



# BFN703<sup>+</sup> OVERHEAD DC IONIZING BLOWER MANUAL

BFN-703+ Overhead Ionizing Blower has outstanding ion elimination performance. It's the ideal equipment for preventing static pollution & interruption in the areas of electronic production line, maintenance bench, package bench, ion shower devices, etc.

**▲ Note:** Please read this operating instruction manual thoroughly and completely before installation and operation. All of the BFN series electrostatic devices shouldn't be used under flammable and explosive environment. Don't use common and temporary socket as power source. All the BFN series ionic blowers must use the power socket equipped with safety standard power cord and mustn't change or use other Power socket with bad grounding system.

## Safety

BFN-703+ Overhead Ionizing Blowers have reliable safety loop design and excellent grounding equipments. In the meantime, there are jiggle switches under the front and back covers. If the front and back covers fall off, they can cut off the power by themselves immediately to avoid the accidents.

- Forbid to operate the blowers in flammable and explosive environment.
- Forbid to insert objects into the air outlet.
- Make sure reliable grounding before operating.
- Ensure that the power is cut off when cleaning and maintenance. After you wiper the blowers by alcohol and other preparations (including metal crust), you mustn't operate the blowers unless the blowers are completely dry.
- Don't disassemble or repair blowers by yourself.

## Features

- Alarm or non-alarm function available (option)
- Thin, light, convenient and practical.
- With large ion output volume, can eliminate static quickly.
- Optional air speed (you can choose any air speed you like) .
- Convenient maintenance, assemble and disassemble front and back cover, easy to clean.
- Strict safety protection fittings.

## Application

Designed especially for areas of production line, maintenance station, test station, ion shower equipment, etc. Suitable for any situation.

## Specification

- Power Supply: AC 220V  $\pm$  15% /50Hz or AC 110V 15% /60Hz
- Operating Current: 0.12A (Fan fixed at the highest speed)
- Air Output: 250CFM
- Effective Coverage: 300~1600mm
- Ion Balance:  $\leq$ 5V
- Decay time:  $\leq$ 2.0s (decrease from  $\pm$ 1000V to  $\pm$ 100V at 300mm away from the air mouth)  
Test Condition: 25°C humidity 55% , measure up with the EOS/ESD criterion
- Operating Condition 0°C~50°C(temperature)20%~85%(relative humidity)
- Color: off white +sky blue (plastic)
- Dimension: W955mm x H85mm x D180mm
- Material: Aluminium
- Weight: 4.5kg

