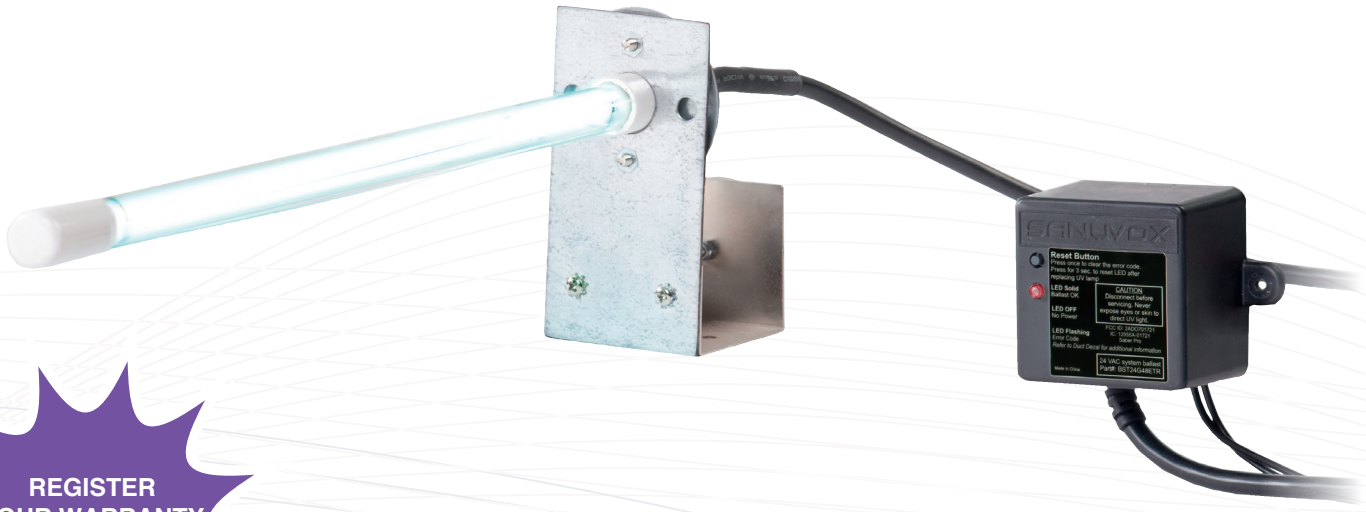


Photos illustrating products are non contractual.

REGISTER YOUR WARRANTY ONLINE AT www.sanuvox.com

SABER MAGNET 24V

UV COIL CLEANER

Residential Model

⚠ IMPORTANT SAFETY INSTRUCTIONS ⚠

READ AND SAVE THESE SAFETY INSTRUCTIONS BEFORE USING THIS PRODUCT.

Read and follow all instructions contained in this manual before using the product. Failure to comply with these instructions may result in personal injuries or damage to the unit or system.

1. **Installation and servicing** of air conditioning and related equipment **can be hazardous** due to systems pressure and electrical components. **Only trained and qualified service personnel** should install, repair or service equipment.
2. **Untrained personnel** can perform **basic maintenance** functions such as replacing lamp(s) and/or filter(s). All other operations should be performed by trained service personnel.
3. When working on the unit or system, observe precautions in the literature, tags and labels attached to the unit or system, and all other safety precautions considered as best practices in the HVAC industry.
4. When applicable, local regulation may comprise more restrictive installation and/or certification requirements. The afore mentioned requirements prevail on those of this document and the installer agrees to conform to these at his own expense.
5. Follow all the safety instructions outlined in this document and respect all local and national codes applicable.
6. **Never expose eyes or skin to ultraviolet light from any source.** Therefore, **before installing or performing maintenance** on the unit or system, **TURN OFF AND DISCONNECT** the unit or system **from all power sources** (there may be more than one switch to disconnect).
   ⚠ **CAUTION:** Electrical shock may cause personal injuries or possibly death.
7. UV rays may destroy certain types of filters (polymer or plastic); please keep the unit or system light away from shining directly on plastic.
8. When installing or performing maintenance on the UV unit or system, it is recommended to **wear safety glasses and gloves**. In order to avoid reduced performance of lamp(s), **do not touch lamp glass without gloves**.
9. UV lamps contain a small quantity of mercury: if a lamp breaks, clean and **dispose of with care**. UV lamps can be disposed/recycled after use, as any other fluorescent lamps. Contact and follow your local and national authorities' specific instructions.
10. **Use only specified SANUVOX branded replacement UV lamps with your unit or system.** Use of any other lamps will void your warranty and can result in damage to the unit, system and/or lamp(s).
11. Most UV units or systems are not waterproof. **DO NOT INSTALL OUTDOORS** unless specified otherwise.

