

CLEARRAY™ UV Sanitizer System Installation Instructions

This document include instructions for installing the CLEARRAY™ UV Sanitizer System into all spa models. Installation should only be performed by an authorized dealer or service technician.



Supplied Parts		
Part No.	Description	Qty.
See Note	CLEARRAY UV Sanitizer With Ballast	1
6570-100	Wood Screw (#6 x 1")	4
6560-060	Solid Copper #8 Bonding Wire	8 ft.
6560-470	Plastic Cable Tie (11")	5
6540-744	3/4" Clear PVC Hose	8 ft.
6570-033	Clamp (27mm)	4
6451-075	Coupling (3/4" Barb x Barb)	1

Required Tools	
Description	Qty.
Hand Drill	1
#2 Phillips Head Screwdriver Bit	1
Flat Head Screwdriver	1
Hose Cutter	1
Standard Pliers	1
Phillips Head Screwdriver	1
<i>Note: See Section 12 For Part Number Details.</i>	

Installation Instructions


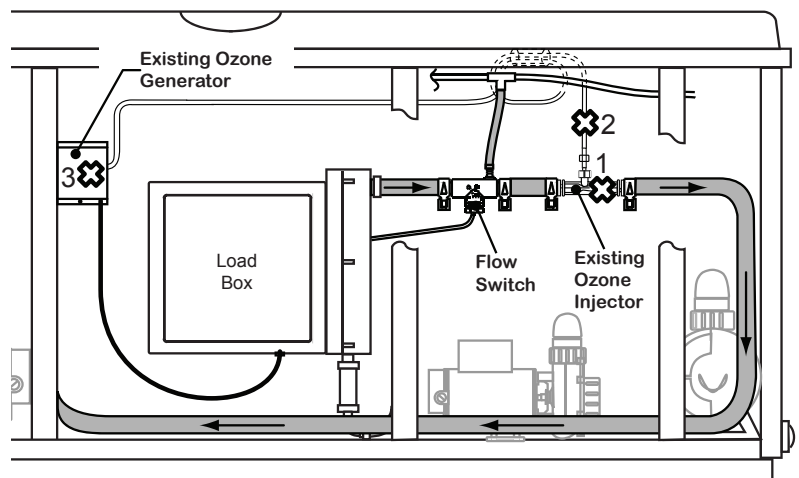
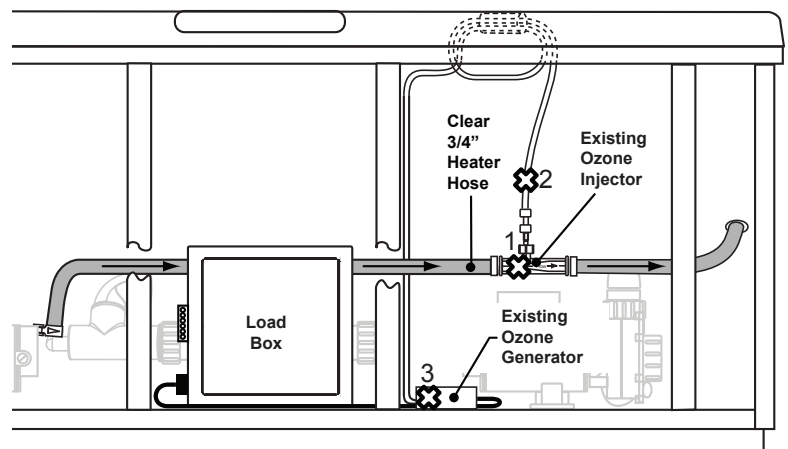
1. Turn off power to spa at the house breaker box or sub panel. For models equipped with a plug-in GFCI breaker, simply unplug it from the wall outlet. Be advised, 120/240V convertible spas require a 120V CLEARARRAY System. Standard 240V spas require a 240V CLEARARRAY System.
2. Loosen and remove skirt panels as necessary to expose the underlying equipment bay as illustrated in Figures A-B. If the spa has a stereo, unplug it to facilitate panel removal.
Note: Equipment bay appearance will vary by model.
3. Drain spa as outlined in the supplied spa owners manual. Clean or replace the spa filter.
4. If the spa has an existing ozone plumbing system, remove and discard the following components  outlined in Figures A-B: ozone injector (1), attached 1/4" hose with 2 check valves (2) and the ozone generator (3)

Figure-A (All Models With A Flow Switch)



Note: Equipment bay appearance will vary between models

Figure-B (All Models Without A Flow Switch)



Note: Equipment bay appearance will vary between models

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(3). *Note: Ozone Generator location will vary.*

