Over Head Zero Volt Ionizer Installation, Operation, and Adjustment Instructions

Made in America

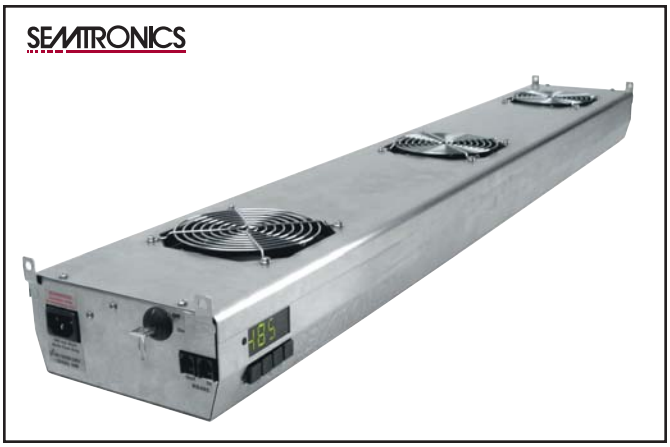

Figure 1. 62290 Over Head Zero Volt Ionizer

The Overhead Zero Volt Ionizer combines the effectiveness of steady-state DC ionization with ease of adjustability, communication capability, and the flexibility of a micro-controller based design to produce a versatile and stable ionization system. Three fans produce extended ionization coverage, and are ideal for areas where bench space is limited. (**Note:** for the 2 fan unit, disregard any instructions relating to the 3 fan unit or fan 3.

Optional network software and remote control (ZVI-IR) for adjustments are available.

Installation

Remove the ionizer from the carton and inspect for shipping damage. Included with the unit are:

1. 62290/62250 (ZVI8200/7200) Overhead Ionizer
2. AC Power Cord
3. Keys (to power on)
4. Hanging Kit

The AC input voltage should be set to the user's specification prior to shipping (120v or 220v). It can be verified or reset by referring to the **Maintenance / Cleaning** section of these instructions.

Before installing unit verify that the AC outlet is properly connected to earth ground. The unit must have a good earth ground to maintain proper balance. Install the unit in the desired location, making sure that the airflow will not be restricted through the unit. Make sure the ON/OFF key switch, located on the side of the unit, is in the "OFF" position. Plug the power cord into the unit and then into the appropriate AC power source. This equipment has a grounding type plug that has a third (grounding) pin. This plug will only fit into a grounding type power outlet. If the plug does not fit into the outlet, contact qualified personnel to install the proper outlet. Do not alter the plug in any way.

Specifications

- Air Flow
100 cfm each of 3 Fans.

- Balance
0V ±3 volt (typical), 0V ±5 volts (maximum.)

- Dimensions
3-1/2" D x 6-1/2" W x 42" L

- Emitter Points
Machined Tungsten

- Fuse
400 mA slow blow

- High Voltage Power Supply
5kV

- Input Power
115V AC 60Hz or 220/230V AC 50Hz Internal Jumper Selectable

- Ion Emission
Steady State DC

- Ozone
Less than 0.05ppm

- Weight
10 pounds

Setup and Operation

The unit is powered on and off by using the keys supplied with the unit. The key switch is located on the left end of the unit along with the RS485 input/output ports for the optional ZVI software package. The control buttons along with the LED display are located on the front of the unit. The control buttons are numbered left to right as shown in Figure 1. Button #1 (◀) corresponds to "Back", button #2 (▼) corresponds to "Decrease", button #3 (▲) corresponds to "Increase" and button #4 (▶ corresponds to "Forward".

When the ionizer is first powered on, the unit will display its default address **"000"**.

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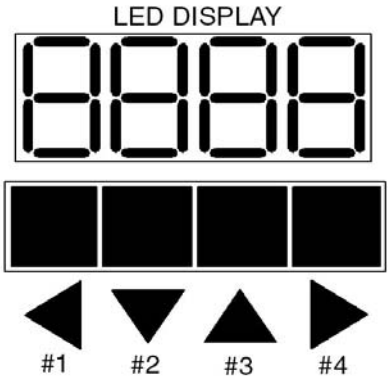


Figure 2.