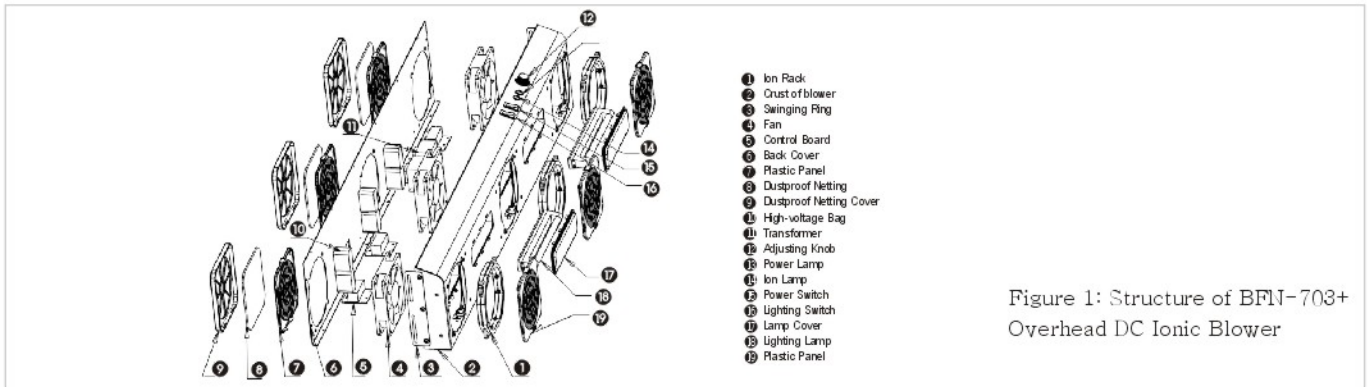
## Packing list

- BFN-703+ ionizing blower: 1 set
- Power supply: 1 piece

- Instruction Manual: 1 copy
- Warranty Card: 1 copy

- Ex-work inspection report: 1 copy

## Structure



## Installation and application

Fix the bracket of blowers on proper plane by M6 bolts or hung on proper plane by pendant chains. Make sure the distance falls into the valid range of 300mm to 1600mm and ensure the air covers the protected area. The fan should blow the hands and area needed to be protected not human body.

Elimination time is closely related to the strength or weakness of the ionic air. Farther from the air outlet and weaker the air bunch is, longer the elimination time will be, if the air speed is same. We suggest that BFN-703+ can work most efficiently at the distance of 300-1400mm.

## Operating guidance

### ■ Turn on the blowers

When the ion blower is installed and fixed, please check the power cords and turn the power switch to "ON". At this time, the ionizer indicator is on. At the beginning, the air speed is maximal, because of full-pressure start. Of course, you can adjust the speed according to the practical situation.

**▲ Note:** Forbid to insert any objects into air outlet and must ensure good grounding system before operating.

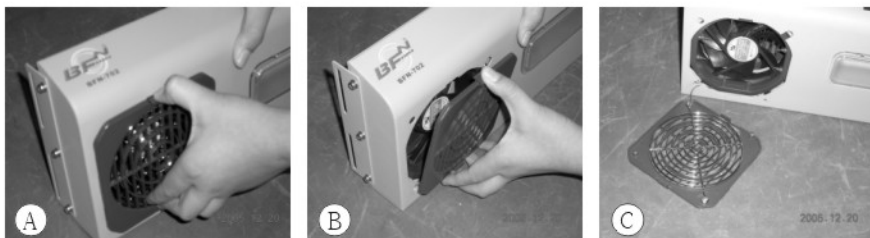
## Regular maintenance

Ensure the ionic blower can work normally by periodical cleaning and calibration.

### ■ Cleaning

BFN series blowers themselves don't release dusts. They can completely measure up the requirements of clean environments. While it is necessary to clean them to ensure they can work normally due to the particles and dusts floating around, which may pollute the ion blowers.

Cleaning for fan and needle rack: The unique structure design of BFN-703+ is very convenient for cleaning the inner parts of blowers. Please find the specific operation shown as figures.



- ① Press the button on the top of plastic front cover downwards and make the button separate from metal crust.
- ② Lightly pull the front cover upwards and make it completely separate from the blower.

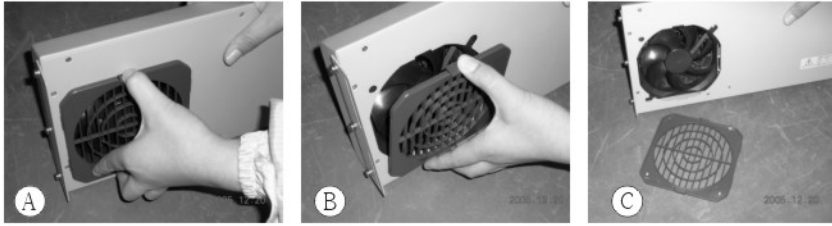
**▲ Note:** there are orientating forelock and corresponding aperture between plastic cover and metal blower, So please be careful when pulling out plastic cover.

- ③ Make it completely separate from the blower.

**▲ Note:** metal induction netting inside of plastic cover connects with a flexible cord, so please not break it.



After taking apart the front cover, we can disassemble the back cover. Please find the specific operation shown in following figures.



