

Pulsed Ion Bar Controller Installation, Operation and Maintenance



Made in America



Figure 1. EMIT Pulsed Ion Bar Controller

Description

The EMIT Pulsed Ion Bar Controller combines the effectiveness of pulsed DC ionization with the ease of adjustability, communication capability and the flexibility of a micro-controller based design to produce a versatile ionization system. When used with the EMIT Ion Bars, the Pulsed Ion Bar Controller uses pulses of positive and negative ions to produce extended ionization coverage with or without forced airflow.

Ionizers are useful in preventing electrostatic charge generation, ElectroStatic Discharge, ElectroStatic Attraction, as well as preventing equipment latch-up. Per ANSI/ESD S20.20 section 6.2.3.1. Protected Areas Requirement states: "Ionization or other charge mitigating techniques shall be used at the workstation to neutralize electrostatic fields on all process essential insulators if the electrostatic field is considered a threat." Air ionization can neutralize the static charge on insulated and isolated objects by producing separate charges in the molecules of the gases of the surrounding air. When an electrostatic charge is present on objects in the work environment, it will be neutralized by attracting opposite polarity charges from the ionized air. Note that ionization systems should not be used as a primary means of charge control on conductors or people. (Reference: EN 61340-5-2 clause 5.2.9).

The Pulsed Ion Bar Controller is available in two models:

Item #	Power Supply
50855	North America
50856	Not Included

Packaging

- 1 Pulsed Ion Bar Controller
- 1 Ground Cord
- 1 24V Power Supply (50855 only)
- 1 Certificate of Calibration

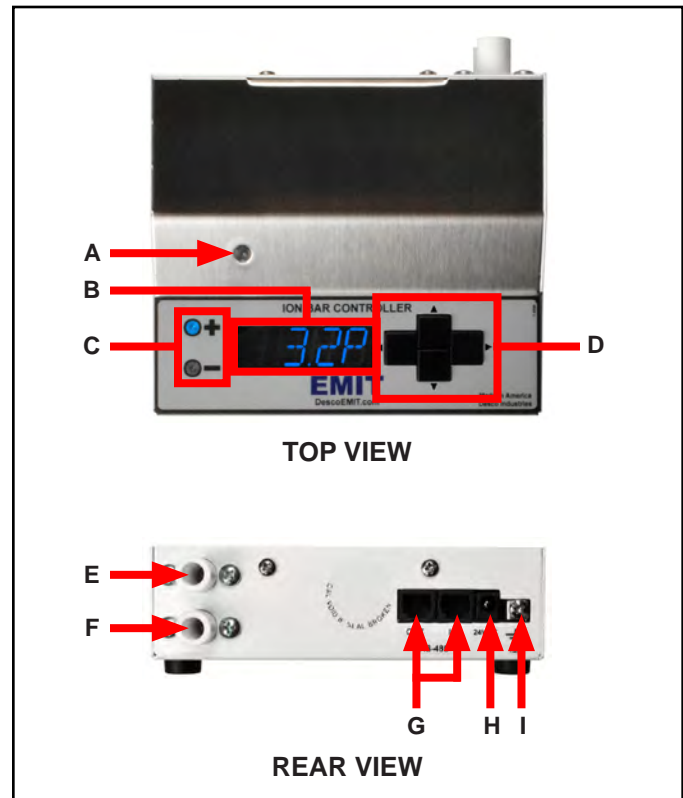


Figure 2. Pulsed Ion Bar Controller features and components

Features and Components

A. Remote Control Sensor: Receives infrared signals transmitted by the 50669 Ionizer Remote Control accessory.

B. Display: Displays the Pulsed Ion Bar Controller's settings.

C. Polarity Status LEDs: Illuminates when positive or negative ions are being emitted from the Ion Bars.

D. Control Buttons: Use these buttons to operate the Pulsed Ion Bar Controller.

The left (◀) button corresponds to “go back”.

The down (▼) button corresponds to “decrease”.

The up (▲) button corresponds to “increase”.

The right (▶) button corresponds to “go forward”.

E. Positive High Voltage Output: Connect one of the Ion Bar input leads here.

F. Negative High Voltage Output: Connect one of the Ion Bar input leads here.

G. RS-485 Input / Output Jacks: Provide data output. Contact the manufacturer for more information.

H. Power Jack: Connect the power adapter here.

I. Ground Terminal: Connect the included ground cord here.

Installation

I. Place the Pulsed Ion Bar Controller nearby an EMIT Ion Bar. The Controller may be placed on top of a surface or mounted to a wall by using the mounting holes located at the bottom.

II. **Connect the ring terminal end of the included ground cord to the ground terminal on the Controller. Connect the other end of the ground cord to ground prior to operation of the system.**

III. Connect the leads from the EMIT Ion Bar to the high voltage outputs on the Controller. The leads do not have polarity and may be connected to whichever output you choose.

