

450 & 970 operation and maintenance instructions

IMPORTANT!!!!

1. Read instructions thoroughly before operating!!

**CAUTION, THIS OZONE GENERATOR OPERATES AT 4000-5000 VOLTS AC
DISCONNECT POWER BEFORE OPENING TO SERVICE**

SPECIFICATIONS FOR 450 970 SERIES ozone generator

Maximum output	PRO 970 = 950mg/hr	PRO 450 = 450mg/hr
Fan size (rated cfm)	76 cfm	
Filter	1 Cleanable foam filter	
Cabinet material	stainless steel	
Generation method	Ultra High frequency corona discharge	
Weight	4.9lb(generator) + 1.8 (dc power supply)	
Size	7" long x 7" wide x 7" height (including handle and filter)	

INTRODUCTION

This line of ozone generators are designed for various uses at varying output levels. This ozone generator can be used for many uses such as deodorizing cars homes as well as oxidizing many organic contaminants.

WARRANTY (refer to complete warranty sheet for detailed info)

The 450 & 970 is warranted against defects in materials and workmanship for a period of 6 years from date of purchase. Liability is limited to parts and labor only. Shipping is the sole responsibility of the customer. CAMI is not liable for damage caused by shipping, misuse, neglect or lack of regular maintenance.

LIABILITY

CAMI assumes no responsibility for any damage done to items from the use or miss use of any product sold or manufactured by CAMI. It is the customers responsibility to test materials prior to use and to ensure that the procedure and installation technique they are using is correct for the application.

HEALTH AND SAFETY

Ozone can be an irritant and a powerful oxidizing agent. As with most all products, ozone is dangerous only when used improperly, as such it is important to follow safe usage guide lines.

When doing a shock treatment, no people plants or pets/animals may be in the room when the unit is running.
The room should not be re entered until all ozone has been depleted unless proper breathing respirators are used.

MAINTENANCE FREQUENCY

Under heavy duty use or severely polluted areas, The ozone generator should be inspected and cleaned if necessary every 2 to 3 weeks for fine dust or oily residue collecting on generator surfaces or plates. Light duty use requires cleaning every 2 to 6 months depending on the severity of pollution and the humidity level of the feed air. In dirty and humid conditions cleaning can be as often as 2-4 weeks.

DESCRIPTION OF OZONE GENERATOR

These ozone generators produce ozone by corona discharge, converting normal oxygen to ozone gas which is a very strong oxidizing agent used to destroy odors and other organic contaminants.

PLACEMENT OF UNIT

This ozone generator is designed as a portable commercial deodorizing device. It uses 12vdc and comes with an adapter for indoor as follows, 120VAC for North America, and 100-264VAC for European countries etc. European models come with an IEC connector and it is up to the customer to supply the proper cord (this can be acquired at any computer shop).

Please note the following points when placing the unit.

- Place on a flat solid surface such as a table or shelf. Do not place on rug flooring to reduce dust entering the unit
- Do not place in an area where the unit could be splashed with water, moisture or in an area that it could get flooded with water.
- Ensure that the unit gets proper fresh air flow. Do not obstruct the incoming or outgoing air from the unit.
- DO NOT USE IN VICINITY OF COMBUSTIBLE GASSES!!
- Humidity levels higher than 75% should be avoided as it will cause the unit to wear excessively fast and will require cleaning much more often.
- If used in temperatures below freezing, ensure that condensation inside the unit does not occur.
- Set the unit in an area where it will provide the best ozone distribution.
- The use of circulation fan will greatly increase the efficiency of the treatment.
- If the ozone generator being used is large enough to treat the whole house, the air handling system can be used to distribute the ozone, just point the ozone generator into the return air duct.

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SETTING OF MACHINE

(Refer to ozone application/usage instructions for more detailed instructions.)

1. The 970 series controls features a Low/Off/Hi switch to power the unit and fan, The 450 series features an on / off switch to power the unit and fan, a continuously adjustable output level control to adjust the amount of ozone being produced, and a fan speed control to reduce the air flow. Ozone production begins when the power switch is turned to low or Hi, please ensure the level control is set to low(#1 on the dial).

2a. (Setting Ozone Level (occupied areas)) The right level is when all the generated ozone is being used up to accomplish its job. However, this is difficult to obtain because it becomes a balancing act. Initially the unit should be used for a shock treatment to get rid of the problem odor as quickly as possible. After a shock treatment, set the unit at a very low setting, after several hours if there is a heavy smell of ozone, then there is more ozone present than is required to do the job. A good indication that the generator is set right is when you come home after being away for 6-8 hours and smell just a hint of the fresh sweet smell of ozone. Simply turn the output level control down. This is a case where more is not considered better. The levels of ozone required to deodorize most environments are from .03 ppm to .1 ppm.

2b. (Setting Ozone Level (shock treatments)) For most shock treatment applications the setting should be set to the highest setting. If the area being treated is small, the setting can be reduced to a lower level.



