

KESD[®]

Fan-type Electrostatic Eliminator

Product executing standard: Q/320505KESD01



KF-21AW

High Frequency AC Ion Fan Operating Instruction

Please read carefully before using it!

KESD[®]

Special Destaticizing Device Manufacturer

Read Carefully before Using It

- Thank you very much to buy the KF series ion fan from the company.
- Please read the operation method carefully before operating it.
- Please put the product specification in a place where it can be seen at any time.
- Please use it according to the method recorded in the specification and operating manual; otherwise, the company assumes no responsibility.

Please observe the following precautions for security

1. To avoid electric shock and guarantee destaticizing property, make sure the KF-21AW grounding terminal is totally grounded.
2. Please don't use KF-21AW in places of fire or explosion due to combustible liquid or particles.
3. Prevent water, oil or flammable liquid splashing to KF-21AW; otherwise, KF-21AW may suffer electric breakdown, electric shock or product fault due to overhigh voltage.

4. When wiring on the production line, please don't wire with power line or high voltage wire or place them into same tubing; otherwise, the equipment operation may be abnormal due to disturbance.

5. Before power supply to the product or operating the product, please be sure to conduct safety confirmation within the work range of the equipment.

6. The service life of the spray point differs due to application environment and conditions. If the application environment is bad (for example, environment with too high humidity) or the spray point hasn't been cleaned for a long time; its performance may be declined. Therefore, must carry out maintenance regularly.

7. Please impose specified voltage to the product correctly; once imposing wrong voltage, it may result in the product can't develop its specified function, or result in the product damage or burning up.

8. Once smoking, strange flavor or strong voice appears, please immediately stop using the equipment; otherwise, it may result in fire hazard or electric shock.

9. Please don't use the product beyond its specification range; if using it beyond the specification range, it may lead to product fault, function stop or damage; in addition, it may also result in that its service life is obviously shortened.

10. Precise electronic parts are installed within the product. When using the product, please don't knock, fall down or hit against the product, or impose too much impact force to the product; otherwise, even the product appearance is not damaged, its internal may also be damaged or the operation may be abnormal.

■ **Brief Introduction of the Product**

1. The product has the function of cleaning the spray point automatically, which can reduce the cleaning and maintenance frequency of daily workers;

2. The product adds wireless network monitoring function, carrying out real time monitoring with wireless receiver and emitter;

3. The spray point can be cleaned with LED nixie tube according to the workshop environment; the time is 1-999 hours adjustable;

4. The product has whole machine locking function (referring to the button function description);

5. Automatic ion balance system; the ion balance can reach within $0 \pm 10V$.

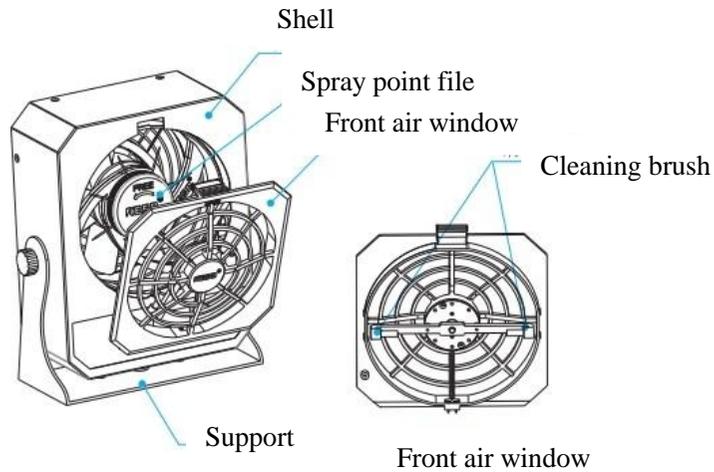
6. Equipped with destaticizing normal operation indicator light and high voltage abnormal warning indicator light;