5. Mount the new CLEARRAY unit on the right-side wood frame upright using two wood screws as illustrated in Figure C-E. *Note: Make sure one CLEARRAY port is pointing downward to ensure proper drainage when the spa is drained or winterized. The mounting position will vary by spa model and available clearance.*

6. Install the CLEARRAY Ballast using two wood screws as illustrated in Figures C-E. Install the Ballast body 1/8-1/4" behind the front surface of the wood upright to prevent interference with the spa skirt. This mounting position is recommended since it permits easy viewing of the red and green Ballast status lights. Install the Ballast power plug into the blue or green power receptacle located on the side of the spa load box. *Note: this is the same power receptacle used for ozone generators.* Roll up and secure excess Ballast wires using plastic tie wraps as illustrated. Finally, connect the solid copper #8 bonding wire to the metal bonding lug on the new CLEARRAY unit, then connect the opposite end to the bonding terminal block on the side of the spa load box (location may vary).

7. Skip this step for all models without a flow switch. Route the clear 3/4" hose exiting the flow switch to the CLEARRAY input port as illustrated in Figure C. Test fit and cut the hose so that it is long enough to install onto the input port without kinking or binding, then install a 27mm clamp over the hose end and slide it back 2-3". Finally, secure the hose in place on the

Figure-C (All Models With A Flow Switch)

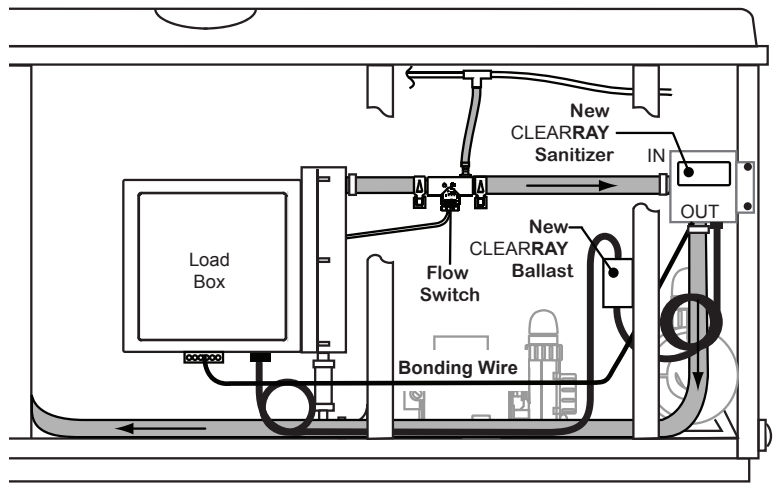


Figure-D (Rectangular Spas Without A Flow Switch)

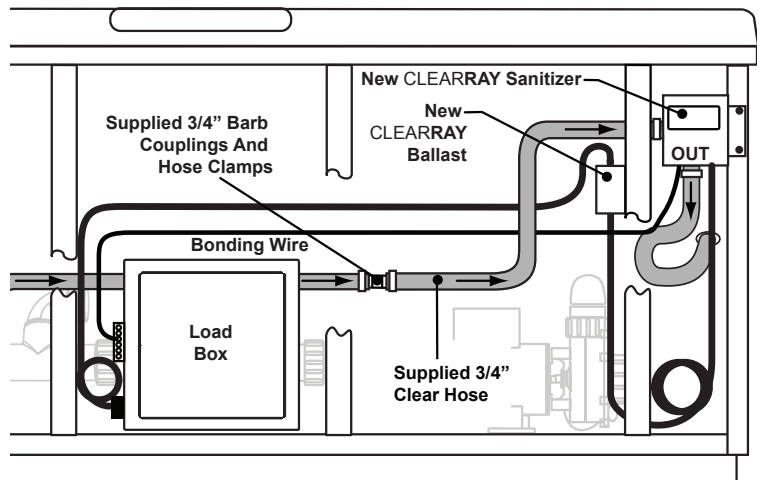
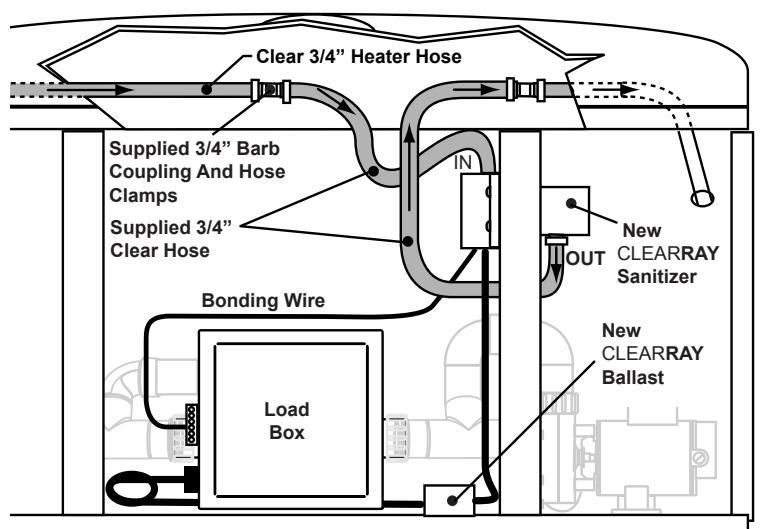


Figure-E (Round Spas Without A Flow Switch)



input port. Repeat this process for the remaining 3/4" clear hose that runs back into the spa by connecting it to the CLEARRAY output port and securing it in place with a 27mm clamp.

