

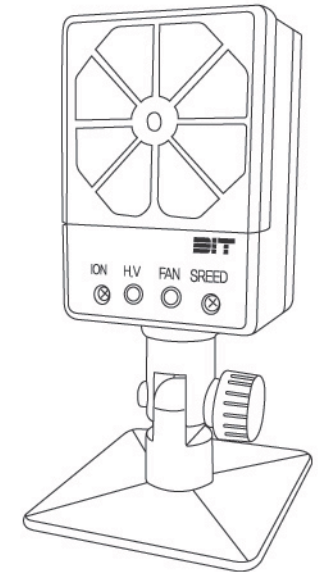
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Instruction Manual

ION BLOWER SF-40A



This instruction manual describes the functions and operation of SF-40A Model. Please read this manual carefully to ensure safe use and maximum performance of the product.
 This product requires DC 24V power supply.
 Check to make sure that you have the correct power supply.

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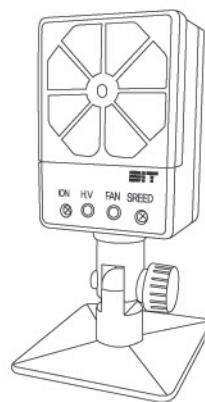
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APPENDIX

Section 1_ Product Characteristics

1.1 SF-40A Mini Fan Blower



Thank you for purchasing SF-40A Mini Fan Blower from DIT.

This product uses a process known as corona electric discharge to generate positive(+) and negative(-) air ions which are then blown to the target object to neutralize any static electric charge thereon. The product is convenient to use and easy-to-install anywhere.

With SF-40A model, the controls allow easy adjustments of air output and direction. Also, ion balance may be flexibly adjusted to meet any specific usage condition.

◀ Diagram 1. SF-40A Model

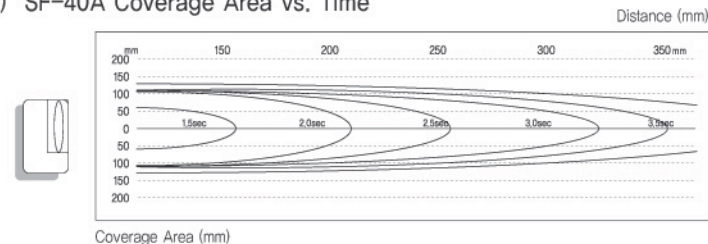
1.2 ESD Elimination Performance

1) Decay Time vs. Distance

Distance(cm)	Decay Time(sec)
10	1 sec
15	1.5 sec
20	2.0 sec
30	3.0 sec

- Decay Time : $\pm 1000V$ to $\pm 100V$
- Charge Plate Capacitance : 20pF
- Ambient Conditions : 25°C, 45%RH

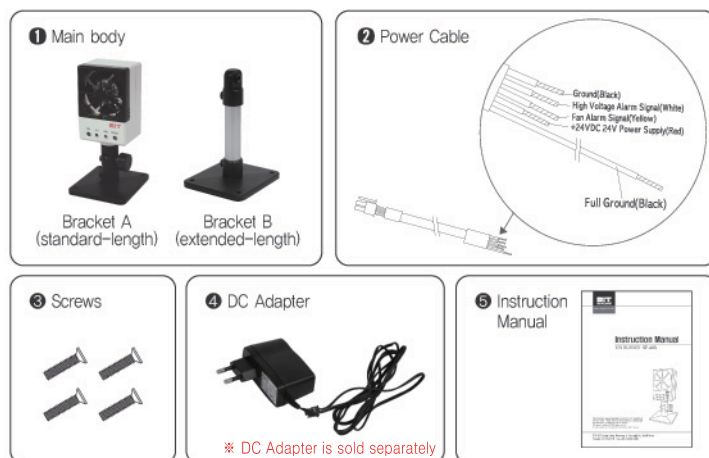
2) SF-40A Coverage Area vs. Time



1.3 SF-40A Configuration

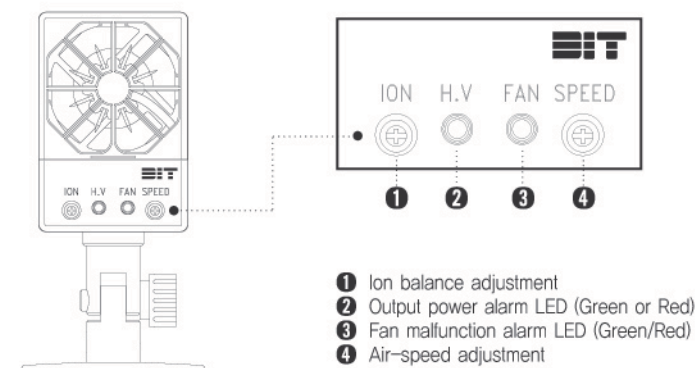
Please check to see that you are in possession of the following:

- 1 Main body with fan, standard-length(A) bracket, and extended-length(B) bracket
- 2 Power Cable
Power cable (DC 24V, 4-pin I/O, 1500mm)
Caution Always make sure to match lead-wire colors when connecting to power.
Always connect to Ground in order to protect against electric shock and to be more effective in controlling static electricity.
- 3 Screws
The product comes with screws as shown in the diagram.
- 4 DC Adapter (Sold Separately)
- 5 Instruction Manual



1.4 Product Nomenclature & Functions

1.4.1 Controls Panel



1.4.2 Controls and Displays Panel (Front-side)



- 1 Ion Balance Adjustments
Wait for 1 minute after turning on the power before checking ion balance.
Adjust as needed by turning the knob clockwise or counterclockwise.

- 2 Power malfunction alarm LED (Green or Red)
shows whether ion emissions are.

LAMP	Red	Green	Check
HV	NG	Good	Ion Emission

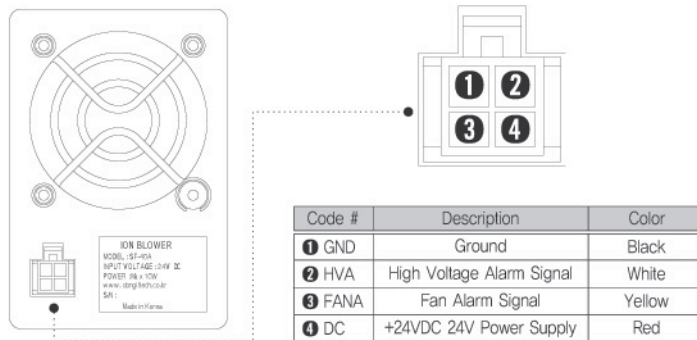
- 3 Fan malfunction alarm LED (Green/Red)
shows whether fans are functioning correctly or not.

LAMP	Red	Green	Check
FAN	NG	Good	Fan Status

- 4 Air Speed Adjustment
To increase air speed use a Phillips screw driver to turn the knob in clockwise direction ↻
To decrease air speed use a Phillips screw driver to turn the knob in counterclockwise direction ↻

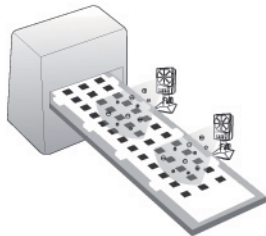
1.4 Product Nomenclature & Functions

1.4.3 Wire Connection (Rear-side)

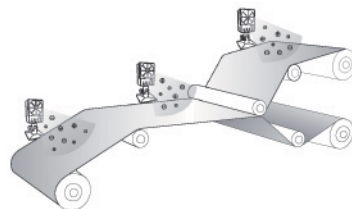


Section 2_ Product Installation

2.1 Installation Guide for Various Manufacturing Processes



- Semiconductor / LCD Process
- Handphone Mfg. Process

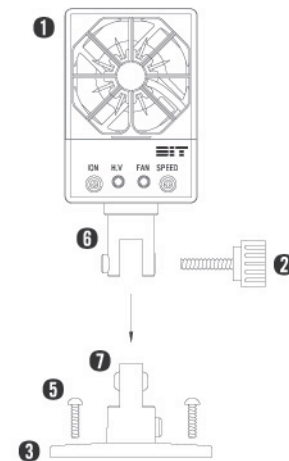


- Film Manufacturing Process
- BLU Manufacturing Process

And other countless applications in electronics industry which require ESD control.

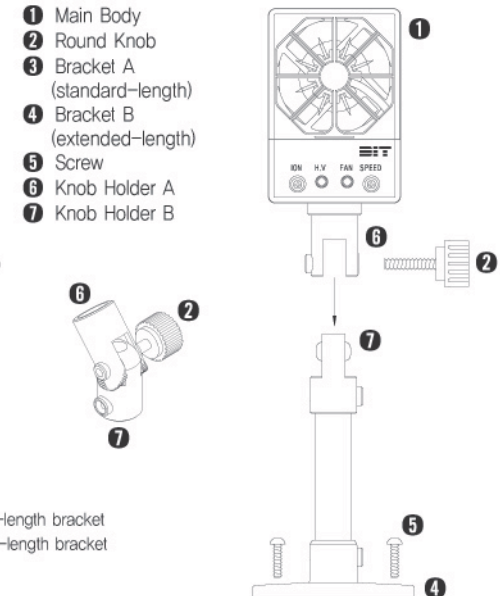
2.2 Product Assembly & Installation

2.2.1 Bracket A (standard-length) Assembly



- ▲ Diagram 1. Connection to standard-length bracket
- ▶ Diagram 2. Connection to extended-length bracket