7. Equipped with fan normal operation indicator light and abnormal warning indicator light;

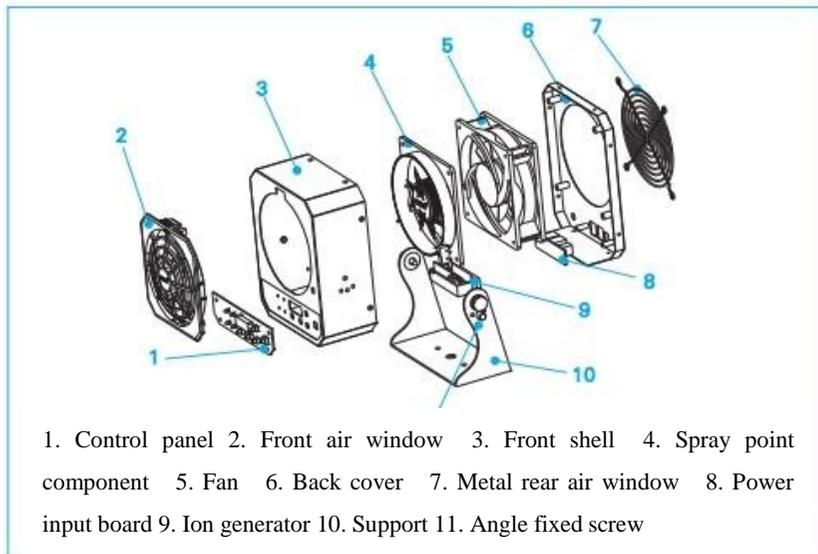
8. Apply special tungsten alloy additional acusector, which is not easy to be worn for long term use;

9. Spray point component and front air window can be flexibly dismantled, convenient for cleaning, maintenance, repair and replacement.

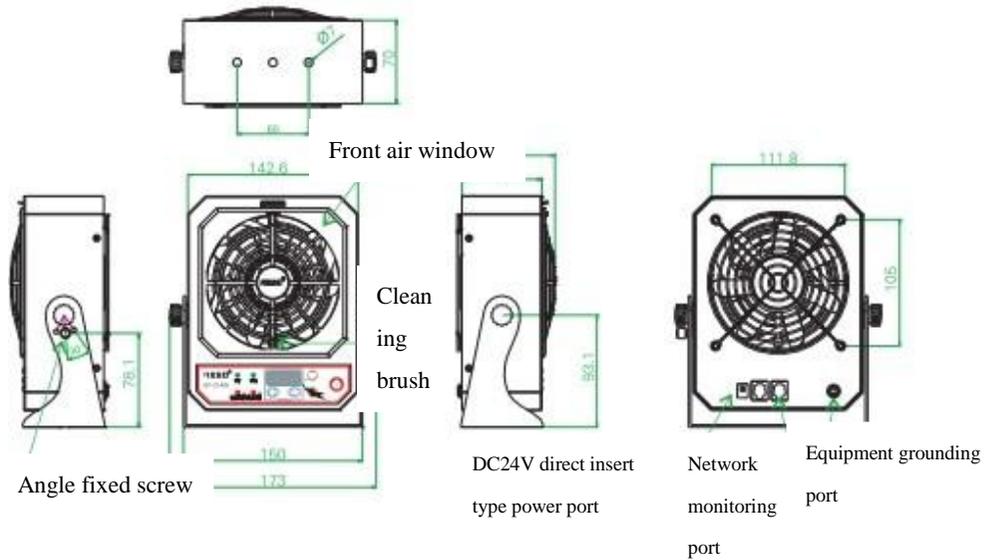
□ **Product structure diagram**



Product Breakdown Structure



Product Overall Dimension Drawing



Product Specification

Technical Parameters		
Input voltage	DC24V ±5%	
ion generating way	Corona discharge way	
Display LED	H.V	High voltage normal operation indicator light is on
	H.V ALARM	The indicator is on when discharge is abnormal and electric circuit (over-current) is abnormal; meanwhile, the buzzer sends out

