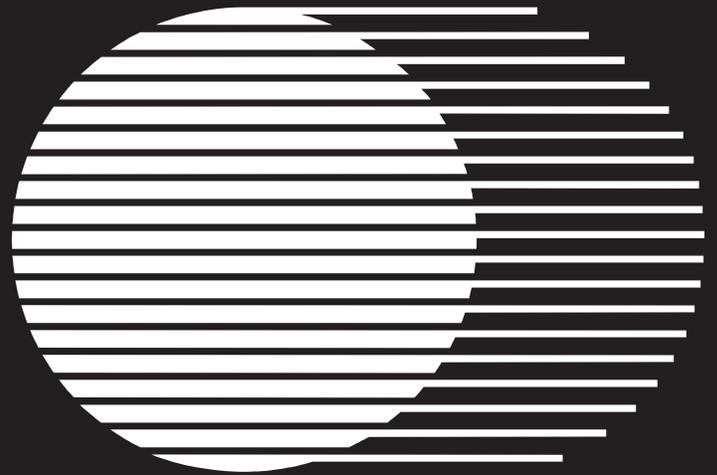


# SANUVOX



# QUATTRO INSTALLATION MANUAL



## WARNING

Before installing or performing maintenance or service on the purifier, turn off unit and disconnect from power source. Electrical shock can cause injury or death. There may be more than one disconnect switch.

Never expose eyes or skin to ultraviolet light from any source. The purifier **MUST BE DISCONNECTED** from power source before performing maintenance or service. Personal injury may result.

Do not touch lamp glass without gloves. Reduced performance of lamp may result. Clean lamp after handling.

The UV lamp contains a small quantity of mercury. If a lamp breaks, clean and dispose of with care.

Use only specified replacement lamps with your purifier. Use of an incorrect lamp can result in damage to the purifier and/or lamp.

UV rays may destroy certain types of filters (polymer or plastic), please keep unit away from shining directly on plastic.

**Follow all safety codes.  
Wear safety glasses and work gloves.**

## PLEASE SAVE FOR YOUR RECORDS

**Serial Number#** \_\_\_\_\_

**Date Installed:** \_\_\_\_\_

**Installed By:** \_\_\_\_\_

**Installers' Contact Info.:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

## NOTICE

UV lamp can be disposed/recycled after use as for any other fluorescent bulb.

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1-888-SANUVOX

[www.sanuvoy.com](http://www.sanuvoy.com)

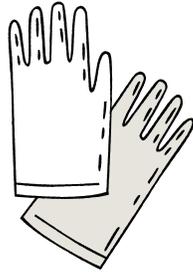
# SANUVOX

Congratulations on the purchase and installation of your new Sanuvox ultraviolet air purifier. Sanuvox UV air purifiers are the most advanced air purification systems available having been proven to destroy up to 99.999% of biological and chemical contaminants that circulate throughout your home or facility. Sanuvox' systems have been tested by the EPA (Environmental Protection Agency), the National Homeland Security Research Center, medical universities and Independent 3<sup>rd</sup> party laboratories.

## THIS BOX CONTAINS



(1) QUATTRO  
(4) 18" Straight UV Lamps



(1) Pair of Gloves



(12) Self Taping  
Sheet Metal Screws

**Literature Package**  
(1) Lamp Date Decal  
(1) Warranty Card

## TOOLS REQUIRED

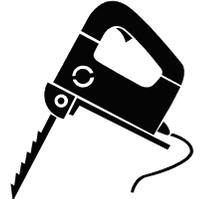


Drill



Pair of Snips

OR



Saw



A. Vacuum Sensor Elbow  
B. Adjustable Clutch

# QUATTRO INSTALLATION MANUAL

## SAFETY PRECAUTIONS

Installation and servicing of air-conditioning equipment can be hazardous due to system pressure and electrical components. Only trained and qualified service personnel should install, repair or service air conditioning equipment.

Untrained personnel can perform basic maintenance functions such as changing lamps. Any other operations should be performed by trained service personnel. When working on air-conditioning equipment, observe precautions in the literature, tags, labels attached to the unit or accessory, and other safety precautions that may apply.

Follow all safety codes. Wear Safety glasses and work gloves.