IV. Connect the power supply to the Controller’s power jack, and plug the power supply into an appropriate power outlet in a position that is easy to reach and disconnect.

V. Upon power up, the Controller will display its default address: “000”.

ENVIRONMENTAL CONDITIONS

- Suitable for indoor use only at altitudes not exceeding 6500 ft (2Km).
- Temperature range of 41°F (5°C) to 104°F (31°C) decreasing linearly to 50% @ 104°F (40°C)
- Pollution degree 2 per IEC 664
- Installation Category II

CAUTION: If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Operation

SETUP MODE

Press the left (◀) and right (▶) buttons at the same time to enter Setup Mode. The Controller will beep once and “Prog” will momentarily display. The Controller will then display the period setting.

PERIOD SETTING

Press the down (▼) or up (▲) button to adjust the period from “0.1P” (0.1 seconds) to “10P” (10 seconds) for acceptable balance swing and discharge time. Press the right (▶) button to continue to the next setting.

DUTY CYCLE SETTING

Place a charged plate monitor under the middle of the EMIT Ion Bar. The value displayed on the Controller (XXd) represents the duty cycle. The duty cycle is the percentage of time that the positive supply is on. For example, for a period of 10 seconds, selecting a 40% duty cycle corresponds to the positive supply being on for 4 seconds and the negative supply being on for 6 seconds. Press the down (▼) button (smaller duty cycle / more negative) or the up (▲) button (larger duty cycle / more positive) to adjust the balance for an even swing. Press the right (▶) button to save and exit. Press the left (◀) button to go to the previous setting.

To save and exit any time during Setup Mode, press the left (◀) and right (▶) buttons at the same time. The Pulsed Ion Bar Controller will display “SAVE” and the status of the buttons “On b” (buttons enabled). The Controller will display its address when in normal operation.

NOTE: The control buttons can only be disabled (“OFF b”) by the 50669 Ionizer Remote Control.



Figure 3. EMIT 50669 Ionizer Remote Control

CHANGING THE PULSED ION BAR CONTROLLER'S ADDRESS

The following procedure describes how to change the three digit address of the Pulsed Ion Bar Controller. This is needed when the user wants to control more than one Pulsed Ion Bar Controller with the 50669 Ionizer Remote Control. Assigning a unique address to each Controller eliminates the possibility of controlling more than one unit at the same time.

Press the left (◀) and right (▶) buttons at the same time to enter Setup Mode. The Controller will beep once and "Prog" will momentarily display. The Controller will then display the period setting. Press the left (◀) button to enter the Address Menu. This will be denoted by an "A" at the end of the display (XXXXA).

The last digit of the address will be flashing. Press the up (▲) or down (▼) button to change the last digit from 0 to 9. Press the left (◀) button to move to the second address digit.

The second digit of the address will be flashing. Press the up (▲) or down (▼) button to change the second digit from 0 to 9. Press the left (◀) button to move to the first address digit.

The first digit of the address will be flashing. Press the up (▲) or down (▼) button to change the first digit from 0 to 9. After setting the address, the user may choose to either press the left (◀) and right (▶) buttons at the same time to save the settings or press the left (◀) button to enter the Remote Menu.

ENABLING THE REMOTE CONTROL SENSOR

Press the left (◀) and right (▶) buttons at the same time to enter Setup Mode. The Controller will beep once and "Prog" will momentarily display. The Controller will then display the period setting.

Press the left (◀) button until the Remote Menu is reached. The display will read "OFFr" (off remote). This is the default setting. To enable the remote control sensor, press the up (▲) or down (▼) button. The Controller will display "On r" (on remote). The up (▲) or down (▼) button can be pressed again to disable the remote control sensor: "OFFr".

Specifications

Dimensions	4.9" L x 5.7" W x 1.65" H 124mm L x 145mm W x 42mm H
Weight	1.6 lbs 0.8 kg
Power	24VDC, 500mA

Limited Warranty

EMIT expressly warrants that for a period of five (5) years from the date of purchase EMIT Pulsed Ion Bar Controllers will be free of defects in material (parts) and workmanship (labor). Within the warranty period, a credit for purchase of replacement EMIT Pulsed Ion Bar Controllers, or, at EMIT's option, the Pulsed Ion Bar Controller will be repaired or replaced free of charge. If product credit is issued, the amount will be calculated by multiplying the unused portion of the expected one year life times the original unit purchase price. Call our Customer Service Department at 909-664-9980 (Chino, CA) for a Return Material Authorization (RMA) and proper shipping instructions and address. Please 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 EMIT factory. Warranty replacements will take approximately two weeks.

If your unit is out of warranty, call our Customer Service Department at 909-664-9980 (Chino, CA) for a Return Material Authorization (RMA) and proper shipping instructions and address. EMIT will quote repair charges necessary to bring your unit up to factory standards.

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.

Limit of Liability

In no event will EMIT or any seller be responsible or liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, users shall determine the suitability of the product for their intended use, and users assume all risk and liability whatsoever in connection therewith.