



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

# **BFN** AC Ionizers

**Ionizing Air Gun  
Model BFNG10**



**Instruction Manual**

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## Description

### Ionizing Air Gun Model BFNG10

The BFNG10 is a high performance ESD ionizing gun perfect for a wide variety of industrial applications. The BFNG10 ionizing gun combines portability, fast static decay rates, excellent balance and low compressed air consumption to efficiently remove static and contaminants in the Semiconductor, Electronic Assembly, Medical Device, Optics, Automotive and Pharmaceutical markets.

### About BFN Technology

Dependable, Balanced and Fast. BFN® AC ionizers, from Transforming Technologies, are built to last. Reliable AC ionization technology is combined with superior mechanical design to assure years of optimal static neutralizing performance.

- A full 1 year warranty.
- High Frequency AC (68KHz) Ion Emission
- Titanium alloy emitter points for long life.

All BFN series AC ionizing blowers are designed for safe operation under normal use.

### Safety:

- Do not use BFN ionizers in flammable or explosive environments.
- Do not insert foreign objects into the air inlet or outlet.
- Make certain the BFN ionizer is properly grounded before operation.
- Do not open or attempt to repair any BFN series product. Breaking the manufacturing seal will void warranty.
- Do not allow water to enter the gun. Do not operated in high humidity, or wet areas. This can cause damage to the internal circuits of the ionizer
- Power off unit before maintenance and cleaning. Wait until fully dry to power on again if using alcohol to clean.

## Features & Advantages:

- Point-and-shoot precision ionization.
- Ergonomic handle design: easy to use to achieve high working efficiency.
- Built in piezoelectric transformer
- Excellent decay time and ion balance,
- High voltage alarm
- Easy to clean and service
- Uses Tungsten emitter points which have a long life and are abrasion resistant.
- Optional high efficiency filter that allows use in cleanroom environments.

## Specifications:

- Power Supply: DC 24V/500mA (AC input: 220V/60Hz. 110V/60Hz alternatively)
- Air Pressure: Less than 88PSI
- Air Line Connection Diameter: 1/4in
- Available Range: 4in—36in.
- Balance: Less than +/-30v
- Decay Time: Less than 2seconds at 12in
- Working Condition: Temp 0-50°C, humidity 20%-80%RH
- Color: Light Grey
- Dimensions: 6.5inX 3.3in X 1.4in (power adapter), 8.25in X 3.42in X 104in (gun body)
- Cable Length: 6.5ft
- Material: ABS Fireproof
- Weight: 2.1lbs

## Kit Includes

- |                              |       |
|------------------------------|-------|
| • BFN-HFG10 Ionizing Air Gun | 1 Set |
| • Power Adapter              | 1 Pcs |
| • Manual                     | 1 Pcs |
| • Certificate of Calibration | 1 Pcs |

## Installation and Operation

1. **Power Requirement.** The BFNG10 works with common 110 AC power. Connect the ionizing controller body to a grounded outlet with the power cable. The switch on the controller body controls the power to the gun.
2. **Mounting.** Mount the controller in a fixed location with the included bracket. Choose a safe location that to avoid damage to the controller. Avoid high humidity, wet and dusty locations.
3. **Gas Line Connection.** Connect the ionizer to a air source through the 1/4 airline connection at the back of the controller. The compressed gas supply must be clean dry air or nitrogen. To prevent particles from entering the console, a 2 micron coalescing filter or better can be used upstream of the gun console (optional). Failure to use clean dry air or nitrogen may result in damage to the BFNG10 Gun.
4. **Decay time.** The rate at which the ionizer will eliminate static (decay time) is influenced by the strength of the air flow, and the distance to the target surface. Lower airflow results in longer decay times. The optimal operating distance is 4in—36in.
5. **Air Pressure.** The compressed air flow must be less than 88psi. Higher pressure may influence the operating efficiency or cause damage to the ionizer.
6. **Operating Time.** The BFNG10 ionizing air gun is not recommended for continuous use. It is designed for point-and-shoot intermittent operation. If continuous operation is needed, contact Transforming Technologies, there are specifically designed ionizers for continuous use.
7. **Air Filter (Optional).** The BFNG10 can be used with an air filter for clean applications. Model SPBFN37. The filter is installed inside the controller to insure that the air output is clean and the ionized air meets the cleanroom requirement. Reminder: Air filters have single way air through direction that must be followed to achieve the filter's efficiency.
8. **Air Volume Controller (Optional).** An finger valve can control the compressed air volume release to the equipment. The valve is installed in the back of the controller in place of the 1/4 inlet.



## Caution

- Make sure the compressed air pressure is less than 88PSI exceeding will make the lower efficiency and possibly damage the device.
- Stop using when the red LED light is on. This signifies at High Voltage issue and the gun may not be eliminating static. Check the unit for proper operation (Verification procedure below); return to Transforming Technologies if needed.
- Keep away from humid, corrosive, flammable, and dusty environments. Do not allow water to enter the unit.
- The compressed air must be clean and dry.

## Verification

Transforming Technologies Ionizers are inherently balanced by design, so there are no calibration adjustments. Periodic verification of the calibration 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 (decay time)** and **balance** according to the Charge Plate's instructions. Compare the ion output and balance to the ionizer's published data sheet and verify the numbers are within limits.

The ionizer can be sent to Transforming Technologies and our technicians can verify the ionizers calibration. Our intent is to clearly identify the type of calibration service we provide. We provide a basic, traceable calibration service that is sometimes referred to as Level 1 calibration.

## Maintenance

### Emitter Point Cleaning Procedure

The BFNG10 requires minimal maintenance. While the BFNG10 does not generate particles itself, dust particles, moisture, and oil from compressed air can affect the performance of the air gun. Periodic cleaning of the emitter point is necessary to ensure the air



gun is working properly. Remove the plastic tip to expose the metal emitter point. Take care because the tip is very sharp. Clean the tip with IPA and a clean cloth. Allow the tip to completely dry before using (1-5 mins).

Clean the tip at least once a year. The frequency of emitter point cleaning will depend on the environment and quality of the air source. Appearance of the tip and the performance of the gun will signify a cleaning is needed.

If the unit does not work properly, please contact Transforming Technologies. DO NOT take apart the unit, or attempt to provide self maintenance as this will void the warranty.

## **Service and Warranty**

Transforming Technologies, LLC provides a limited warranty for the Model BFNG10 ionizing air nozzle. 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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