## GENERAL

The Sanuvox QUATTRO residential / commercial ultraviolet air purifier is designed to destroy biological and \*chemical (\*GX models) contaminants such as mold, bacteria, viruses, \*chemicals, \*VOCs and \*odors that may be transmitted through the HVAC ventilation system.

The Sanuvox QUATTRO is installed in the RETURN (preferred) or SUPPLY plenum of the HVAC equipment treating 100% of the air flowing through the air-stream. The actual percentage destruction is based on the duct size, percentage of fresh air, velocity and the specific contaminants to be treated. Depending on the variables above, more than one QUATTRO may be required for commercial applications.

## INSTALLATION

**IMPORTANT:** The QUATTRO is energized from a pressure differential caused by airflow through the duct. On variable speed fan applications, airflow at LOW setting may not be sufficient to energize the air purifier. The vacuum switch is factory set to a differential of 0.03". Insure that there is sufficient differential to activate the switch. As well, take into account that the differential will decrease as the air filter loads.

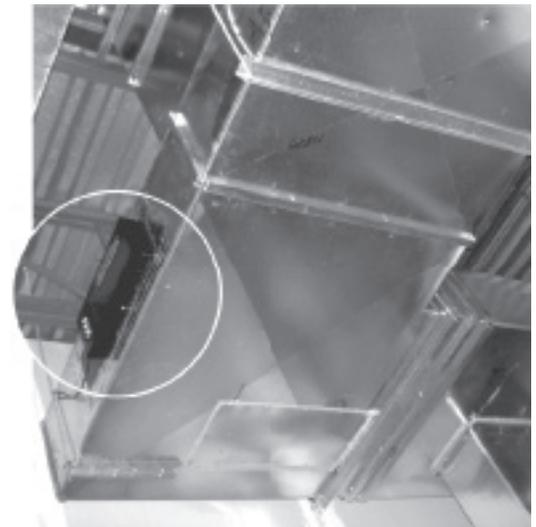
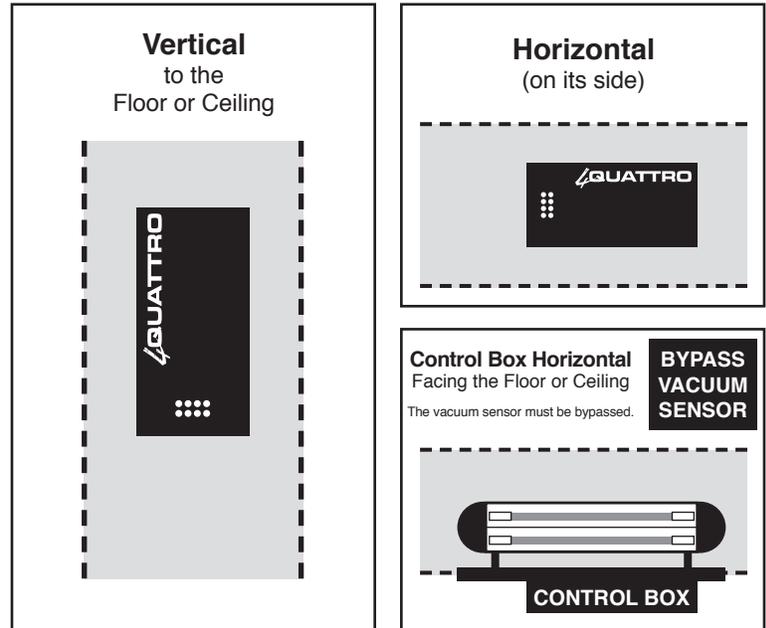
The QUATTRO must be installed in a vertical plain for the vacuum sensor to function properly. If the QUATTRO is to be installed in a horizontal position (see Figure C.), or the differential is not sufficient, the vacuum sensor must be bypassed and the QUATTRO is to be wired into the fan circuit. To bypass the vacuum sensor, disconnect the two leads on the pressure switch and joining them together with a wire nut and wiring the QUATTRO into the fan circuit or the EAC terminal.

Make sure the site can be supplied with the necessary power requirements. The QUATTRO has a power consumption of 160 watts and requires a 110/220V, 50-60 Hz power source. Ensure that there is adequate clearance for service. If a humidifier is present, the air purifier should be installed in the air-stream before the humidifier (preferred). Any plastic components should be shielded from direct UV exposure.

