

ATTEN



ST-1020D Static Eliminator DC Ion Fan

SHENZHEN ATTEN TECHNOLOGY CO., LTD

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01/Safety and cautions

- The design of this product (including software) and its accessories are under tutelage of laws. Any action to violate relevant right of our product will be penalized by the law. Please consciously observe relevant local laws in the use of this product.
- Thank you for purchasing our products Please read this manual carefully and pay attention to warnings and precautions mentioned herein before using this product.



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



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

- We assume that user have common sense and basic relevant electrical operation knowledge before using this product. Children shall not play with the appliance without supervision.



Attention To avoid damaging to unit and please keep the operating environment safe.

- To avoid electric shock, injury to user or causing fire, please comply with the following items.
- To ensure your safety and avoid damage to the unit, please use parts and accessories that have been approved or recommended by our factory.



Warning

- Before switching on the power supply, ensure that the voltage of the product conforms to the applicable local voltage to avoid permanent damage to the machine.
- Do not touch the fan and ion emitting needle when power is on.
- The unit generates high voltage inside, please clean up ion needle by professionals.
- Do not fill stuffs through the air inlet and outlet location.
- Keep this product away from flammable materials.
- keep this product out of children's reach.
- Do not use this product if you are inexperienced or have no sufficient necessary knowledge without the guidance of related personnel.
- Do not use this product under wet environment or with wet hands to prevent electric shock.
- To ensure the normal operation of this product's grounding function, make sure that the power supply is well grounded when connecting the machine.
- If the power cord is damaged, turn off the power immediately and replace the power cable.
- Please use the accessories from the original factory when replacing the product parts.
- Make sure to turn off the power switch when the equipment is temporarily stopped or out of use.
- Do not play or do other similar dangerous actions when using this equipment, because it can easily lead to injury to others or yourself.
- Do not use it for any purpose other than the function of the product, to avoid machine damage or personal injury.
- Do not modify this product and its accessories, otherwise the original warranty will be invalidated or damage may occur to the product.
- When plugging and unplugging the power cord and handle plug, please hold the plug body and do not pull the cord.
- Do not hit the product or its accessories too hard during the operation; otherwise damage may occur to the product.



Disclaimer

- We will take no responsibility for any personal injury or property damage caused by reasons other than the product quality problem, which may include force majeure (natural disasters, etc.) or personal behavior during the operation of this product.
- This manual is organized, compiled and released by SHENZHEN ATTEN TECHNOLOGY CO., LTD. According to the latest product features. We will not be responsible for further notice of the subsequent improvement of the product and this manual.

02/Package list and apperance description

• Packing list



• Static eliminator ion fan host *1



• Power cord *1



• Ground wire *1



• Remote control *1

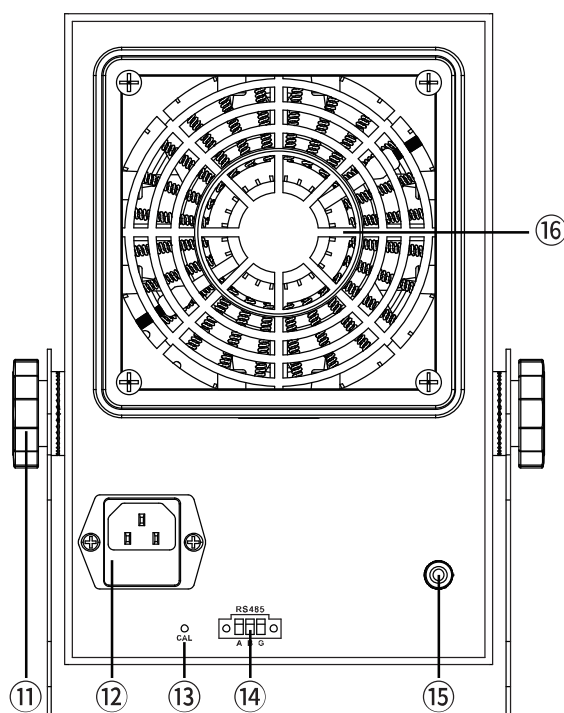
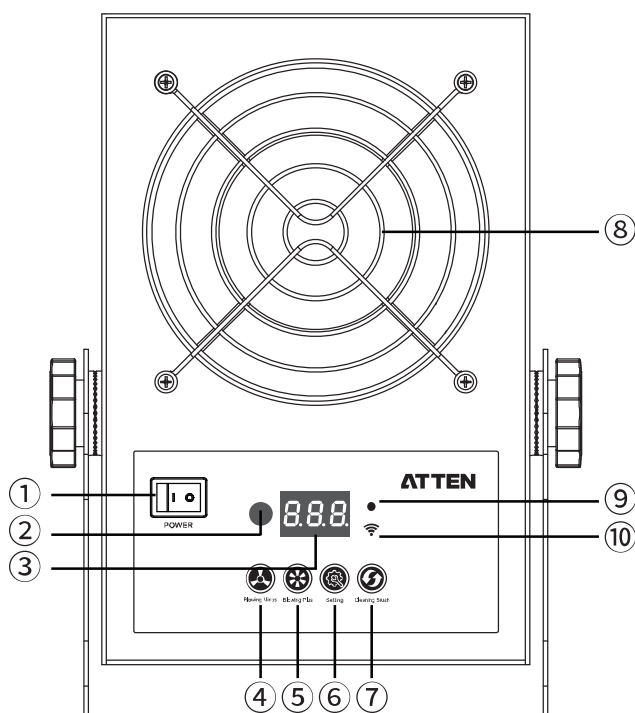


