
- Never yank cord to pull plug from outlet. Grasp the plug and pull to disconnect.
- 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 bulb rays--**severe burns may result!!!** Always unplug unit when there is a possibility of direct exposure.
- Do not use indoor models in exterior applications unless they are well protected from the weather. Use pond models for exterior applications.
- Do not allow unit to be exposed to freezing temperatures. Severe damage may result.
- Do not operate this unit if you suspect that the bulb or quartz sleeve may be broken inside. Be safe: remove and inspect bulb or sleeve if you are not sure.
- Do not attempt to change bulb or quartz sleeve without using appropriate safety gear.
- Do not exceed the maximum pressure rating of **30 psi**

DO NOT exceed this maximum rating or serious damage may result.
High pressure units are available. Contact *AQUA LOGIC* for information.



Thank you for selecting an Aqua Logic 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's UV sterilizers are in use 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 8:30 am to 5:00 pm except selected holidays. Information is also available on the internet at our website (www.aqualogicinc.com) and by email: info@aqualogicinc.com.

The following should answer most of the questions that you may have about the installation, operation and use of your UV sterilizer:

- What benefits do I receive by using a UV sterilizer on my system?

Aqua Logic UV sterilizers are highly recommended for both fresh and saltwater (marine) systems as well as ponds. They may be used to kill waterborne bacteria and viruses, to control algae and/or to kill fungi and protozoa (parasites).

UV sterilizers do NOT affect water chemistry, lower the livestock's immune systems, nor affect established biological filtration systems.

- How do I know which size UV I need to do the job?

The following sizing chart provides maximum flow rates (in gallons per hour) to control typical bacteria and viruses, algae, and fungus/protozoa:

Model	Typical Bacteria & viruses (15000 $\mu\text{WSec}/\text{cm}^2$)	Typical algae (22,000 $\mu\text{WSec}/\text{cm}^2$)	Typical Protozoa (45000 $\mu\text{WSec}/\text{cm}^2$)
ALQ25IL	750	500	250
ALQ30IL	1000	660	330

The following sizing chart provides maximum flow rates (in gallons per hour) and suggested pond sizes to control typical waterborne single-cell pond algae:

Model	Maximum Flow Rate:	Pond Size (gal)
ALQ25IL	500	1000-2000
ALQ30IL	660	1350-2700

You may use additional units or larger units for greater capacity.

- What advantage does using a quartz-sleeved model offer over a non-quartz model?

If your system is a cold-water system (72° F or less), you MUST use a quartz model so that the UV sterilizer will operate properly.

Most people choose quartz models because it is so much easier to change the bulb. Other than unplugging the unit from the electrical outlet, there is no need to remove the UV from your system or to drain it.



- 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 bulb?

The average life expectancy of bulbs in Aqua Logic UV sterilizers is almost a year of continuous operation for all 15-watt and larger units and about 6 months for 4- and 8-watt units. Even though the bulb may still be glowing with blue light after these time periods, the bulb probably no longer produces the kill-rate you desire. If you are using a non-quartz model, we also recommend that you change the compression gaskets at least every other bulb change to minimize risk of leaking.

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

All 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.

Aqua Logic, Inc. manufactures a line of special high-pressure units which handle up to 60 psi. Call for availability.

- Where should I put the UV sterilizer in my system?

The UV sterilizer should be the last piece of equipment in your system before the water is returned to the tank.

- How do I connect the water inlet and outlet?

It doesn't make any difference which port you use for inlet or outlet. If you don't mount the unit on a level surface, make sure that the water goes in the lower port and out the higher. This prevents air from being trapped in the unit.

- Can I mount the UV vertically?

Yes. All models may be installed vertically. Be sure that the water goes into the UV sterilizer at the bottom and comes out at the top to prevent air from getting trapped in the unit.

- Can I use an Aqua Logic UV sterilizer outdoors?

Yes. We recommend that you mount the unit shielded from direct rain.

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 bulb, the quartz sleeve or to the PVC chamber.

Damage to the unit caused by freezing is not covered under warranty.

