

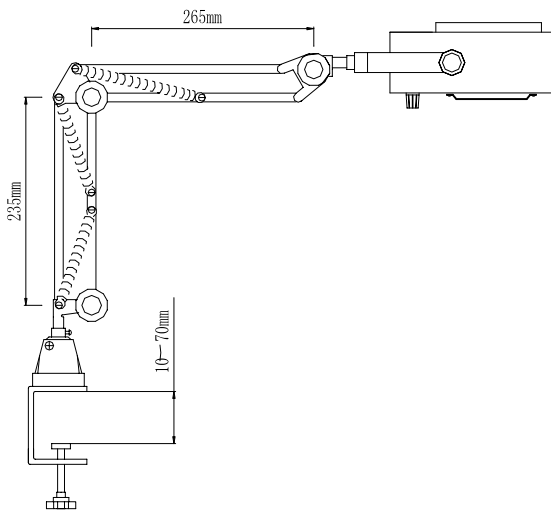
STATIC ELIMINATOR

I443A

INSTRUCTION MANUAL

Thank you for purchasing a Static Eliminator. It is designed to eliminate the static charge from a charged object. Please read this manual before operating the static eliminator. Keep this manual readily accessible for reference.

The static eliminator can be mounted on the arm of optional moveable fixture to provide a wider range of angles and positions from which to approach the charged body.



Arm stand

***Specifications and design subject will be changed without notice.**

Precautions

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WARNING

- Warnings and cautions are placed at critical points in this manual to direct the operator's attention to significant items. They are defined as follows:

WARNING:

Failure to comply with a **WARNING** may result in serious injury or death.

CAUTION:

Failure to comply with a **CAUTION** may result in injury to the operator, or damage to the items involved.

- High voltages are produced inside the static eliminator main unit. Observe the following warning to avoid the danger of electric shock.
 - * Do not touch the electrodes while the power is ON.
 - * Do not put metal parts or other foreign objects into the panel.
 - * Carry on daily inspection and regular maintenance procedures.
- This unit is not explosion proof. Do not use this unit near combustible gases or organic solvents.

CAUTION

To prevent accidents and failures, be sure to observe the following precautions:

- Do not use the unit near flammable materials.
- Turn off the power after using.

- When changing parts of the unit, only use genuine replacement parts.
- Do not wet the unit or use it with wet hands.
- Remove power cord by holding the plug, not the cord.

Section 1 Summary

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Thank you for purchasing this static eliminator. It is important to read this instruction before operating and installing. It helps to installation, use and maintenance. Fail to do so could result in serious personal injury and/ or damage to the equipment.

The blower is designed to purify air in room and eliminate static charge for sensitive electronic components. It can be applied in inspection, testing, assembly and laboratory environments. The blower can also be used where static charge causes problems such as: dust attached on product, misalignment of small parts due to electrostatic “jumping”, and undesirable adhesion of plastic films due to static charge.

This blower is portable ionized air blower, plastic enclosure, legerity and insulation. It uses a small fan to produce large airflow. The volume of airflow is controlled by variable speed knob which provides a wide range of airflow settings. The ionizer uses a transformer which produces low current and high voltage. This transformer is inherently current limited for safety. The transformer output also contains current limiting resistor which provides redundant safety and enhances the ionization stability. The high voltage is applied to a row of tungsten steel ion emitters which produce positive and negative ions, and the ions will be output with airflow. It is this intense electric field that injects alternating polarity ions into the airflow. The shaped airflow exiting the Blower carries these ions over a broad area for static elimination. Directing the airflow on an object that has a static electricity charge will neutralize the charge. If the object has a positive static charge, it will draw negative ions from the airflow. If the object has a negative static charge, it will draw positive ions from the airflow. The ions are attracted to

the oppositely charged object and neutralize the charge on the object.

Section 10 Trouble shooting

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WARNING

To avoid shock, always, unplug the power cord before inspecting the unit or changing parts.

1. The unit will not operate when the power switch is turn on.

Check 1: Is the fuse broken?

Action: Replace the fuse

Check 2: Is the power cord plugged in?

Action: Plug it in.

Note:

*** There is a spare fuse in the fuse holder.**

*** Be sure to replace it with a fuse of the same specification.**

2. The air is airflow but the static is not eliminated.

Check 1: Is dust or other foreign matter collected on the electrodes?

Action: Clean the electrodes.

Check 2: Is the filter dirty?

Action: Clean or change the filter.

For any problems other than those listed above, contact our company or our sales agents in your area.

Section 11 Optional /Replacement parts

The filtration sponge is a replacement part, if you need, you can order. When cleaning the filtration sponge, rinse the sponge in plain water and gently

squeezing. If the dust is stubborn, wash the sponge in mild soap then rinse.

be read with the static meter. Turn on the BLOWER and set the fan speed to high. Hold the plastic 30cm from the ionized air outlet for about 5 seconds. Remove the plastic from the ionized air stream and measure the static charge. The plastic should be neutralized.

