SELF-CLEANING AIR IONIZATION SYSTEM FOR RESIDENTIAL AIR CONDITIONING SYSTEMS

- Patented self-cleaning design ensures ongoing peak performance
- Needlepoint ionization actively treats air in the living space
- For duct systems up to 6 tons (2400 CFM)
- iWave is UL 867 ozone standard certified to produce no unsafe levels of ozone
- No maintenance for the life of the iWave
- Easily installs in minutes in A/C system
- Patented multi-voltage input – 24VAC to 240VAC!
- Universal mounting with magnets
- Flexible design with no replacement parts
- Reduces certain bacteria and viruses
- Reduces odors, smoke and other airborne particles
- Keeps coil cleaner
- Programmable cleaning cycle
- Alarm contact option for secondary notification
- UL and cUL recognized
- Three-year warranty

Description

With technology installed in over 200,000 applications, iWave-R is a self-cleaning, no maintenance needlepoint bi-polar ionization generator designed specifically for treating air in residential duct A/C systems. As the air flows past the iWave-R, positive and negative ions actively treat the supply air, reducing certain bacteria and viruses in the coil and living space. The ionization process also reduces smoke, odors (cooking, pet, VOCs), as well as other particles (no more sunbeams) in the air. iWave is UL 867 ozone standard certified to produce no unsafe levels of ozone.

Application

iWave-R treats the air in any brand of residential duct air conditioning systems up to 6 tons (2400 CFM) in size with no maintenance and no replacement parts. Designed for universal mounting, the iWave-R can be installed inside or outside of duct, or attached magnetically near the indoor fan in the air handler. Simply connect to power using its patented voltage input capability. Install between air filter and cooling coil to treat the indoor coil; as an alternative, the iWave-R can be installed in the supply air. iWave-R always works at peak performance, producing over 160 million ions/cc per polarity (320 million total ions/cc), more than any other ionizer product on the market. Its patented self-cleaning design includes a programmable cleaning cycle that can clean the emitter brushes every 1, 3, 5 or 10 days. The iWave-R is factory set to clean every third day which is adequate for a typical installation. iWave-R does not create “black walls” as negative-only ionizer products will do.

Indoor Air Quality

iWave®-R

Residential Air Ionization System

Packaging

1 each	**4900-20**

Specifications

Input Voltage:	24VAC to 240VAC
Power (VA):	10 VA
Frequency:	50/60 HZ
System Size:	6 tons (2400 CFM)
Ion Output:	160 million ions/cc per polarity (320 million total ions/cc)
Dimensions:	6” L x 4.8” W x 2” D
Weight:	1 lb.
Electrical Approvals:	UL and cUL recognized
Service Temp. Range:	-40°F to 160°F

iWave-R Installation Instructions

1. Disconnect air handler power before installing.
2. Mount the iWave-R after the particle filter and before the indoor coil. This ensures pathogens (i.e., mold) and odors are controlled throughout the entire depth of the coil in addition to the breathing space.
3. The iWave-R is designed with universal mounting- either attach with screws or affix to the system with integral magnets. Mount near the fan inlet (shaft side) on a metal surface in the air handler, internal wall duct or external wall duct depending on what is best for the installation. For external duct mount, a three inch diameter hole will need to be cut/drilled out of the duct. **IMPORTANT:** If mounting on the fan housing, ensure the iWave-R is secured from fan vibration - use short length self-tapping screws so as not to impair operation of fan.

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iWave-R Installation Instructions Continued

CRITICAL: Make sure air flows across both brushes at the same time, like a football through a field goal post.

CRITICAL: The iWave-R is designed for flush, external duct mount installations as an optional install. Ensure in all installations that other metal surfaces/wires are kept a minimum of two inches away from the tip ends of the high voltage emitters to prevent grounding, leading to premature failure.

4. The iWave-R has universal voltage capability, connect 24VAC to 240VAC voltage input, whatever is most convenient for quick installation. Although the device only pulls 10 watts, sometimes a dedicated 24VAC power supply may be necessary depending on the current load on the transformer for other system accessories.
5. Unit may be powered 24/7 or may be interlocked with indoor fan – unit only purifies when air is flowing. If unit is wired with the fan, the quickest air purification to address an air concern is to let the fan/iWave-R run continually for 72 hours. Leaving the fan continually in the 'on' position will provide the best ongoing air purification in the house.
6. **Wiring:** The iWave-R has a patented universal voltage 24VAC to 240VAC input capability. The black wire (marked 'AC' on label) is for 24VAC to 240VAC voltage input. The white wire (marked 'N' on the label) is the neutral leg for 24VAC or 120VAC; or the other hot leg for 208/240VAC. The green striped wire is ground, marked 'G' on the label. The brown wires (marked 'A' on the label) are leads to a normally closed alarm contact – see step 7.
7. The iWave-R is equipped with an alarm contact option to provide a visual indicator outside of the air conditioning system to let the homeowner know that it is in normal operation or if there is a fault. The alarm contact, a normally closed contact, rated at 240 VAC/1A, will require a power source and visual indicator, such as a LED. In normal mode, the LED will stay illuminated. If the device goes into default mode, the LED will not light. If a homeowner wants a remote indication of iWave-R status, it is recommend that the 24VAC light (bought separately) be powered through the alarm contacts and sent to a remote wall.
8. When powered up, a green LED on the iWave-R will illuminate; the ionizer is working and the stepper motor for the cleaning feature is in the home position. If the light is not illuminated, check voltage to the iWave-R.
9. **Self-Cleaning/Program Feature:** The patented iWave-R has a self-cleaning feature to ensure it is always operating at peak performance over its design life. The functions for the button include:

   a. While in normal operation mode, press the button once, the LED light will flash and the stepper motor starts an on-demand cleaning cycle.

   b. While in cleaning cycle (after step 'a' above), press the button and hold for 3 seconds, it goes into the mode of setting the cleaning cycle intervals. The iWave-R is designed to be programmed for 1, 3, 5, or 10 day cleaning cycle intervals. **The iWave-R is factory preset for cleaning the emitters every third day; this is adequate for most applications and will not need to be reprogrammed in the field.**

   While in the cleaning mode (with LED flashing and cleaning feature working):

   a. Press the button and hold for 3 seconds, the LED will flash once every second and the motor works once every day.

   b. Press the button twice (the first press hold for three seconds), the LED will flash twice every second and the motor works once every 3 days. This is the factory preset program.

   c. Press the button three times (the first press hold for three seconds), the LED will flash five times every second and the motor works once every 5 days.

   d. Press the button four times (the first press hold for three seconds), the LED will flash ten times every second and the motor works once every 10 days.

   The iWave-R remembers the programmed cleaning cycle days. After the power source is removed and applied again, the iWave-R will automatically operate and go back to the previous days.

   Note: The iWave-R is designed to be a long term IAQ investment, not requiring ongoing maintenance of replacing expensive parts every year or two like other market approaches. The ion emitters (fiber brushes) used in the iWave-R are designed to where they could easily be replaced after many years in service; in the unlikely event they ever needed to be replaced. Replacement requires a Phillips screwdriver and a few minutes; contact Nu-Calgon for further questions.