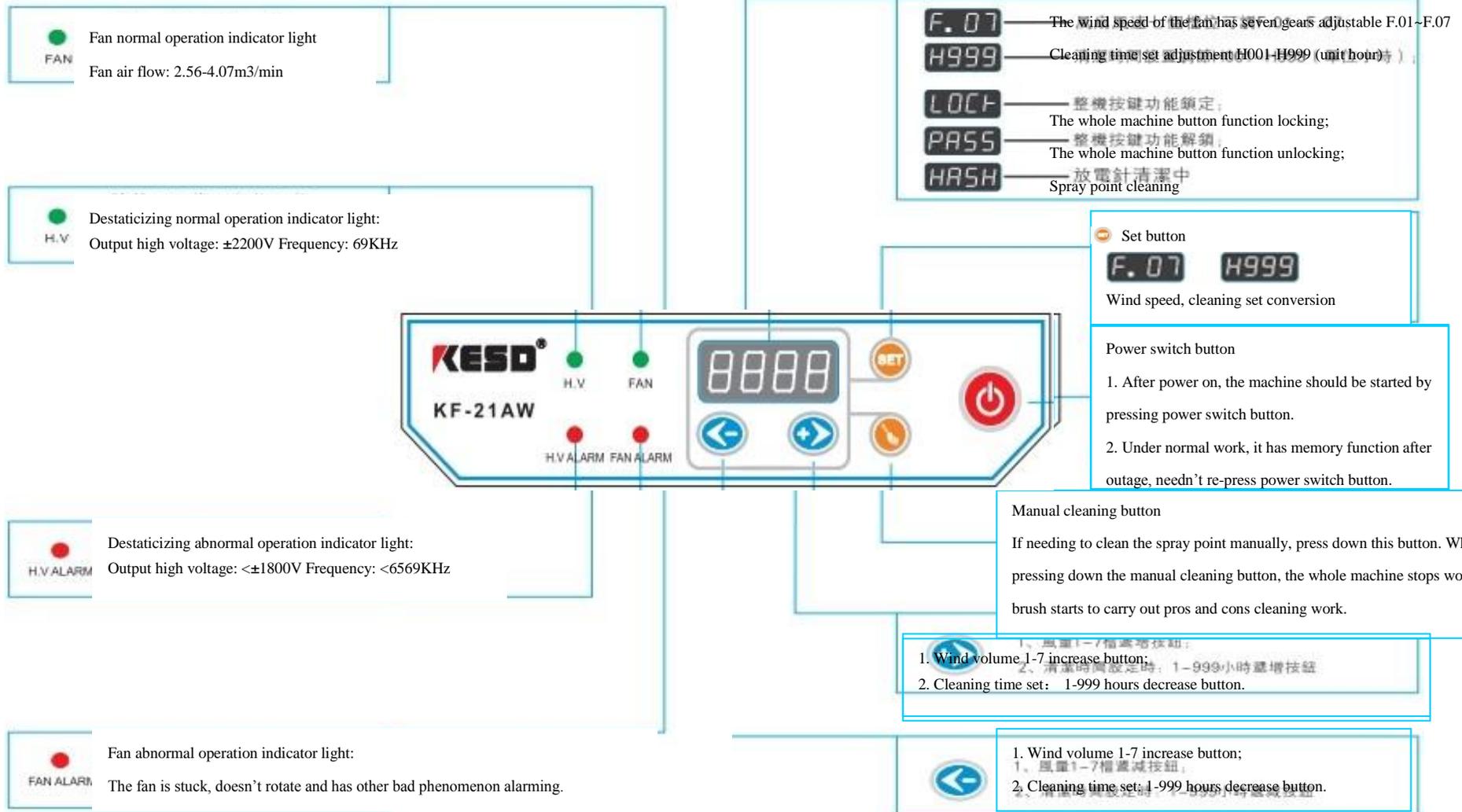
		alarm sound.
	FAN	The indicator light is on when the fan is operating normally.
	FAN ALA RM	The indicator light is on when the fan is stuck or doesn't rotate; meanwhile, the buzzer sends out alarm sound.
Fan air flow		2.56-4.07m ³ /min
Voltage regulation mode/ applied voltage		High frequency AC method $\pm 2200V$
Ion balance		Within $\pm 10V$ (measuring distance 300mm)
Destaticizing time		Within 2s (measuring distance 300mm)
Cleaning timer set time		Can set within 1-999 hours
Ozone generation amount (ppm)		Within 0.004ppm (measuring distance 50mm)
Service environment SJt		Indoor 0~40°C
Service environment humidity		15~75% (no condensation)
Overall size/mm		192x173x82.3
Weight/Kg		2.5Kg