• User manual *1



• Certificate *1

• Apperance description



- ① Power switch
- ② Infrared receiver
- ③ LED display
- ④ Blowing minus
- ⑤ Blowing plus
- ⑥ Menu setting
- ⑦ Cleaning brush
- ⑧ Dust-proof cover
- ⑨ Indicator light
- ⑩ RS485 indicator light
- ⑪ Angle adjustable knob
- ⑫ Power interface
- ⑬ CAL factory calibration
- ⑭ RS485 interface
- ⑮ Metal ground rod
- ⑯ Automatic cleaning device mask

03/Specification

• Technical parameters

Model	ST-1020D
Rated operating voltage	AC 220-240V~ 50/60Hz (AC 110V-120V 60Hz)
Output voltage	DC4KV~5KV
Ozone protection	<0.01 PPM
Power	20W
Air volume	≤2.4m ³ /min
Static elimination time	≤1.2S
Ion balance	≤±10V
Range of ion balance alarm values	±15V ~ ±50V
No high voltage output alarm	Yes
Effective range	400*1500mm
Screen	LED display
Ion emission needle	Terminal
Computer control	Support
Work conditions	Temperature 0°C~45°C; Relative humidity<75%RH (Suggestions 50%~70% humidit run with the best)
Dimension	146 (L) x85 (W) x238 (H) mm
Weight (N.W.)	≈3.16Kg

• Packing

Inner box package	Outer carton package
Inner box size:282x210x235mm Product weight: ≈3Kg G.W: ≈3.5kg	Outer carton size: 435x297x495mm Package: 4pcs/carton G.W: ≈15kg

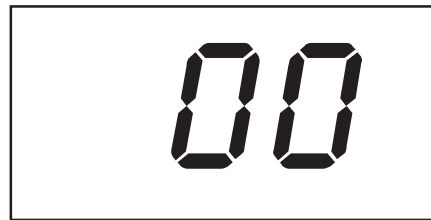
04/Operation instruction

• Operation:

- ① Place or fix static eliminator ac ion fan in a stable working environment, connect the power cord to the power interface on the host.
- ② Turn on the power switch, the screen displays the version number, air volume level, and the indicator light flashes blue, after the cleaning brush starts to work for 3-5 seconds, the static eliminator ac ion fan will enter normal operation state and the indicator light will display as green.





(version 1.0)



Working interface

• Air volume adjustment:

- Under the main menu, short press "  " or "  " key, adjust the appropriate air volume level according to the work requirements. (Air volume range: F01-F05, F01 minimum air volume F05 maximum air volume)







Air volume level display

[] Blowing minus

[] Blowing plus

• Menu setting

- Timing automatic clean setting

- ① Under the main menu, short press "  " key to enter automatic clean menu.
(factory default: automatic clean per 8 hours)
- ② Short press "  " or "  " key to set the timing automatic clean time.
(Sett range: t01~999 hours)
- ③ Wait for 5 seconds after set, the system will automatically save the setting, or press "  " to save the setting and enter next menu.







Timing automatic clean setting

- **Cleaning key:**

Short press "  " key , the cleaning brush will start to clean ion emitting needle.