SAVE THESE INSTRUCTIONS

Installation Date: _____ **Installed by:** _____

Installer Contact Info.: _____

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ABOUT THE PRODUCT

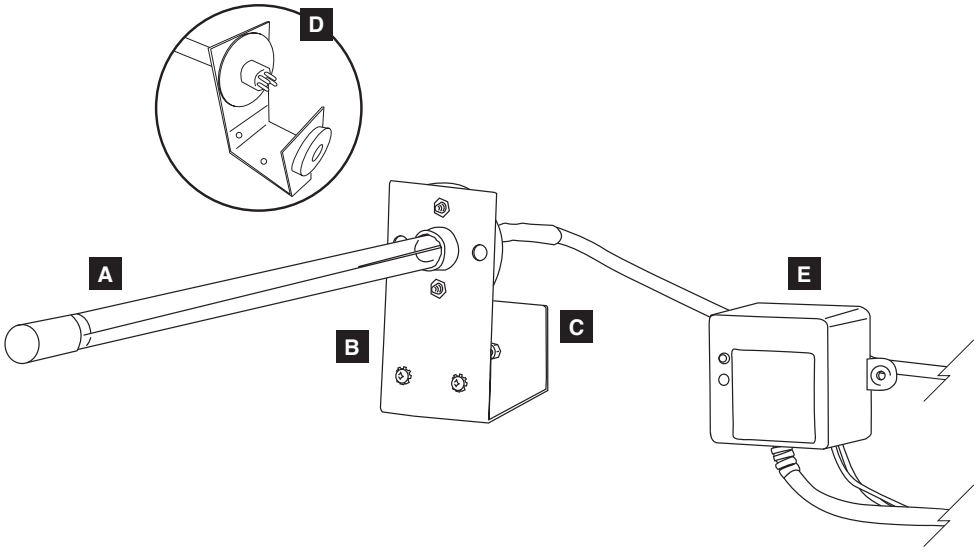
The SABER MAGNET 24V coil cleaner prevents and destroys mold and other microbial growth on the coil and its surrounding areas.

For information or recommendations on how to size your specific application, please call SANUVOX at 1-888-726-8869.

COMPONENTS

How it Works

When a bio-film (a coating of microbial growth) covers a coil, it acts as an adhesive, attracting dirt and coating the fins of the coil. This results in an odor emanating from the equipment and a loss in energy efficiency as the equipment must work harder to provide the same air temperature. Installed on the air conditioning's evaporator coil, the SABER MAGNET 24V keeps the system running at top efficiency, saving you electricity and preventing the coil from becoming a source of bad air quality and bad odor.



A. 16" UVC Lamp
B. Main Bracket
C. Magnetic Multi-Bracket
D. Lamp Retaining Ring
E. Ballast

ACCESSORIES & KITS

The following optional accessories and/or kits work great with your product (sold separately).

Step Down Transformer (AC)		A transformer to convert a regular outlet (120 VAC) to 24 VAC.

For instruction manuals or information about your optional accessories and/or kits, please call SANUVOX at 1-888-726-8869 or visit www.sanuvox.com.