**Unit Installation:**

- Shut off or unplug pump which will drive UV sterilizer.
- Connect water from pumping source (pump, powerhead, power filter, etc.) to either one of the ports on the UV [if mounting UV in a vertical position, this port must be at the bottom of the unit]. The UV should be installed after all other system components to minimize the accumulation of organics within the UV sterilizer. You may use either flexible tubing or rigid pipe.
- Do not exceed the maximum flow rate for your unit as shown on page 2.
- Connect the output from the UV to the return line to your tank.
- Turn on or plug in pump.
- Carefully inspect the installation for leaks.
- Plug ballast into an available Ground Fault Interrupt (GFI) protected outlet.
NOTE: Make sure that ballast and outlet are protected from possible leaks and water drips. Make sure that the power cord between the UV and the ballast has a loop in it below the ballast to prevent water from following the cord into the ballast and outlet.
- Look through the viewport on the endcap to see if the bulb is glowing with a blue color.
- Your UV sterilizer is now installed and operational.

1 Month Scheduled Maintenance (all models):

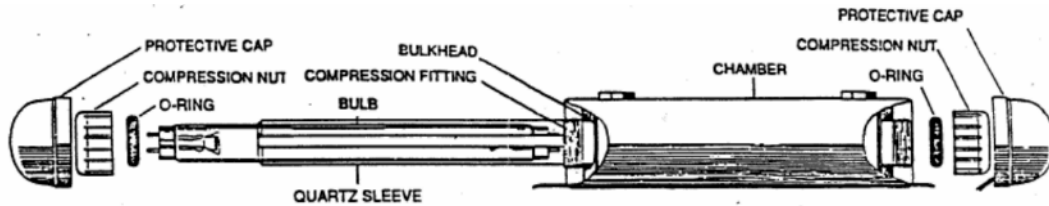
- Look through the viewport on the endcap to see if the bulb is glowing a bluish color.
- Carefully inspect the UV and plumbing for leaks.

1 Year Scheduled Maintenance:

- Replace bulb.

Maintenance as Required (all models):

- Replace starter or ballast as needed
- Replace quartz sleeve.
- Remove organics from quartz sleeve.



Drawing A: ALQ25IL and ALQ30IL

Replace Bulb in Quartz Models

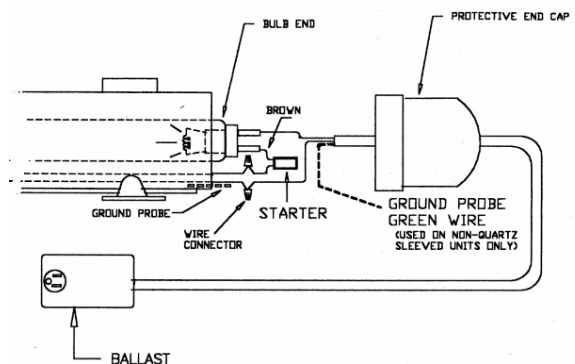
WARNING: Be sure to wear protective gear for your hands and eyes!!

- Turn off or unplug pump.
- Unplug UV ballast from outlet.
- Remove both endcaps from UV sterilizer by pressing the end of the caps with your palm.
- Remove bulbpin connectors from both ends of bulb.
- Remove bulb by sliding it out of the unit.
- Slide replacement bulb into unit. [DO NOT force the bulb into the sleeve or you may break the quartz sleeve! We recommend using Aqua Logic certified bulbs for a perfect fit.]
- Attach bulbpins to bulb (It doesn't matter which connector goes to which pin).
- Replace endcaps.
- Turn on or plug in pump.
- Carefully inspect for leaks.
- Plug UV sterilizer ballast into outlet.
- The view port should show a blue light after a few seconds.

Other Maintenance:

Replace the starter [Use Drawing D]:

- Turn off or unplug pump.
- Unplug UV ballast from outlet.
- Remove both endcaps from UV sterilizer by pressing the end of the caps with your palm
- Remove starter bulbpin connector from bulb.
- Remove wire nut from starter wire and untwist wires.
- Twist the stripped wire on the new starter with the black wire you disconnected.
- Screw wire nut on twisted wires.
- Hook starter bulbpin connector to UV bulb.
- Replace endcap.
- Turn on or plug in pump.
- Plug UV ballast into its outlet.
- After a few seconds, the view port should glow with a blue color.



