

# DESCO INDUSTRIES INCORPORATED

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## Compressed Air Ionizer Calibration Procedure

Test using a version of EOS/ESD STM3.1. Observe and record offset voltage (float voltage) in voltage, measure of discharge time for +1000volts to +100volts, and -1000volts to -100volts in seconds.

### Equipment and tools used:

- Charged Plate Monitor (CPM)
- Medium sizes insulative flat head screw driver

### Set-up:

1. Refer to EOS/ESD STM3.1, 6.4 Compressed gas ionizers – guns and nozzles. Test should be performed on static dissipative worksurface. Testing technician and worksurface needs to be properly grounded.
2. Refer to figure 14 – Test location for compressed gas – Guns or nozzles on page 13. CPM needs to be 6” from the center of the CPM plate to worksurface. Tip of air nozzle needs to be at 6” away from surface of CPM plate.

### Testing:

Lab environment should be at 75°F at +/-5°F, relative humidity at 45% at +/-5% RH. Observe offset voltage for no less than 10sec before recording.

	MFG Specifications	Recorded Values
Offset voltage (floating voltage) in voltage	+/-25 volts	
Discharge time, +1000volts to +100volts in seconds	2 sec or less	
Discharge time, -1000volts to -100volts in seconds	2 sec or less	

### Adjustments:

Adjustments to the offset voltage could be made by using an insulative flat head screwdriver. Balancing pot is location on the side of controller, where the white plastic cap is covering it.

### Notes:

The emitter pin is the source of ion emissions. The emitter needs to be absolutely clean of dirt and debris. The emitter pin is located inside aluminum nozzle head. Gently unscrew tip to expose emitter pin. Using 99% Isopropyl Alcohol is highly recommended in cleaning emitter pins. In environments where the humidity is higher than 60%, you will notice a much higher discharge time, due to ion recombining with air molecules.