SETUP & INSTALLATION

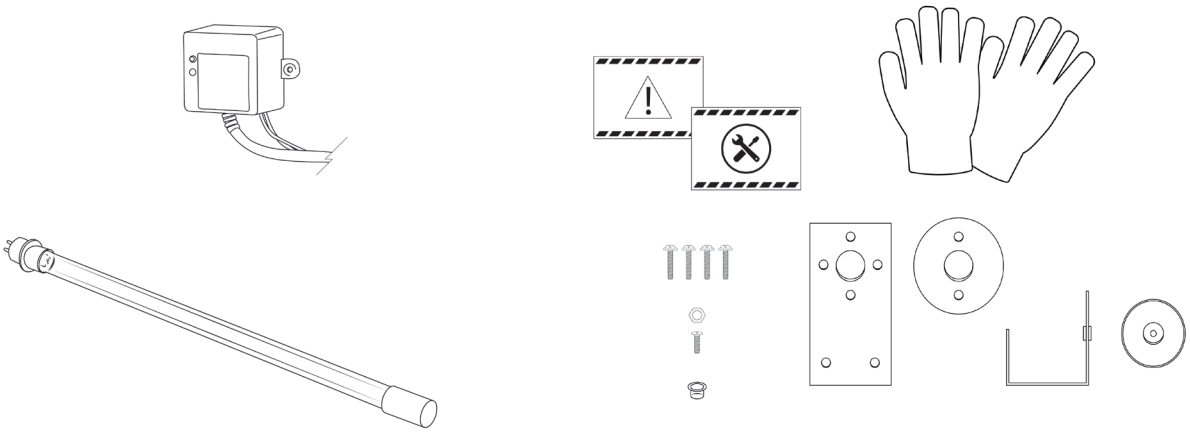
What you will need

A utility knife to unpack all components, a Phillips #2 screwdriver, a nut driver or socket ¼", a measuring tape, a marker and a power drill with a metal bit.

⚠ **CAUTION:** Handle your product with care to avoid breaking parts. Make sure you have a free and safe space to unpack, install and setup your product. Confirm you have access to the necessary power source for the product requirements (see unit or system label). If you have any questions regarding the installation instructions, call SANUVOX at 1-888-726-8869.

What's included

The ballast, 1 UV lamp and a basic installation kit.



The installation kit includes: a UV caution decal, a maintenance decal, a pair of cotton gloves, 4 sheet metal screws, one small screw, a nut, a plastic view port, a main bracket, a retainer ring, a magnetic multi-bracket and a round magnet.

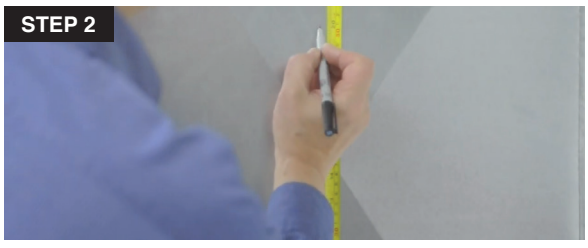
Step by Step Setup & Installation

Check out Sanuvox Technologies YouTube Channel for the SABER MAGNET 24V installation video!



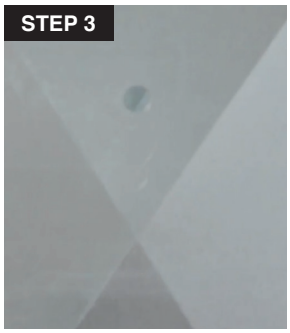
1. **Prepare the SABER MAGNET 24V for installation.**
   Remove the contents from packaging.

   ⚠ **CAUTION:** Before installing or performing maintenance on the unit or system, **TURN OFF AND DISCONNECT the HVAC unit or system from all power sources** (there may be more than one switch to disconnect).