- Ⓐ Please press the button on the top of back cover downwards, and then make the top of cover separate from the metal crust.
- Ⓑ Finally, lightly pull the back cover upwards and make it completely separate from the blower.  
**▲ Note:** there are orientating forelock and corresponding aperture between plastic cover and metal blower, So please be careful when pulling out plastic cover.
- Ⓒ Make it completely separate from the blower.

After disassembling the front and back covers, the inside fan and ion needle rack of the blower will expose outside. At this time, we can use soft brush and compressed air to remove the dust or to wipe the blower with tampons with 35% industrial alcohol. Suggestion: one time each year. Of course, you can clean the blower according to the practical situation.

**▲ Note:** Ensure that power supply to be turned off before cleaning and maintenance. When using alcohol and other solvents to clean (including metal crust), please don't turn on the blower until it is completely dry. Otherwise, it is possible to cause damage to blower or harm to human body. In order to avoid damage, please be careful when disassembling.

It's quite easy to replace the BFN 7 series products' ion needles, due to the unique insert-exact design on ion needles. The specific processes are as show in the following pictures.



- Ⓐ Disassemble the front cover, according to disassembling processes mentioned above. Put the cover lightly at the side of the blower.  
**▲ Attention:** make sure the induction cable free of any damage.
- Ⓑ Extract the needle by sharp-tip tweezers. Insert the new ion needle into relative ion needle hole.  
**▲ Attention:** make sure push the needle until it arrives the end of the hole and the length exposed outside is the same as others. Be careful and not hurt your hand.
- Ⓒ Push the induction cable at right position and assemble the front cover, according to the processes mentioned below.

After cleaning the fans and ion needle racks, we can assemble the plastic front and back cover. It is easy to operate. Please find the following figures for reference:



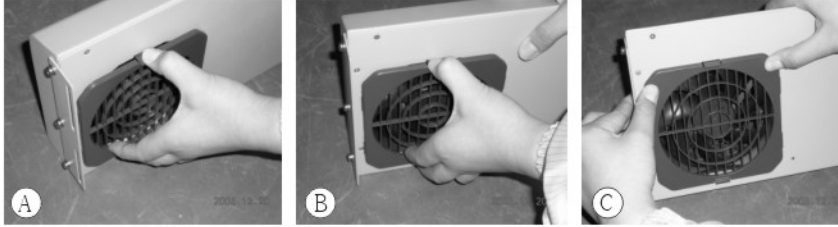
① Insert the button on the bottom of plastic covers into metal crust.

**▲ Note:** there are orientating forelock and corresponding aperture between plastic cover and metal blower, so please be careful when pushing in plastic cover.

② Push the button on the top of the front cover downwards into metal crust.

③ Push the front cover into the metal crust completely to make buttons lock tightly

After assembling the front cover, we'll assemble the back cover. Please find following pictures for reference:



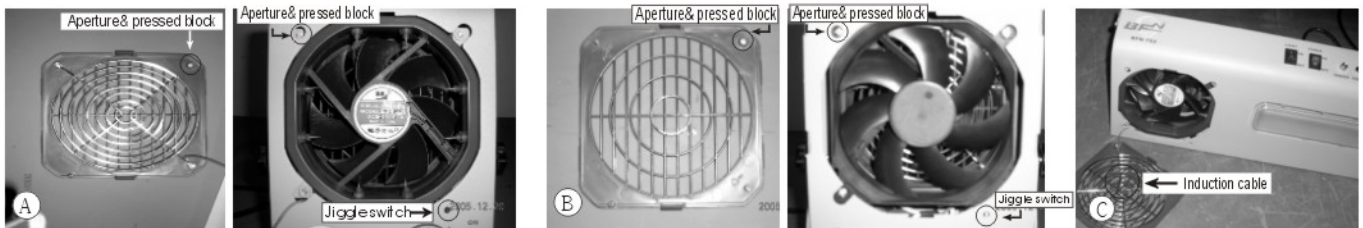
① Put the button on the bottom of plastic back cover into the slots of the bottom of metal crust.

**▲ Note:** there are orientating forelock and corresponding aperture between plastic cover and metal blower, so please be careful when pushing in plastic cover.