If no instrument is available, the unit's operation can be verified with the following procedure. Tear off about a 25cm length of transparent tape. You will note that the tape is charged and will be easily attracted to a nearby surface when the tape is held vertically approximately 30mm from it. Make the tape pass through the ionized air stream approximately 30cm from the unit and 5 seconds later, approach the non-adhesive side of the tape with your free hand. If the charge has been neutralized, it will not attract.

Do not try to verify operation of the unit by drawing a spark from an ion emitter point. The design of the balancing circuit makes the "spark test" inconclusive. Sustained grounding of the ion emitters may damage the balancing circuit.

Note: When performing this procedure, do not use a plastic surface such as Plexiglas as the surface, since itself maybe charged and attract the tape. A "safe" surface would be a metal leg or drawer front on a workbench.

Note: If the ion balance deflection is too much, please contact agent or our company.

1. Daily inspection

- * Make sure no abnormal odor, smoke, or abnormal noises are emitted from the unit while it is running.
- * If any abnormal odor, smoke, or abnormal noises is observed, stop using immediately. Turn the switch off and unplug the power cord from the socket. Contact agent.

* Check if it is grounded correctly.

Section 2 Features

1. Compact design, light weight, portable and adjustable angle.
2. Rapidly neutralizes static charges.
3. Ion balance and stability is very good.
4. Wide ion air area.
5. Variable speed fan with wide range of airflow.
6. Plastic enclosure and good insulation.
7. Filter is installed with magnet, convenient to clean.

Section 3 Specifications

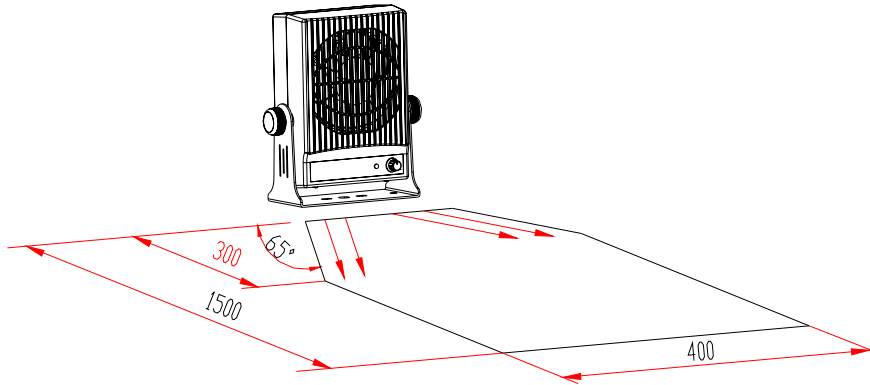
Ion balance: less than $\pm 5V$ when regulating in the company,
determined as association standard ANSI/ESD-S20.20-1999

Output voltage: $\pm 5000VDC$

Ozone Production: less than 0.01 PPM

Measured 15cm from the unit.

Efficiency range of ionizing air area: 40cm \times 150cm

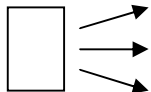


Audible Noise:

Fan Speed
 Low Page 3
40dB
 High 45dB
 Measured 1m from the unit.

Eliminating static time (s):

Fan Speed – High

	30cm	60cm	90cm	120cm	
	1.4	2.5	5.4	8.8	15cm
	1.1	2.7	6	9.2	Center Line
	1.4	2.5	5.4	8.8	15cm

1. Ion balance and neutralizing time is measured according to American Standard ESD-STM 3.1-2000 and ANSI/EOS/ESD-S3.1-1991 using CPM374 charged plate monitor.
2. Neutralizing times from 1000 volts to 100 volts are measured as the above show.
3. Above testing value will vary with difference temperature, humidity and

ambient environment.

Environment Temperature: 0°C--50°C

Housing material: steel

Weight: 1.25Kg (without power cord)

Dimension 13.5cm(W)×19.0cm(H)×7.5cm(D)

Section 9 Maintenance Page 4


WARNING

Do not neglect to perform the maintenance and daily inspection described as follows. Dust collected on high voltage areas may lead to a fire hazard.

2. Clean the electrodes

Turn the power switch off and unplug the power cord.

Take out the fixture behind the unit, clean the electrode and its white fixture socket with the attached cotton swabs dipped with alcohol.

 **CAUTION: Make sure fibers from the cotton swabs don't stick the electrodes.**

3. Clean filter

Turn the power switch off and unplug the power cord. Take out the fixture from the rear of the unit and separate the shield from sponge. Rinse the filter with clean water. If filtration sponge is used, wash and squeeze it gently. If

the dirt is stubborn, wash the filter in mild soap. After wiping up the plastic shield with paper or clean towels and allowing the sponge become dry, reinstall the fixture again.

Note: If the filter is used, regular clean should be performed. A clean filter is vital for the operation of this unit, clean regularly.

4. Ion output check

CMP374 (Charge plate monitor) can be used to test the neutralizing time and ion balance.

If a charged plate monitor is not available, but a handheld electrostatic field-meter is available, ion output may be checked with the following procedure. Take a piece of plastic and rub it with cloth until static charge can

2. Turn on and off power switch ^{Page9}

The power switch is on the power socket behind the unit.