2. **Check install location of the ballast**, so that there is sufficient cable to attach to the UV lamp when being installed.

STEP 3

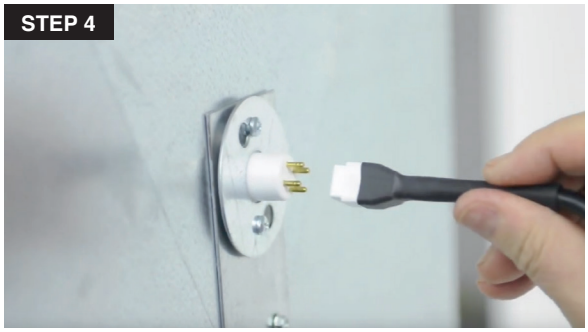




3. The **main bracket can be mounted** to the side of the duct allowing the UV lamp to be inserted in-between or over the A coil.
Drill a 1” diameter hole in the sheet metal to allow the UV lamp to pass, and mount the main bracket to the side of the duct using 2 sheet metal screws. Once installed, use the retainer ring to lock the lamp in place. Then tighten the 2 screws with care.

NOTE: If you want to install your Saber with the magnetic bracket, attach the multi-bracket to the main bracket using 2 sheet metal screws, and tightly screw the round magnet to the multi-bracket using the small screw and nut.

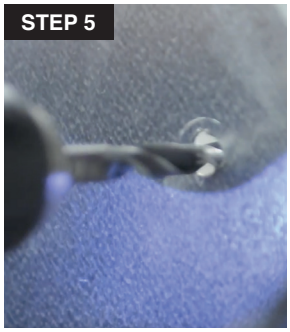
STEP 4

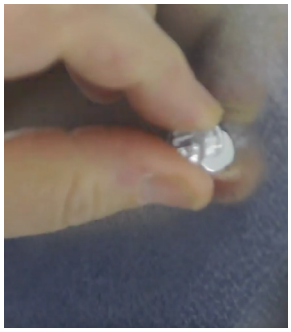


4. **Plug the connector onto the lamp pins.** The plug is designed so that it can only be installed one way. You may have to rotate the socket 90° to line up the pins with the holes.

⚠ **CAUTION:** Power supply cable should not be coiled.

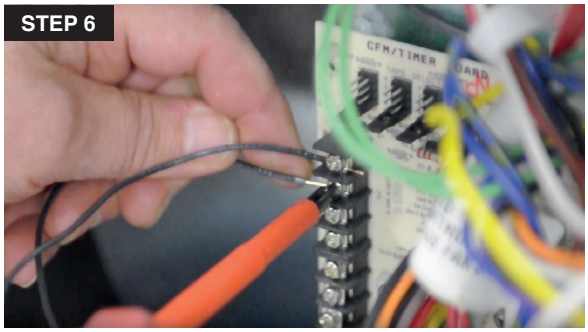
STEP 5





5. Drill a 0.25" hole on the outside of the plenum and install the view port. When the lamp is ON, the glow of the lamp will be visible through this port.

STEP 6



6. Connect the two black wires to the 24 VAC terminals on the HVAC equipment.

NOTE: Make sure that the HVAC equipment can at least supply 20 VA. If not, we recommend the use of a dedicated transformer that provides 24 VAC with a minimum of 20 VA, otherwise it will not be sufficient to power the ballast and lamp. An alternative is to use a step down transformer 24 to 27 VA on a 120V plug.

STEP 7



7. And finally, reconnect power to the HVAC unit or system, or plug in the transformer in a power outlet.

You are now ready to use your new SABER MAGNET 24V and enjoy great air quality for you and your family.

OPERATION

How to Operate your Product

The SABER MAGNET 24V is an automatic unit: once it's installed and plugged in, it immediatly turns ON on its own.

⚠ **CAUTION:** The suggested operating temperature range is 10 to 50°C (50 to 122°F). Operating the SABER MAGNET 24V outside this range will result in decreased performance.