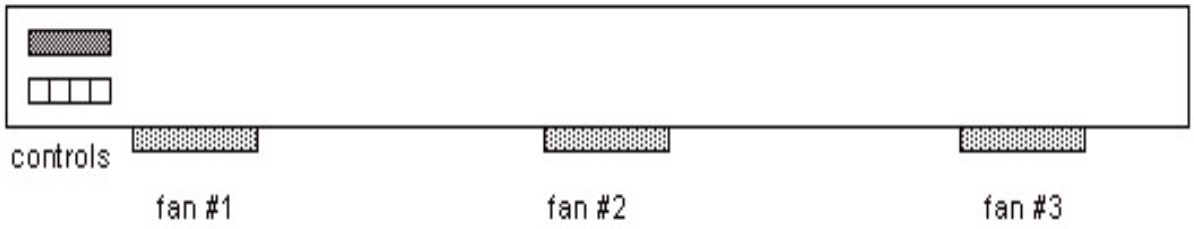
Set Up Mode

P r o g

Press ◀ and ▶ buttons simultaneously to go into the ionizer setup mode. When the buttons are released, the unit should beep once and **"Prog"** should appear momentarily on the LED display. The display will then show the period setting.

S P d 5

Press ▼ or ▲ buttons on the remote to adjust the fan speed from **"SPd 1"** (lowest), to **"SPd 9"** (highest), for operator comfort and satisfactory decay time. Press the ▶ button to go to the next menu. The next menu is for the balance adjustment. Starting with fan 1 and moving down to fan 3.



B A L 1

Place the charge plate monitor under the left fan (fan 1). Press and hold the ▼ button, (more negative), or the ▲ button, (more positive), on the remote to adjust the balance under fan 1 to zero. For finer adjustment, use single clicks of the buttons. Press the ▶ button to go to the next fan. By pressing the ◀ button you can go back to the previous fan or menu.

B A L 2

Move charge plate monitor under the middle fan (fan 2). Press ▼ or ▲ buttons on the remote to adjust the balance under fan 2 to zero. Press the ▶ button to go to the next fan, or press the ◀ button to go to previous menu.

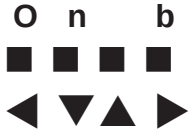
B A L 3

Move the charge plate monitor under the right fan (fan 3). Press ▼ or ▲ buttons to adjust the balance under fan 3 to zero. Re-check each fan and repeat Bal 1, BAL2, and BAL3 adjustments as necessary to eliminate the effect of airflow interference between the fans. Press the ▶ button to go to the next menu.

S A V E

To save and exit at any time during the setup mode press ◀ and ▶ buttons simultaneously. The 50665 will save all settings and return to normal operation. The 50665 will display **"SAVE"** and the status of the buttons **"On b"** for "on buttons" (meaning that the buttons are enabled), then the unit address.

O n b



(**Note:** the control buttons can be disabled, "OFF b", by the ZVI-IR remote control only.)

To change the three digit network address and enable or disable the remote control, use the following procedure. **Note:** Address can only be **000** to **254**. If an invalid address is selected the display will blink, the buzzer will sound three times, and the unit will not continue to other menus until a valid address has been selected.

1 2 3

Press ◀ and ▶ buttons simultaneously to go into the ionizer setup mode.

S P d 5

The unit will display **"Prog"** momentarily and go to the "fan speed" menu. Press the ◀ button to go back to the "address" menu.

1 2 4 A

The last digit of the address will be flashing. Press ▼ or ▲ buttons to change the last digit 0 to 9. Press the ◀ button to go to the second digit of the address.

1 5 4 A

The second digit of the address should now be flashing. Press ▼ or ▲ buttons to change the second digit 0 to 9. Press the ◀ button to change first digit of the address.

2 5 4 A

The first digit of the address will be flashing. Press ▼ or ▲ buttons to change the first digit 0 to 2. Press the ◀ button to go to the enable or disable remote menu.

O F F r

After pressing the ◀ button to go to the enable/disable remote menu, the display will show **"OFF r"** for "off remote", (default setting). This means that the unit will not respond to the remote control. To enable the remote, press ▼ or ▲ buttons and the display will read **"On r"** for "on remote".

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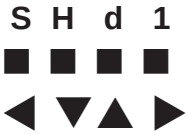
Alarm Conditions

The ionizer is able to detect various problems that may occur through normal use. The unit can detect low and high line voltages, and inoperable high voltage power modules. The unit will sound a continuous audible alarm during all alarm conditions.

If the unit detects that the AC line voltage is too low, it will display **"AC L"** and sound the alarm. If the unit detects that the line voltage is too high, it will display **"AC H"** and sound the alarm.



If the unit detects that there is something wrong with the high voltage modules, or the sensor circuitry, it will shutdown the high voltage modules of the fan for which it detected the problem. If this occurs for fan #1 the unit will display "**SHd 1**" and sound the alarm.

Maintenance / Cleaning Procedure

WARNING - RISK OF ELECTRIC SHOCK - These servicing instructions are for use by qualified personnel only. To reduce the risk of electric shock, do not perform any servicing of internal parts unless you are qualified to do so.