TROUBLE SHOOTING (NOTE: Do not use a home multi meter to test voltage, multimeters only read up to 1000 VAC)

1. Fan works but no ozone.

1a. Try various output setting.

1b. If the unit was recently serviced check plate alignment. A misaligned plate will stop the whole unit from working.

1c. Check plate for damage and clean if necessary.

1d. If after cleaning the plate there is still no ozone contact your dealer or CAMI.

2. No fan and no ozone

2a. Check fuse.

2b. Ensure that the ozone generator is plugged into a working power receptacle.

3. Generator sounds erratic, crackling, or like it is arcing, popping, etc..

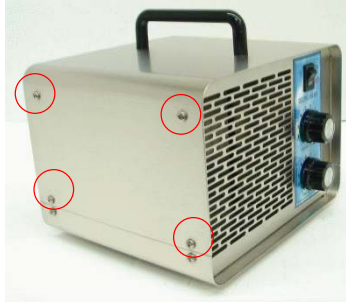
3a. Check plate for damage and clean if necessary.

3b. Check center HV screen alignment. Refer to cleaning instructions for proper alignment.

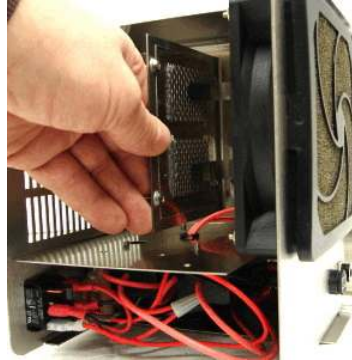
3c. High altitudes can also cause excess voltage output. Contact CAMI if screens are aligned and there is still a problem contact, your dealer or CAMI.

PRO 450 & 970 plate removal instructions

1. Remove the eight Philips (star) screws from the top lid of the PRO 450 & 970 as shown (4 on each side). Lift the lid off the main chassis.



2. While holding the stainless steel plate, as shown in the first picture to the right, remove the 2 Philips screws indicated in the second picture.



3. With the 2 screws removed the stainless plate that holds the mica will come out of the generator.

4. Loosen the 4 screws on the stainless plate. To remove the mica and screens just slide the plate out. If you completely remove 2 or more of the screws, they will simply lift off.



5. Next refer to the plate cleaning instructions.

PLEASE ENSURE THAT ALL PARTS ARE COMPLETELY DRY PRIOR TO RE ASSEMBLY!

6. Re install the mica/screen to the stainless plate. Make sure that the mica is flat on the steel plate, under the supplied washers as shown.
NOTE: It is easiest to hold the stainless plate upside down while inserting the mica/screen between the plate and the screws, as shown.



7. Once the mica/screen is in place tighten the 4 screws to hold the mica in place on the stainless plate.



8. Use an alcohol soaked paper towel or something similar to wipe down any other areas of the machine that are dirty such as inside the ozone generator chamber. Clean the filters with dish soap and rinse thoroughly with water and allow to dry.

9. Re install the generator plate by holding the SS plate in place as in first picture in step 2. While holding the plate in place re install the 2 bottom screws that were removed in step 2.

450 & 970 plate cleaning instructions

1. Disassemble plate parts according to the removal instructions provided.

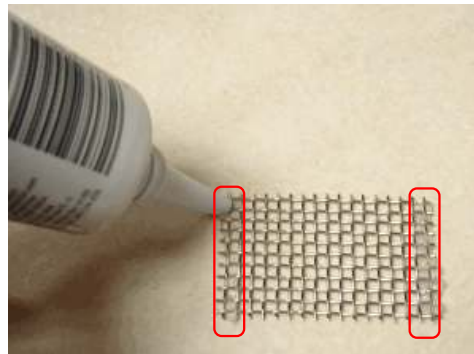
2. Take mica/screen and clean in the sink using dish soap and an old toothbrush. If the plates have not been cleaned for a long time, it is important to use the tooth brush to help remove the flaking mica. Rinse with clean clear water.

Note: If the mica has started to "flake" or "peel" under the screen area you may need to remove the screens to properly clean and remove any flaking mica. Remove the screens by carefully separating the silicone from the mica. You may need to use a small utility knife to help but be careful not to leave deep scratches in the mica. See step 3 for instructions on how to re install the screens after cleaning is done.



3. **NOTE:** Try to be very careful not to remove the screen from the mica. If the screen comes off the mica sheet this can be repaired by first cleaning the mica with alcohol and then putting a very thin amount of silicone on the existing silicone that is stuck to the screen then re place them on the mica in the same position as it was originally.

Place a small weight on the screen to hold it in place. The ozone generator upside down will work as shown in the second picture



4. If the generator needs to be put back in service immediately you will need an oven or other source of heat to dry the mica and screens. If using an oven set the temperature at about 150° F (lowest setting) and place the mica and screens on the middle rack for approximately 1-2 hours.

If there is no rush or you do not have access to an oven, place the mica and screens in a very warm dry place such as on an operating base board heater to dry overnight, or if it must air dry leave it dry for several days with good air flow .

5. Once all the Mica and screens are dry re assemble the ozone generator according to the instructions provided.