How to Read the Ballast Display

Once the power has been reconnected the ballast LED will illuminate as will the UV Lamp. In the event the LED status light is OFF this signals that there is either no power going to the ballast or the ballast has failed. When the LED flashes it is time to replace the UV Lamp (after 1 year of use). Once the UV Lamp has been replaced hold the RESET button for 3 seconds to reset the ballast timer.

Normal Operation

- **SOLID RED:** In operation, system OK.
- **FLASHING RED (once every second):** Lamp > 8,700 h (time to replace the lamp).
- **FLASHING RED (twice every second):** Lamp failure.
- **FLASHING RED (three times every second):** Ballast failure.
- **FLASHING RED (four times every second):** Low voltage (under 18V).*
- **FLASHING RED (five times every second):** High voltage (over 30V).*

* Connects to a Step Down Transformer (sold separately).

How to Reset your Product and its Lamp Timer

After installing a new lamp, make sure the timer function is reset.

Step by Step Product and Lamp Timer Reset

STEP 1



1. On the ballast, press and hold for 3 seconds the reset button until LED blinks. The timer has now been reset.

MAINTENANCE

How to Replace Lamp(s)

Replacing lamp on the SABER MAGNET 24V is quick and easy. Simply turn off the power source, remove lamp from duct, dispose of old lamp and replace with new Sanuvox branded UV lamp, replace lamp in duct and turn power source back on. See below for detailed step by step instructions.

⚠ **CAUTION:** In order to avoid reduced performance of lamp(s), do not touch lamp glass without gloves.

Step by Step Lamp Replacement



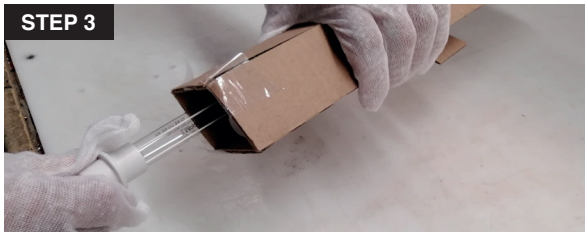


1. First disconnect white socket from the old lamp. Then, loosen the 2 screws on the retainer ring and turn retainer ring counterclockwise ↺. Pull out the old lamp. Dispose of old lamp.

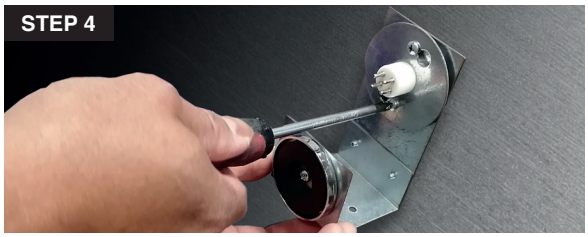
   NOTE: UV lamps can be disposed/recycled after use, as any other fluorescent lamps. Contact and follow your local and national authorities' specific instructions.



2. **Prepare the new lamp.** Remove the contents from packaging. Only after you have visually inspected the UV lamp should you cut open the packaging.



3. Carefully slide the new **UV lamp** out from the cardboard sleeve. Be sure to wear the **cotton gloves** (included) guaranteeing a clean lamp free from fingerprints. Fingerprints on the lamp will negatively impact the UV output of the lamp.



4. Place the new lamp in the duct. Tighten the 2 screws on the retainer ring and turn retainer ring right. Connect white socket from the new lamp.

   Then, reset your product and its lamp timer (see page 8).

How to Clean your Product

For optimal performance, the lamp(s) should be kept free of dust and residue deposit: clean every two to three months with a soft tissue and mild soap or alcohol based solution. Always spot test the cleaner to make sure it does not damage the surface.

⚠ **CAUTION:** Under no circumstance should water be sprayed or splashed onto the product.

STORAGE

The SABER MAGNET 24V is an in-duct unit working continuously and automatically and therefore, requires no specific storage.