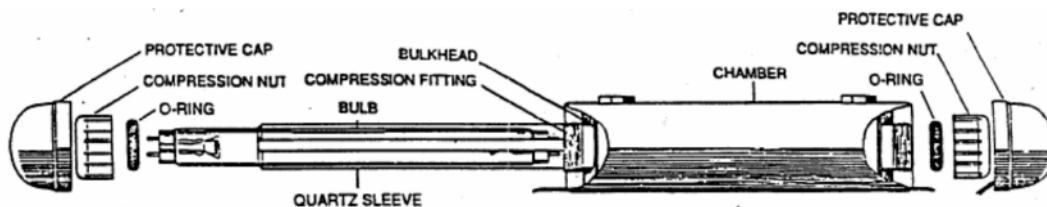
Drawing D: 25 and 30W Ballast/Starter Replacement

Replace the ballast (all models):

- Turn off or unplug pump.
- Unplug UV ballast.
- Remove both endcaps from UV sterilizer by pressing the end of the caps with your palm
- Remove ballast (black wire) bulbpin connector from bulb.



- Remove wire nut from ballast wire and untwist wires.
- Undo the knot and pull the ballast wire through the endcap.
- Push the wire from the new ballast through the hole in the endcap from outside to inside the cap.
- Tie a knot inside the endcap.
- Twist the stripped red wire on the new ballast to the red wire in the UV.
- Screw wire nut over the twisted wire.
- Plug black ballast wire onto bulbpin.
- Replace endcap.
- Turn on or plug in pump.
- Plug UV ballast into its outlet.
- After a few seconds, the view port should glow with a blue color.



Drawing A: ALQ25IL and ALQ30IL

Replacing the quartz O-rings and/or quartz sleeve [See Drawing A].

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

- Turn off or unplug the pump.
- Unplug the UV ballast.
- Disconnect UV from plumbing and drain it.
- Remove both endcaps from UV sterilizer by pressing the end of the caps with your palm.
- Disconnect all 4 bulbpins from the bulb.
- Remove the bulb by sliding it out.
- Remove the compression nuts on each end of the UV. [NOTE: Some water may leak out during this procedure.] If you cannot loosen them by hand, you may obtain a UV bulb removal wrench from your distributor or from Aqua Logic Systems or use a pair of adjustable spanner pliers.
- Slide the quartz sleeve from the chamber in the same manner as removing the bulb.
- Remove both O-rings. If you are not replacing them, inspect them carefully for damage or cracks.
- Slide the sleeve back into the chamber until it is approximately centered in the sterilizer.
- Slide the O-rings onto the sleeve and snug them evenly against their seats.
- Screw the compression nuts back on. Hand tighten only. Do NOT overtighten.
- Reinstall the UV bulb and reconnect the bulbpins.
- Reconnect the UV to the plumbing.
- Turn on or plug in pump.
- Inspect carefully for leaks.
- Replace endcaps.
- Plug UV ballast into its outlet.
- After a few seconds, the view port should glow with a blue color.



Removing organics from the UV:

- Turn off or unplug the pump.
- Unplug the UV ballast.
- Disconnect UV from plumbing and drain it.
- Pour a pure chlorine bleach solutions (1 cup bleach to 1 quart water) into an in/out port on the UV.
- Plug the water connection ports with your hands and vigorously shake or agitate the unit for 30-60 seconds. This will remove accumulated organics in the unit.
- Drain the bleach solution.
- 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.
- Turn on or plug in pump.
- Inspect carefully for leaks.
- Plug UV ballast into its outlet.
- After a few seconds, the view port should glow with a blue color. For Q4IL, Q8IL and PQ8IL models, you can see blue light reflecting off the vinyl tubing connected to the inlet and outlet of the UV.

Parts Listing: All replacement parts are available from your dealer or directly from Aqua Logic Systems.

Bulbs:

25-Watt Bulb
30-Watt Bulb

Gaskets, O-Rings and Nuts:

25/30-Watt Quartz O-ring
Compression Nut, quartz

Ballasts:

25-Watt Ballast W/Starter Kit (including Q50ILD)
30-Watt Ballast W/Starter Kit

Miscellaneous Parts:

Bulbpin w/shrink tubing
25/30-W Endcap
Compression Nut Wrench (Bulb Wrench)

Starters:

30-W Potted Starter Kit

Quartz Sleeves:

25-Watt Quartz Sleeve
30-Watt Quartz Sleeve



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/enduser or eighteen (18) months after date of manufacture (whichever is sooner). 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.
- Light bulbs (including ultraviolet sterilizer bulbs) are warranted for a period of ninety (90) days from date of purchase.
- The warranty applies only to the original enduser 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 enduser'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**.