2.2.2 Bracket B (extended-length) Assembly



2.3 Installation Procedures

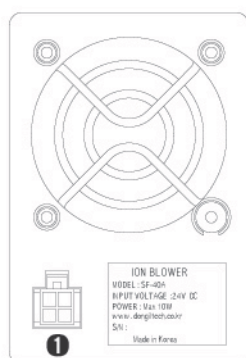
- 1 Install this product in equipment or on top of workstation making sure that no material obstruction lies between the product and the target object.
- 2 Connect the ground cable to the screw on the right side of the rear cover.
- 3 Connect power cable to DC24V outlet of the product before use.
- 4 In case of using an adapter (separately sold for), connect one end to the product and the plug to AC110~220V outlet before use.
- 5 When initially connected to power, HV Alarm LED comes on red for 0.5 seconds before switching on to green light. The green light is an indication that the static electricity is being removed from target object lying within the area of coverage by ion emissions.

2.4. Precautions During Installation

- 1 As safety precautions, do not place metallic objects or bare wires close to the product.
- 2 Do not move the product, clean emitter pins or touch the product during operations.
- 3 Remove water, oil/grease, and dust from the vicinity and assure that the environmental conditions are maintained below 50°C temperature and 70% relative humidity.

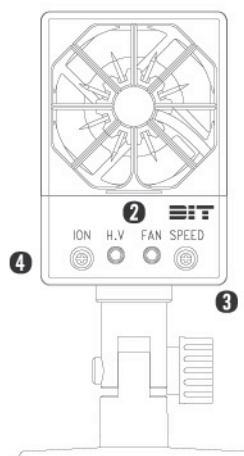
Section 3_ Operation of the Product

3.1 How to Operate



- 1 Connect Power Cable to 4Pin I/O connector to supply DC24V to the product, and connect ground wire at the opposite end to the ground.

- 2 Check if both HV & Fan LED's are lighted green which indicates that the product is functioning properly.
- 3 Adjust fan speed as is appropriate for the location where the product is installed.
- 4 Check to see if ion balance level is within $\pm 10V$ range and adjust accordingly if out of range.

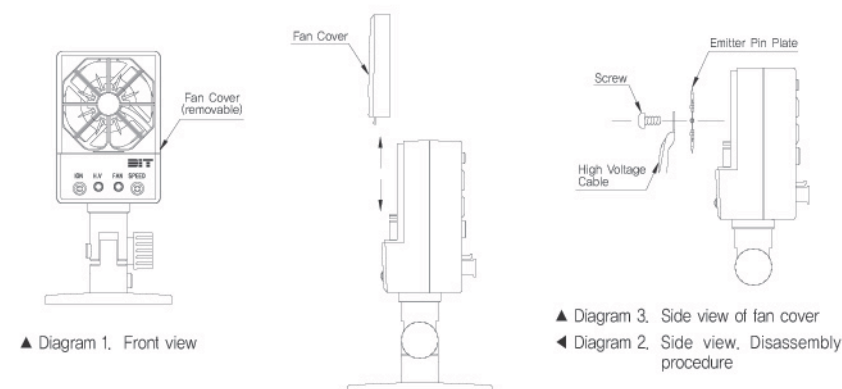


3.2 Safety Instructions

- 1 Please confirm DC24V outlet before connecting power cable.
- 2 Beware of high voltage! Avoid touching the product during operation and never let hands or tools to come near the vicinity of the fans or air inlet/outlet.
- 3 Do not use chemicals or regular cleaning agents to clean the product.
- 4 Do not use the product for purpose other than ESD removal.
- 5 Maintain safe distance from the product during the operation and no dot inhale air in front of the fan outlet for extended period of time.
- 6 Attach the product securely to a fixed object to assure it doesn't come off during the operation.
- 7 Install only in places out of reach of children.
- 8 Avoid installation close to source of combustion, in direct sunlight, or in dusty environment.