Recommendation: Depending on the dust condition, manually clean it once a week.
(Please refer to page 9 for automatic device cleaning method)

- **Ion balance alarm value setting:**

- ① Under the timing automatic clean setting, short press "  " key to enter ion balance alarm values setting. (factory default: **L30**)
- ② Short press "  " or "  " key to set the ion balance alarm values parameter. (Sett range: L15~L50)
- ③ Wait for 5 seconds after set, the system will automatically save the setting, or press "  " to save the setting and enter next menu.

[When ion balance value exceeds the set value, the buzzer will ring]







Ion balance alarm value

- **Ion auto-balance function:**

It has ion auto-balance function, auto-balance range $\pm 10V$, and can display the balance voltage in real time.



- **Address setting:**

- ① Under the ion balance setting, short press "  " key to enter address setting. (factory default: **A01**)
- ② Short press "  " or "  " key to set the address parameter. (Set range: A01~255)
- ③ Wait for 5 seconds after set, the system will automatically save the setting, or press "  " to save the setting and enter next menu.



Address


- **Unlock the panel:**

Use the remote control to lock the machine panel, panel keys can not be operated, if the user remote control is lost or run out of battery, long press "  " + "  " key for 3s, to unlock the panel.



Lock display

- **Restore factory setting:**

Long press "  " key for 10s, to restore factory setting.

- Factory default:**

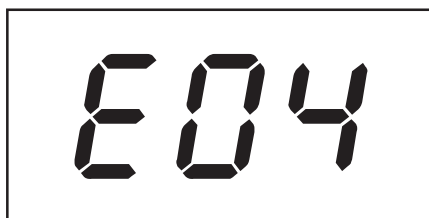
Timing automatic clean time **【E08】** Address **【R01】**

Ion balance alarm value **【L30】**

- **Alarm function:**

- **Fan fault alarm:**

When the fan fails, the screen displays the fan fault code **【E04】**, the indicator light will be displayed as red, the buzzer will ring, ion fan stop working.

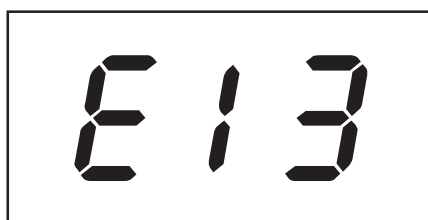


Fan fault code

When the fan runs normally and meets obstacles, the fan will automatically short-circuit and stop working, the indicator light will be displayed as red, the buzzer will ring. Restart after the obstacle cleared, the machine will return to normal operation.

- **High voltage fault alarm:**

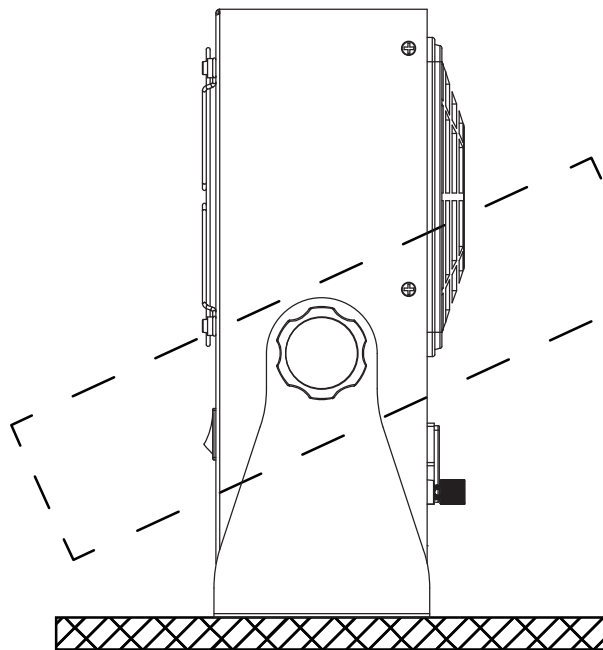
When the high voltage is detected as 0V, the screen displays the high voltage fault alarm code **【E13】** the indicator light will be displayed as red, the buzzer will ring, the ion fan stops working and enters standby state.