The suggested temperature range is 40 to 150°F. Operating the QUATTRO outside this range will result in decreased performance. NOTE: The QUATTRO is not weatherproof. If installing outdoors, the QUATTRO must be installed in a watertight enclosure (please allow for adequate air circulation).

1. Turn off all power to the HVAC equipment.
2. Remove the QUATTRO from its packaging. Use caution as all lamps are fragile.
3. Ultraviolet light may damage plastic or exposed wiring (Sanuvox wire set is teflon coated which is resistant to UV exposure). If any plastic or wiring is exposed to direct UV exposure, wrap exposed material(s) with aluminum tape or metal conduit.
4. OPTIONAL: You may want to line the inside of the duct with reflective material to increase UV effectiveness. Sheets of aluminum or aluminum foil may be used.
5. The air sensor (vacuum sensor) is located inside the QUATTRO cover. The "elbow" tube mounted to the backplate which "reads" the vacuum must be positioned in the same orientation as the airflow (see Figure A.).

Figure C.



## **RETURN OR SUPPLY PLENUM INSTALLATION**

- 1 Cut a 5-1/2" W x 22" H opening in the duct-work at the desired installation location.
2. OPTIONAL: Install the added reflectivity if desired.
3. Adjust the UV lamp assembly so it will be positioned in the middle of the duct. The arms that support the lamp assembly have an adjustable clutch which allows the lamp and extrusion to be set at a distance from 10 to 15 inches from the backplate. To adjust the assembly, loosen the clutch by turning it counter-clockwise (see Figure B.). The Lamps and extrusion can then be positioned to the desired distance from the backplate. Rotate the clutch clockwise to tighten.
4. Place the QUATTRO in the duct opening in the correct position. Mount to duct-work with 12 self taping sheet metal screws provided.
5. Plug in the power cord.

## **OPERATION**

The QUATTRO has an ON-OFF toggle switch and a circuit breaker located at the bottom of the front cover. To operate, press the toggle switch to the "ON" position. The switch has a red light to indicate that there is power. If the switch does not illuminate, check the outlet for power and check the QUATTRO circuit breaker. Start the HVAC fan. The QUATTRO detects airflow with the vacuum switch. The QUATTRO will only operate when the fan is ON (airflow through the plenum) and there is a pressure differential of at least 0.04".

When operating, the LED lights on the front cover will be lit. There are two LED lights corresponding to each of the 4 UV Lamps. The AMBER LED indicates the UV lamp is functioning. The RED LED indicates the ballast is ON. If the UV lamp is defective, the RED LED will be lit corresponding to the BALLAST being ON and AMBER LED will be OFF corresponding to lamp out. If both LED lights are OFF, the ballast is not functioning. If none of the 8 LED lights are lit, then there is not enough of a vacuum differential to activate the vacuum switch, or the vacuum switch is defective.

Fiberglass or paper filter media are recommended for operation of HVAC when filters are exposed to direct line of sight with the ultraviolet light. Polyester or cotton filters are subject to ultraviolet degradation and are not recommended.

## **MAINTENANCE**

Disconnect all power before performing any maintenance or service. Lamps need periodic replacement to maintain design specifications.

In residential applications, replace UV after 3 years of operation. In commercial applications, replace lamps after 2 years of operation.

The following UV lamps are used with the following QUATTRO models:

- QUATTRO G: (4) LMPHGS180 UV germicidal only
- QUATTRO GX: (3) LMPHGS180 UV germicidal only + (1) LMPHGXS180 UV germicidal / oxidizing

Other Lamps may plug into the QUATTRO but should not be used.

## **CHECKING THE UV LAMP**

Sanuvox ultraviolet lamps are built to the highest standards. If the Red LED (ballast) is lit and the Amber LED (lamp) is not lit, it is important to check the lamp to insure that it is not a defect in the lamp sensing circuit in the ballast. This is done by using an ohmmeter to check the two filaments on the lamp.

Disconnect the socket from the lamp.

Placing the probe of the ohmmeter to one of the four pins on the end of the lamp, touch the other probe of the ohmmeter to each of the other pins until you find the matching pin. The ohmmeter will read approximately 3 ohms (almost a short). This indicates that the filament is good. Check the other two pins. If both sets of filaments test OK, the lamp is functioning. If one or both sets of filaments read an open circuit (infinity) on resistance, the lamp is defective.