



**TRANSFORMING TECHNOLOGIES**  
*OUTSTANDING ALTERNATIVES IN STATIC CONTROL*



Model IN1200 Series



Instruction Manual

# SCION™ IN1200 - Ionizing Bar Operation Manual

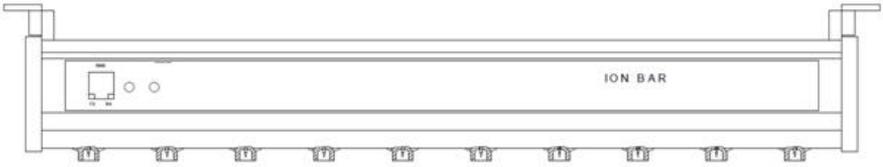
The SCION™ IN1200 ionizing bar is an effective tool to eliminate static in the electronics, plastics, chemicals, printing, textile, optical and other industries. Utilizing AC Square Wave Technology, the SCION™ IN1200 delivers uniform streams of ionized air that quickly eliminates static charge. The ionizing bar features a unique aerodynamic design that ionizes a local area without disruption laminar flow. The IN1200 ionizing bar is designed to reduce static charge in mini-environments, laminar flow hoods and wide area applications. Available in four different lengths.

## Features

1. Aerodynamic bar design
2. AC Square Wave ionizing technology
3. Remote control operation - Easily make adjustments
4. Fast decay times with excellent ion balance
5. Equipped with an malfunction Alarm

## Specifications

Model	IN1200-12, IN1200-22, IN1200-44, IN1200-64
Output voltage	DC±5.00 (KV)
Output frequency	5, 30(Hz)
Duty factor	10%-90%
Power	10W
Working distance	4in-40in
Ion balance	≤ ±30V  (AVE)
Discharge time	≤2S at 18in with airflow
Working temperature	32 - 122 Deg F
Working humidity	<70%
Air pressure scope	70psi



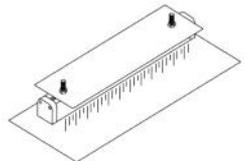
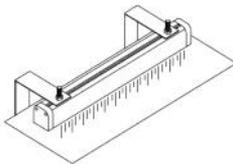
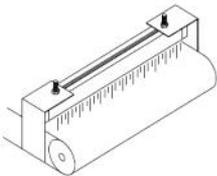
## Notice of Safety and Use

1. Read this manual carefully before use.
2. The device must be properly grounded when in use.
3. This device uses high voltage. Do not touch electrodes while in use. Do not open bar without authorization. Internal maintenance and repair must be carried out by professionals.
4. Do not use this device in an environment where the humidity is greater than 75%
5. Do not use this device in combustible and explosive environments.
6. Electrodes must not come in contact with metal conductors.
7. Please contact Transforming Technologies Customer Service for repair information.

## Installation

1. Choose optimal location for ionization and mount the bar and power supply. Bar should be mounted perpendicular to the charged surface.
2. Slide the EZ mount clips onto the ionizer and twist. Tighten with an Allen wrench to secure position.
3. Insert the power cord in the port labels "Power".
4. Connect the air source to the bar via the quick release valve.
5. Turn on the power switch and adjust air pressure to proper levels with needle valve.

## Positioning



## **Air Assist**

Attach the IN1200 to the gas line using the appropriate tubing. The IN1200 comes with a 1/4" quick release connector. Adjust pressure as required.

The time required to neutralize a static charge on an item in this area depends on two important factors: distance to the ionizer and air velocity assist. With high air velocity, the ions travel further before they recombine. Using assisted air with high speed results in coverage for the greatest possible area.

## **Adjustments**

There are two settings on the ion bar that can be adjusted: Working Frequency and Duty Ratio. Adjustments are made to fit your application or ion bar setup and are completed with the SCION remote control.