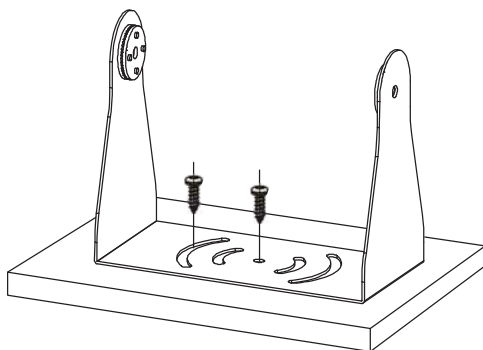
High voltage fault alarm code

• Adjust angle of static eliminator ac ion fan:

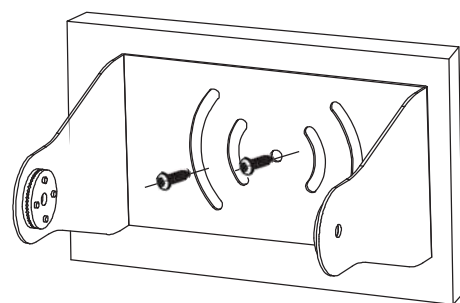
- The orientation of the air outlet can be adjusted according to the operating environment, with 10° as one gear and 0~265° air outlet adjustable.
- It is recommended that the distance between the static eliminator ac ion fan and the workplace between 30cm and 90cm. If the static electricity need to be neutralized quickly, the recommended distance is 15cm.
- Under working, try to make the ion wind cover a large area of the work place. The direction of the ion wind can be adjusted by tilting the fan.



- According to the use environment, the ion fan bracket supports placed on the table or hung vertically.

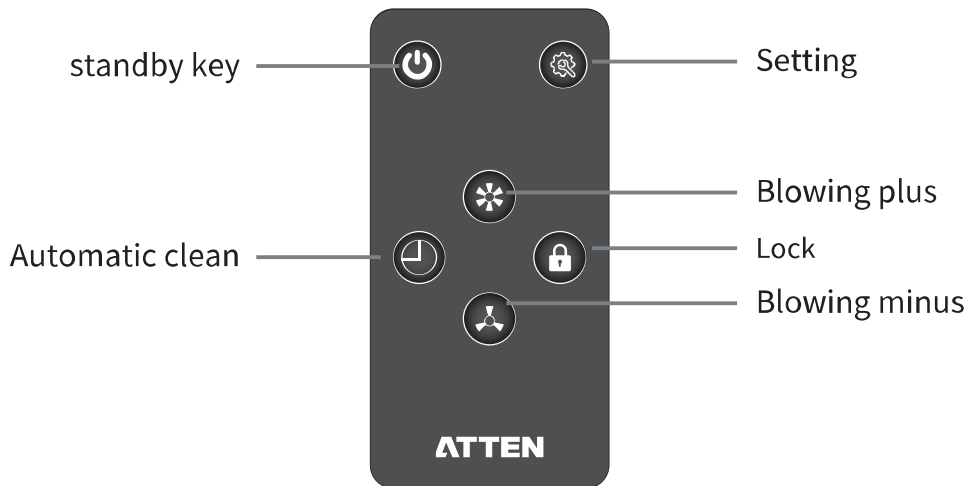


Desktop



Hang up

05/Remote control button description



06/Static eliminator ion fan maintenance

• Automatic clean

- Timing automatic clean can be set through the menu, which can reduce frequent manual maintenance.

Depending on the dust condition, manually clean it once a week.

• Ion emitting needle change and clean

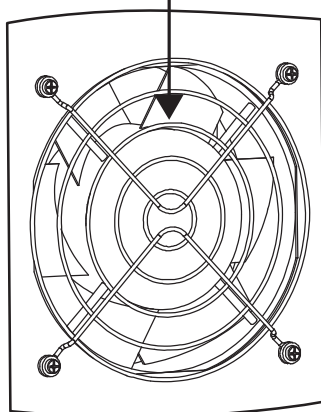
⚠ warning

- The unit generates high voltage inside, professionals needed when change or clean up ion needle, turn off power before clean, and wait the ion emitting needle discharge for 5 mins.

• Clean dust-proof cover:

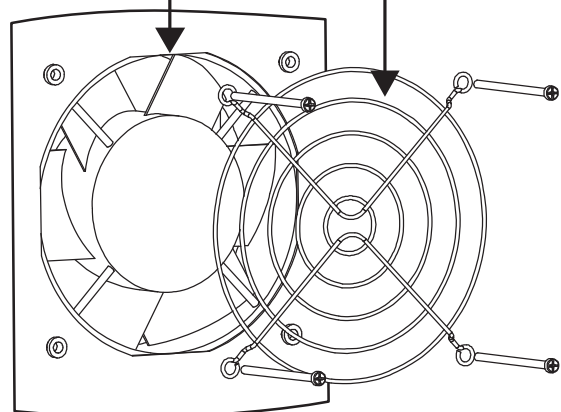
Remove the cover dust-proof cover and dust-proof sponge from the static eliminator ac ion fan, and clean it with a soft brush, cloth or ultrasonic equipment.