□ **Performance Test**

Destaticizing Test Conditions				
Operating voltage: AC110V/60Hz or AC220V/50HZ				
Testing Voltage: $\pm 1000V - \pm 100V$				
Environment Temperature: 23°C ± 2 °C				
Distance		300mm	600mm	900mm
Decay Time	Positive	1.0s	2.3s	4.0s
	Negative	1.2s	2.8s	4.4s
Offset Voltage	Positive	<0 $\pm 10V$		
	Negative			

Note: Destaticizing property measurement value is determined according to America specification EOS/ESD-STM3.3-2006.
Test data will be changed due to the environment in test.

■ Button Function Description



□ **Maintenance**

Carry out briefly description to the daily cleaning and maintenance of desktop type ion fan and set forth specific operation method to conduct reason analysis and maintenance description for some problems that may appear so as to make the work performance of the ion fan always in good state and extend its service life to the extreme extent.

When running the ion fan, dust in air may flow into the fan with airflow, stick to the windshield and tungsten needle frame, etc. structures and especially adsorbed to the live parts to make the tungsten needle passivate, resulting in the discharge effect decline sharply and seriously influencing the property of the ion fan. The spray point can be cleaned automatically by the main machine according to the following set maintenance time; long time application can be maintained manually and regularly according to actual situation.

□ **Cleaning Set and Manual Maintenance Schedule (for reference)**

Workshop cleanliness class	Automatic set time reference	Manual maintenance period
Class 10-100	192 hours	30-60 days
Class 100-1000	120 hours	15-30 days
Class 1000-10000	72 hours	15-30 days
General workshop	60 hours	15-30
Dusty workshop	24 hours	10 days

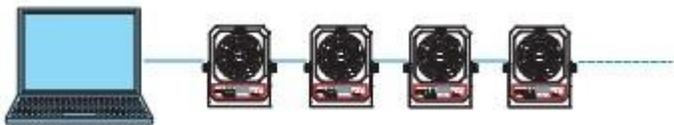
□ **Manual Maintenance Item and Maintenance Method**

Manual maintenance items	Maintenance method
Tungsten needle	After rotating down the spray point, clean the tungsten needle with non-dust cloth dipped with ethanol.
Front air window	Take off the front air window and take it outside the site for cleaning with hairbrush
Rear air window	Take off the air window and take it outside the site for cleaning with hairbrush

□ Network Monitoring System

Introduction of Static Electricity Monitoring Equipment:

Ion fan transmits module through static electricity monitoring model, monitoring static electricity abnormality and transmitting the abnormal situation through wireless transmitting and receiving device. The receiving device is connected to computer and displays it in the program window in real time on the computer.



Set with PC support software

Characteristics:

- Can set, display and manage with support software.
- Can monitor the operation of ion fan wirelessly in real time and can find out the reason fastly when abnormalities happen.
- The quantity of wireless monitoring ion fan can reach 50.
- The reliable communication distance of the single transmitter

module is 180 meters and can derive transmission distance through repeater wirelessly.

- It can support monitoring the grounding monitoring condition of five equipments of the EPA work platform.

***Remark:** the launcher and receiver are not in the whole machine delivery range and should be purchased independently.

□ After-sales Service

1. Service in the Warranty Period

The warranty period of the products sold by the company is one year. Within one year since the product is sold, any fault caused due to its component materials and process problems should be repaired by the company freely (except quick-wear parts).

2. Service after Warranty Period

All products sold by the company will still be repaired free of labor cost (only charging part cost) after warranty period to protect customer's interest.

The company maintains the right of modifying the above product

property parameters and technology at any time without further notification.

■ **Package Content Confirmation**

The package contains the following components. Before using them, please confirm whether all goods are complete.

- 1. ion fan main engine.....1 set
- 2. Computer adapter.....1 pc
- 3. Grounding wire.....1 wire
- 4. Specification.....1 copy
- 5. Warranty card.....1 copy
- 6. Inspection report.....1 copy
- 7. Certificate of conformity.....1 copy