8. For models without a flow switch (Figures D-E): Install a 27mm hose clamp onto the hose removed from the Ozone Injector input (step 4) by sliding it back 2-3" onto the hose end. Install a supplied 3/4" Barb x Barb Coupling into end of this hose and clamp in place. Install a second 27mm clamp onto either end of the supplied 8 foot clear 3/4" hose, then install it onto the opposite side of the coupling and clamp it in place. Route the supplied 8 foot hose to the CLEARRAY input port. Test fit and cut the hose so that it is long enough to install onto the input port without kinking or binding. Install a 27mm clamp onto the hose end and slide it back 2-3" Finally, secure the hose in place on the input port.

Repeat this process for the 3/4" clear hose that runs back into the spa. Connect this hose to the CLEARRAY output port and secure it in place with a 27mm clamp.

Note: For round spa models, the 3/4" clear hose that runs back into the spa may be too short to reach the CLEARRAY output port. In these cases, you must lengthen the line by adding a left-over piece of clear 3/4" hose, a second 3/4" barb x barb coupling 6541-075 and two additional 27mm hose clamps 6570-033 as illustrated in Figure-E (purchased separately).

9. Refill your spa in accordance with your spa owners manual. Reconnect all previously removed stereo wires and install the cabinet skirt panels. Turn power to the spa back on to complete this installation procedure. Finally, refer to your spa owner's manual for proper water sanitizer setup and requirements. A residual sanitizer such as chlorine or bromine is still required in your spa as a supplement to the new CLEARRAY system. Refer to the table below for recommended water chemistry levels.

	with CLEARRAY	without CLEARRAY
pH	7.4 - 7.6	7.4 - 7.6
Free Chlorine	No less than 1.0 ppm	3.0 - 4.0 ppm
Free Bromine	No less than 2.0 ppm	2.0 - 4.0 ppm
Total Alkalinity	100 - 120 ppm	100 - 120 ppm
Calcium Hardness	150 - 250 ppm	150 - 250 ppm

IMPORTANT: If the CLEARRAY system is altered or is not operating efficiently, follow the "without CLEARRAY" water chemistry levels outlined above. Such parameters are defined by the Association of Pool and Spa Professionals. CLEARRAY requires an annual bulb replacement to properly sanitize your spa water.

10. Recommended System Settings

- For models with non-programmable circulation pumps: The UV Sanitizer operates automatically with the circulation pump unless either jets pump or the blower is activated from the main control panel. The UV Sanitizer then resumes operation after all active jets pumps or the blower are shut off or time out.
- For models with programmable circulation pumps: We recommend a minimum of 8 hours filtration each day. Refer to the spa manual for circulation pump cycle programming details.
- For models without circulation pumps: We recommend a minimum of 8 hours filtration each day. Refer to the spa manual for filtration cycle programming details.

11. Status Lights

Ballast Lights	CLEARRAY System Status			
Green	ON	CLEARRAY is on.	OFF	CLEARRAY is off.
Red	ON	CLEARRAY bulb is on.	OFF	If Green light is on, bulb is burnt out*
<i>*Note: If system is on and the Red Ballast light is off, replace the UV bulb. Yearly bulb replacement is recommended.</i>				

12. Replacement Parts

Part No.	Description	Qty.
6472-853	CLEARRAY UV Sanitizer wth Ballast (220V)	1
6472-855	CLEARRAY UV Sanitizer with Ballast (120V)	1
6472-857	CLEARRAY Replacement UV Bulb	1
6472-859	CLEARRAY Replacement Quartz Tube	1

13. Yearly Maintenance

Yearly UV Bulb replacement is required to ensure maximum results from your CLEARRAY UV Sanitizer System. You must also clean the Quartz Tube at this time. Refer to the instructions supplied with your replacement UV Bulb for full details.

14. Warranty

The CLEARRAY UV Sanitizer System is warranted against malfunction due to defects in workmanship or material for one year from the original date of purchase except the UV-C bulb and quartz tube. The UV-C bulb and quartz tube are warranted for ninety (90) days from the original date of purchase.

Technical Support Department

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