Turn the power switch on, the Blower works and produce the ion air.

Turn the power switch off, the Blower stops working.

3. Adjusting air volume

In accordance with work requirement, adjust the airflow adjusting knob to select the appropriate airflow. Turn it clockwise to increase the airflow and turn it anticlockwise to decrease the airflow.

4. Adjusting angle

Loose the angle adjusting knob. Direct the unit toward the charged body. Adjust the position and the angel of the unit, then tighten the adjusting knob.

5. Eliminate static electricity

As the ionized air meets with the charged body, it begins to neutralize the static charge.

6. Shut down

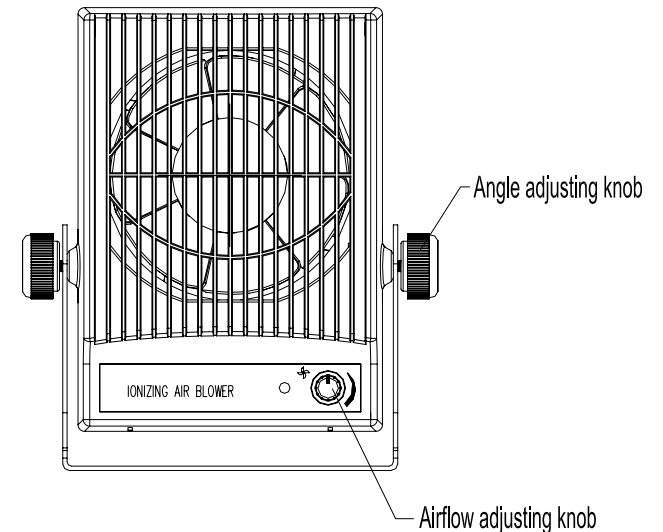
After using, turn the power switch off and unplug the power cord from the socket.



If any abnormal odor or abnormal noise is observed, stop using immediately. Turn the power switch off and unplug the power cord from the socket. Contact agent or our company.

Section 4 Picture

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Section 5 Safety

Please read the instruction manual completely before operating the device. This machine is equipped with a 3-wires grounding plug and must be plugged into a 3-terminal grounded socket. Do not modify plug or use an ungrounded power socket. If an extension cord is necessary, use only a 3-wire extension cord that provides grounding.

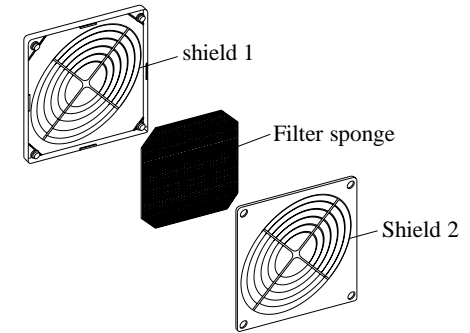
To prevent accidents and failures, be sure to observe the following precautions:

- 1) Read this manual carefully before operating and installing.
- 2) Make sure the voltage accord with rated voltage on the nameplate behind the unit.
- 3) This machine should be equipped with a 3-wires grounding plug and must be plugged into a 3-terminal grounded socket.
- 4) Do not insert any object through intake or outlet grille.
- 5) Do not operate the device under inflammable or explosive atmospheres.
- 6) Maintenance and inspection inside the unit should be carried out by qualified professional.
- 7) Don't touch the ion emitter when working.

Section 6 Installation

1. The Blower is designed for portable or permanent operation. Its base stand can be placed at workbench or installed on flat surface. If the base stand is installed on the wall or ceiling using 4 diameter screws, the blower can be used on moveable fixture. (Moveable fixture is optional.)
2. Under the unclean environment, you can install the filtration sponge. Take out the fixture and separate it. Place sponge in the shield 1 and cover it with the shield 2, press down the edge of the shield 2, so that it will be

locked in. The fixture is fixed with magnet, place or take out it directly.



3. The Blower should be placed approximately 300mm to 900mm from the critical work area or objects to be neutralized. The closer the unit is to the charged body, the higher the static eliminating effect will be. It should be positioned to cover as much of the area as possible with the ionized air stream. The air stream can be directed upward or downward by tilting the unit in its stand. Loosen the angle adjusting knob. Direct the unit toward the charged body from which you wish to eliminate static electricity. Adjust the position and the angle of the unit and tighten the adjusting knob.
4. Operate the Blower with right power voltage, the frequency is 50/60Hz. For safety, this unit is equipped with a 3-wires grounding plug and must be plugged into a 3-terminal grounded socket. Do not modifying plug or using an ungrounded power socket.

Section 7 Inspection before using

1. Clean the ion emitter.
2. Check the grounding.
3. Check the device is good or not.
4. Check humidity and other pollutant.

5. Check whether the used voltage accord with the voltage on the nameplate.

Section 8 Operation

1. Switch on power

Affirm whether the used voltage accord with the voltage on the nameplate.

Insert the power plug into power socket behind the unit and 3-terminal grounded socket.