ULTRAVIOLETS: UVC

The UVC (254 nm) light produced by Sanuvox UV units and systems are the same UV wavelength produced by the Sun. The UVC wavelength attacks the micro-organisms on a molecular level deactivating and destroying the contaminants.

⚠ **CAUTION: Never expose eyes or skin to ultraviolet light from any source.**

ELECTRICAL RATINGS, POWER CONSUMPTION & AVAILABLE VOLTAGE

The product is rated at 24 VAC.
See product label to confirm power consumption of your specific unit or system.

⚠ **CAUTION:** The user that changes or modifies the device without being not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: IF YOU EXPERIENCE A PROBLEM, PLEASE CONTACT CUSTOMER SERVICE FIRST OR SEE YOUR WARRANTY. DO NOT RETURN THE PRODUCT TO THE ORIGINAL PLACE OF PURCHASE. DO NOT ATTEMPT TO OPEN THE PRODUCT OR TAMPER WITH ITS COMPONENTS WITHOUT CONTACTING CUSTOMER SERVICE FIRST. DOING SO MAY VOID YOUR WARRANTY AND CAUSE PERSONAL INJURY OR DAMAGE TO THE PRODUCT.

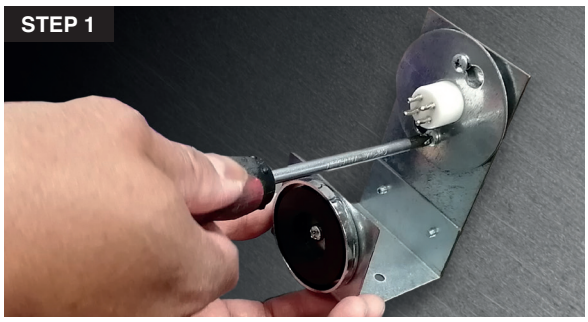
TROUBLESHOOTING

If your product is not working properly, refer to the following.

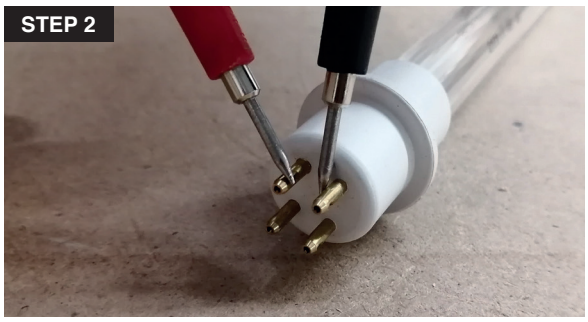
What you will need

A flat head screwdriver and an ohmmeter.

Step by Step UV Lamp Continuity Test



1. **Take the lamp out of the duct.** First disconnect white socket from the lamp. Then, loosen the 2 screws on the retainer ring and turn retainer ring counterclockwise ↺. Pull out the lamp.



2. **Using an ohmmeter** place 1 probe on 1 of the 4 pins and by sensing the 3 remaining pins, 1 should have continuity. Make sure the 2 remaining pins also have continuity.

   The 4 pins are in a rectangle pattern. The 2 pins that form the 2 short sides of the rectangle are the pins that have continuity through the lamp element.

NOTE: The SABER MAGNET 24V error code is determined by the LED flashing pattern on the ballast. The flashing pattern on the ballast is determined by the number of LED blinks (1 to 5) followed by a 1 second pause. This pattern will repeat over and over until the error code is cleared.