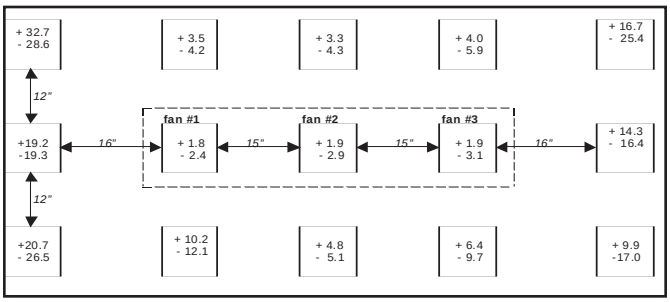
The AC input voltage can be verified or changed by removing the top cover of the unit. The figures below show the jumper (JH2) configuration for 120 and 220 VAC settings. (Note: the AC power cord MUST always be disconnected before the unit is disassembled.)

Figure 3. 120VAC

Figure 4. 220VAC

To clean the ionizer first turn off and unplug the unit. Remove the top lid by removing the six screws along the top of the unit with a Phillips screwdriver. Once the lid is removed the three fan modules are easily accessible. To remove a fan module disconnect the ribbon cable connector from the socket and lift the fan module out. The eight emitter points can be easily cleaned using Semtronics part number S204-200 emitter point cleaner, or 99% rubbing alcohol and a clean brush. To clean any excess dirt off of the fan and or fan guard it is recommended to use compressed air. Once the fan modules are clean slide them back onto the alignment posts, connect the ribbon cable, and replace the lid.

Neutralization (Decay) Times



Note: Reference ESD STM 3.1-2000. The distance from the ionizer to the charge plate is 18". (Readings are typical and taken at maximum fan speed.)

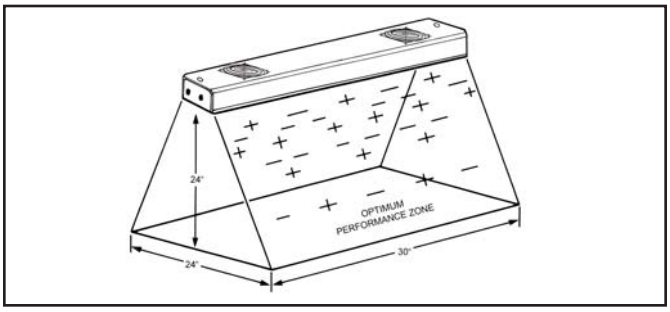


Figure 5. Area of Optimum Charge and Neutralization for 62290

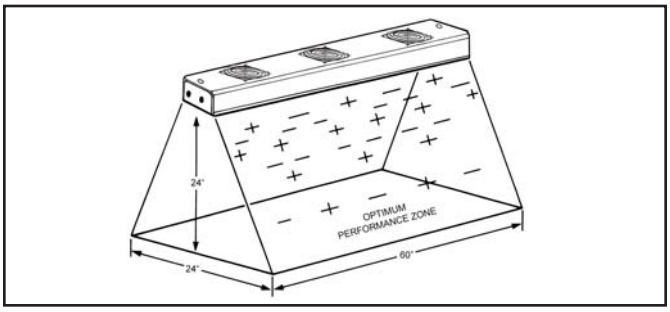


Figure 6. Area of Optimum Charge and Neutralization for 62250

TECHNICAL SUPPORT:

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NOTE: Unauthorized servicing or modifications to your monitor will void the product warranty and may create dangerous conditions. Servicing should be performed only at the factory, or by a Semtronics approved technician.

LIMITED WARRANTY

Semtronics expressly warrants that for a period of one (1) year from the date of purchase, Semtronics 62260(ZVI-IR) will be free of defects in material (parts) and workmanship (labor). Within the warranty period, a unit will be tested, repaired, or replaced at our option, free of charge. Call Customer Service at 909-627-8178 (Chino, CA) or 781-821-8370 (Canton, MA) for Return Material Authorization (RMA) and proper shipping instructions and address. Include a copy of your original packing slip, invoice, or other proof of date of purchase. Any unit under warranty should be shipped prepaid to the Semtronics factory. Warranty replacements will take approximately two weeks. If your unit is out of warranty, Semtronics will quote repair charges necessary to bring your unit up to factory standards. Call Customer Service at 909-627-8178 for proper shipping instructions and address. Ship your unit freight prepaid.

WARRANTY EXCLUSIONS

THE FOREGOING EXPRESS WARRANTY IS MADE IN LIEU OF ALL OTHER PRODUCT WARRANTIES, EXPRESSED AND IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH ARE SPECIFICALLY DISCLAIMED. The express warranty will not apply to defects or damage due to accidents, neglect, misuse, alterations, operator error, or failure to properly maintain, clean or repair products.

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