### **Working Frequency**

The SCION uses an alternating current to produce ions. The Working Frequency is the speed (measured in Hz) at which the ion bar makes a full cycle from the positive current to the negative and back to positive. The bar can be adjusted from 1Hz (slowest) to 50Hz (fastest). The Working Frequency used depends on the distance the charge is from the bar and the amount of airflow assist used. A slower Working Frequency increases the distance that the ions travel from the bar and works with lower airflow. A higher Working Frequency is used when the charge is close to the bar and in high airflow applications.

### **Duty Ratio**

Duty Ratio is the balance of positive and negative ions the ion bar produces. For most situations, the ideal average balance should be as close to 0 as possible. This means the ion bar produces the same amount of positive and negative ions. You can increase the amount of positive ions with "IB+" and increase the negative ions with "IB-" on the SCION remote.

Situations exist when you may choose more of one polarity than the other such as if you are certain that the charge to be neutralized is primarily the opposite. For example, molded plastic components has a large primarily negative charge so you would increase the positive ions produced by the bar.

You can set the ion bar to only positive or only negative with the "P" and "N" on the remote. Cycle the bars power off and on to reset this.

### Remote Control Operation

- "R/S": Run/Stop: Turns the bar on and off
- "IB+": Increase duty ratio
- "IB-": Decrease duty ratio
- "P": Only positive voltage cycle
- "N": Only negative voltage cycle
- "Bar": Adjusts the ion bar working frequency.
- "C": Rest



The bar can be set from 1hz (slowest) to 50hz (fastest) by pressing "Bar" and then a number:

- "Bar"+"1": Set ion bar working frequency 1Hz;
- "Bar"+"2": Set ion bar working frequency 3Hz
- "Bar"+"3": Set ion bar working frequency 5Hz;
- "Bar"+"4": Set ion bar working frequency 10Hz
- "Bar"+"5": Set ion bar working frequency 20Hz;
- "Bar"+"6": Set ion bar working frequency 30Hz
- "Bar"+"7": Set ion bar working frequency 50Hz; "

### High Voltage Alarm

The ion bar will issue an alarm (Alarm 1) on the LED if a HV error occurs.

## Maintenance

The electrodes must be regularly cleaned to maintain good ionizing performance. Frequency of cleaning is dependent on the cleanliness of the environment and requirements of the ESD program. At least once a month is a suggested frequency. Note: Do not clean ionizer when powered on.

1. Power off the ion bar and let sit for 10 minutes.
2. Clean the electrode tip, discharge pad and metal discharge body with alcohol and a clean cloth.
3. Do not power on the ion bar until the components are completely dry.

## Calibration

The SCION IN1200 ion output is inherently balanced by design, so there are no calibration adjustments. Periodic verification is recommended, per ANSI/ESD SP3.3-2006 Periodic Verification of Air Ionizers. Verification frequency may be set by the individual user, but is recommended to be not less than one time per year.

Equipment needed is a Charge Plate Monitor such as Transforming Technologies 287A or 288B. Test the ionizer's ion output and balance according to the Charge Plate's instructions.

Ion Output Check: Discharge times should be 2 seconds (1000v-100v) at 18".

Ion Balance Check: Offset voltage should be measured and be within  $\pm 30$  volts.



**287A -Charge Plate**



**288B - Charge Plate**

## **Service and Warranty**

Transforming Technologies, LLC provides a limited warranty for the IN3000 Ionizers. All new products are guaranteed to be free from defects in material and workmanship for a period of one (1) year from the date of shipment. Liability is limited to servicing (after evaluating, repairing or replacing) any product returned to Transforming Technologies. The company does not warrant damage due to misuse, neglect, alteration or accident. In no event shall Transforming Technologies be liable for collateral or consequential damages. To receive service under warranty, please contact Transforming Technologies Technical Support.

## **About Transforming Technologies**

Since 1998, Transforming Technologies has helped electronic manufacturing facilities to protect their products and processes from the many serious problems associated with static electricity. Transforming Technologies offers a wide range of unique and outstanding products to detect, protect, eliminate and monitor electrostatic charges. Our products are integral components of an effective static control program.



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