Problem	Possible Cause	Solution
Error Code 1 (EC1)	- Lamp has reached over 8,700 hrs (1 year) of operation.	- Get a genuine replacement lamp and reset lamp timer. **See Product and Lamp Timer Reset instructions on page 6.**
Error Code 2 (EC2)	- Lamp has failed.	- Press the reset button once to attempt to restart the lamp. - Shut the power to the ballast (hard reset), wait 10 seconds and turn the power back ON. - Check lamp continuity. **See UV Lamp Continuity Test instructions on page 8.** - Get a genuine replacement lamp and reset lamp timer. **See Product and Lamp Timer Reset instructions on page 6.**
Error Code 3 (EC3)	- Ballast has failed.	- Press the reset button once to attempt to restart the ballast. - Shut the power to the ballast (hard reset), wait 10 seconds and turn the power back ON. - Check power source to confirm that it is within specifications on product label. - Get a replacement ballast.
Error Code 4 (EC4)	- Voltage to the ballast is less than 18VAC. - Power source (furnace control panel or transformer) does not provide sufficient power output (measured in VA).	- Measure the voltage being provided to the ballast. - Install a dedicated transformer (MSCTFR12024 or equivalent) that provides a minimum output of 20 VA at 24 VAC.
Error Code 5 (EC5)	- Voltage to the ballast is over 30VAC. - Power surge.	- Measure the voltage being provided to the ballast. - Install a dedicated transformer (MSCTFR12024 or equivalent) that provides a minimum output of 20 VA at 24 VAC.

Contact your contractor for all your needs in terms of replacement parts: power cord, ballast, UV lamp, brackets, etc.

WARRANTY

You should first read all instructions before attempting to use this product.
For this warranty to be valid, keep a copy of the proof of purchase.

REGISTER YOUR WARRANTY ONLINE AT www.sanuvox.com

UV lamp	1 year
Ballast	5 years
Fixture	1 year

A. This limited warranty applies to repair or replacement of product found to be defective in material or workmanship. This warranty does not apply to damage resulting from abusive, unreasonable use or supplemental damage. Defects that are the result of normal wear and tear will not be considered manufacturing defects under this warranty.
SANUVOX IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.
Some jurisdictions **do not** allow the exclusion or limitation of incidential or consequential damages or limitation on how long an implied warranty last, so the above limitations or exclusions may not apply to you. This warranty gives specific legal rights, and you also may have other rights which vary from jurisdiction to jurisdiction. This warranty applies only to the original purchaser of this product from the original date of purchase.

B. At its option, SANUVOX will repair or replace this product if it is found to be defective in material or workmanship.

C. This warranty does not cover damage resulting from any unauthorized attempts to repair or from any use not in accordance with the instruction manual.

D. This warranty does not cover the filters, pre-filters or other accessories (if included), except for material or workmanship defects.

Call us toll-free at 1-888-726-8869 or email: info@sanuvox.com
Please be sure to specify product name.

NOTE: IF YOU EXPERIENCE A PROBLEM, PLEASE CONTACT CUSTOMER SERVICE FIRST OR SEE YOUR WARRANTY. DO NOT RETURN THE PRODUCT TO THE ORIGINAL PLACE OF PURCHASE. DO NOT ATTEMPT TO OPEN THE PRODUCT OR TAMPER WITH ITS COMPONENTS WITHOUT CONTACTING CUSTOMER SERVICE FIRST. DOING SO MAY VOID YOUR WARRANTY AND CAUSE PERSONAL INJURY OR DAMAGE TO THE PRODUCT.

CUSTOMER SERVICE

TO ORDER REPLACEMENT PARTS

PLEASE CONTACT YOUR CONTRACTOR OR SANUVOX CUSTOMER SERVICE
Toll-Free Phone #: 1-888-726-8869
Email: info@sanuvox.com
Website: www.sanuvox.com
Please be sure to specify product name.

Replacement parts for this product

BST24G48ET	SABER MAGNET 24V ballast
LMPRGPT160T5	Regular intensity 16" UV lamp
MSCTFR12024	Step-down transformer 120VAC to 24VAC (20VA)

⚠ **WARNING: Use only specified SANUVOX branded replacement UV lamps with your unit or system.** Use of any other lamps will void your warranty and can result in damage to the unit, system and/or lamp(s).