3.3 Cleaning & Maintenance

- 1 In order to clean emitter pins, first unplug the adapter from the electric outlet. Grab the sides of the fan cover using the thumb and the index finger, press firmly, lift up and remove the fan cover. Dusts and other residue collected may be removed using a brush or a cotton Q-tip moistened with alcohol.
- 2 Use a Philips screwdriver to turn in counter-clockwise direction to unfasten the screw as shown in Diagram 3 and detach high-voltage cable and emitter pin plate.
- 3 Use cotton Q-tips and alcohol or a brush to clean emitter pins making sure not to leave finger marks on the pins.
- 4 When finished with cleaning, reassemble the product in the reverse order of the disassembly procedures and use after connecting to power supply.



▲ Diagram 1. Front view

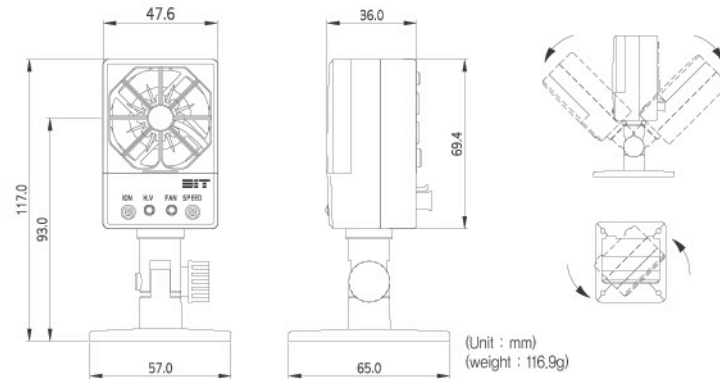
▲ Diagram 3. Side view of fan cover

◀ Diagram 2. Side view. Disassembly procedure

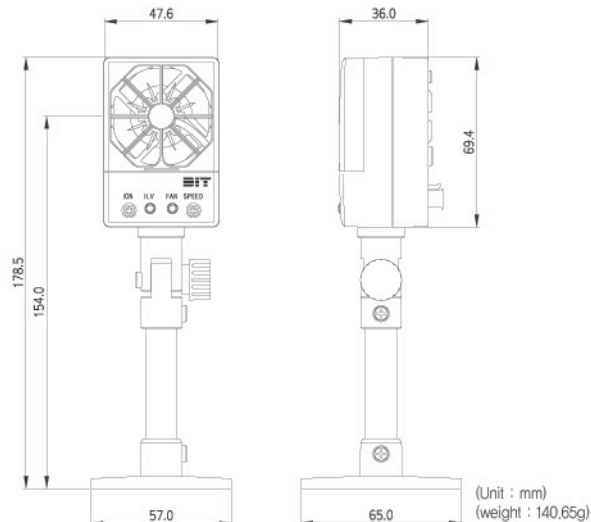
Section 4_ Product Specifications

4.1 Product Exterior

A. Bracket A (standard-length)



B. Bracket B (extended-length)



4.2 Product Specifications

Category	Specifications
Dimensions	46mm(W) x 68.5mm(H) x 36mm(D)
Input Voltage	DC 24V
Input Current	0.15A(Max)
Ion Emission	High frequency AC
Emitter Pins	Tungsten, Titanium
Output Power	5.5kVp-p
Ion Balance	± 10V
Decay Time	1.5sec at 15cm
Air Flow	0.27m ³ /min(Max)
Ozone Output	less than 0.05ppm
Displays	High Voltage LED (G/R), Fan LED (G/R) G(Green) : Normal, R(Red) : Abnormal
Adjustable Controls	Fan Speed (manual), Ion Balance (manual)
Ambient Temperature	0°C ~ +50 °C
Ambient Humidity	35 ~ 65%RH (no condensation)
Weight	approx. 116.9g (Bracket A)
Adaptor	External

- ① The measurements are valid subject to following conditions.

Decay Time
±1000V to ±100V
Charge Plate Capacitance
20pF
Ambient Conditions
25°C, 45% RH

Please contact DIT if you need more detailed information regarding SF-40A Model.

- ② Ideal distance from the target object for the installation of SF-40A is 150mm.
- ③ Height (H) is for "Main Body" unattached to standard or extended-length bracket.

※ Note that the details included in this manual may be changed without notice due to product improvement.

APPENDIX

1. Troubleshooting

Problems	Remedy
LED or Fans do not work	Check connection to power outlet Check cable connection to rear power inlet If no result, then contact A/S for assistance
H.V (High Voltage) LED is lighted red	If ion emissions could not be detected after more than 5 seconds following power-on, then contact A/S for assistance
Fan LED is lighted red yet Fans do not work	Please contact A/S for assistance
The air flow originating from the product imparts slight fishy odor	This is normal in high voltage working environment.
Can smell something burning	Immediately unplug power cable and contact A/S for assistance.