② Press the button on the top of back cover into the metal crust.

③ Push the whole back cover into metal crust to make the buttons lock tightly.

**▲ Note:** To avoid damage, please be careful when installation. Also, there are pressed blocks protecting safety loop under the front and back covers to pin jiggle switch, some orientating forelocks, aperture and induction connection wire. Make sure the pressed block pin jiggle switch and right into forelock and aperture, otherwise, the device can't work normally. Please refer to the following figures:



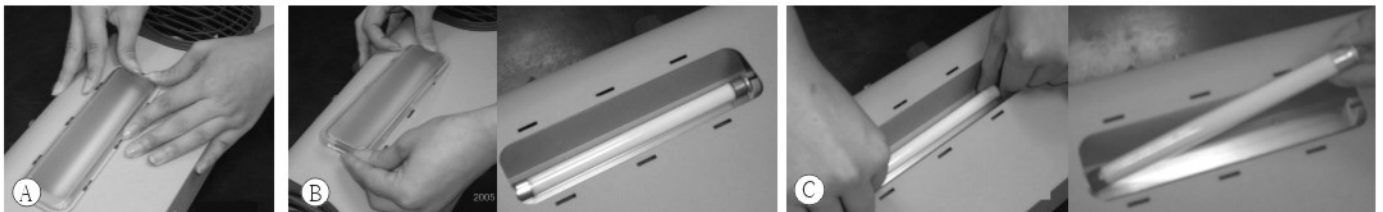
① Specific position of orientating forelock of front cover and crust, orientating aperture and pressed block of jiggle switch are as shown in the following figures.

② Specific position of orientating forelock of back cover and crust, orientating aperture and pressed block of jiggle switch are as shown in the following figures.

③ Connection wire between front cover and inductor.

### BFN-703+ replacement of lamp tube

BFN703 high-quality T4/5W energy-save lamp of ion blower can be used for working surface and it's brightness amounts to 25W incandescent lamp' brightness. Generally, no need to change. If it is necessary to change, please turn off the power supply and take the lamp cover down; and then press metal parts of the two ends of lamp tube and wrist them in order to separate from the lamp holder. Please refer to the following figures:

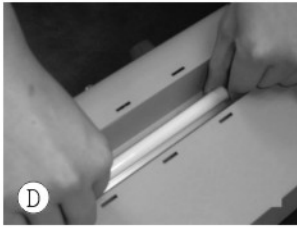


① Push the lamp cover toward left until lamp cover can't be moved.

② Lightly take the lamp cover up and the lamp tube will be exposed.

③ Handhold the metal parts of the two ends of lamp and turn around about 90°, and then take the replaced lamp tube out from the lamp holder.





- Ⓓ Handhold the metal parts of the two ends of lamp and insert it into lamp holder and turn around about 90° to make sure it's fasten enough.
- Ⓔ After replacing the lamp, please put the plastic buttons into metal grooves and make the lamp cover touch outer crust tightly. Finally, push the lamp cover to the right side until it can't be pushed.

**⚠ Note:** Ensure that the power supply is turned off before exchanging the lamp tube. Handhold the metal parts of lamp tube to twist rather than handhold glass part when taking apart and assembling the light tube. To avoid causing accident or damage, please carefully take apart.

### Calibration

BFN-703+ ionizing blowers has excellent steady capability, the parameters may vary with the affections of operating temperature and humidity and fluctuation of voltage.

Ion balance and static decay time test: can be tested at the working post by portable ionizer verification kit. We suggest one time each day at least.

Ion balance and static decay time calibration: can be carried out in labs by flat-plate electrostatic analysis instrument. Suggestion: one time each year at least.

This operation manual only for BFN-703+ users, it includes the components, operation and some concerning information, some upgrading property with continuing stability, slightly difference will be allowed with operation and manual.



Suppliers Information



2012 HORB Corporation/printed in China.  
P/N: 1.001.02.113