Loosen the screws and
remove dust-proof cover



Static eliminator
dc ion fan internal

dust-proof cover

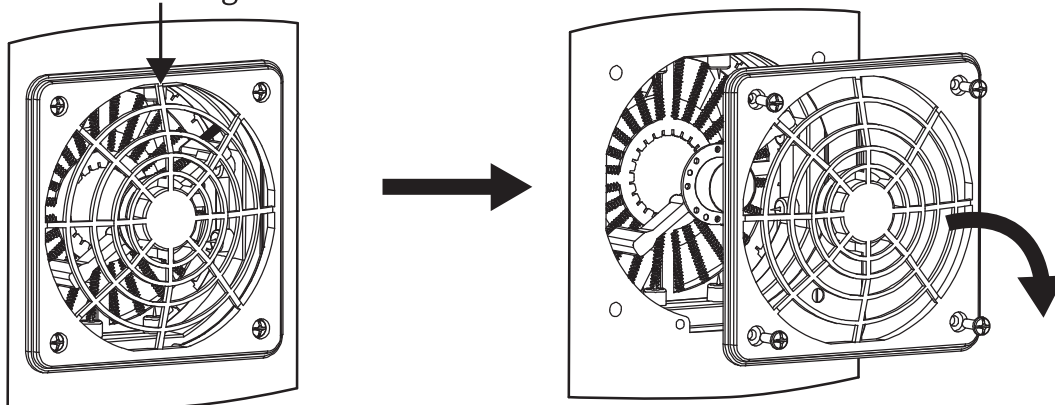


• Automatic cleaning device:

Remove the automatic cleaning device from the static eliminator ac ion fan, after ion emitting needle completely discharged, clean it with a soft brush, cloth or ultrasonic equipment.

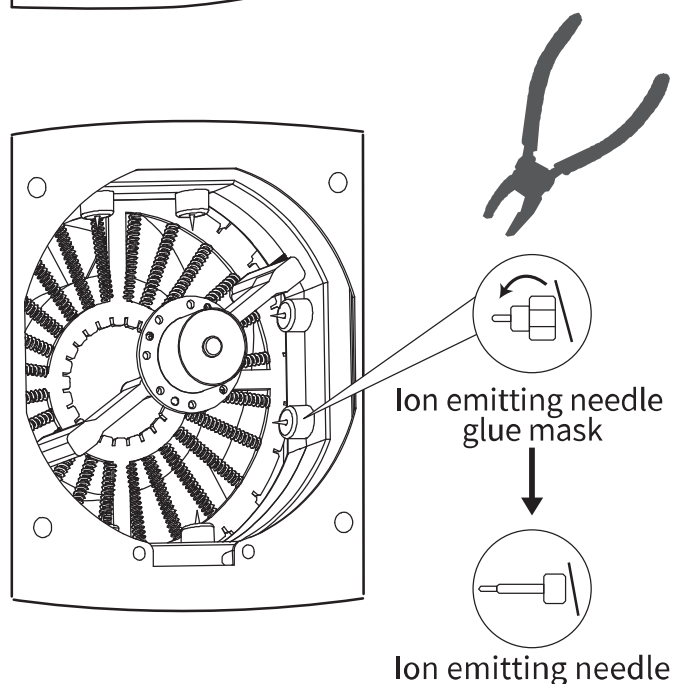
⚠ Note: The ion emitting needle is sharp, pay attention to safety when cleaning.

Loosen the screws and remove automatic cleaning device.



• Change ion emitting needle:

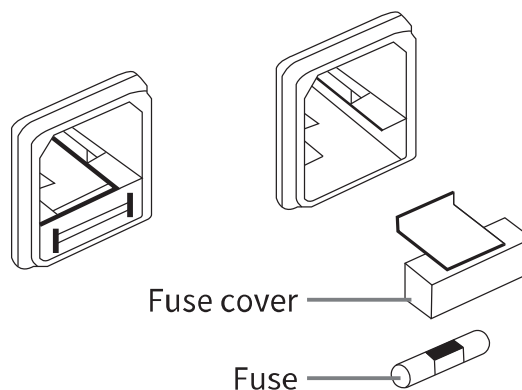
- ① turn off power and wait the ion emitting needle discharge for 5 mins.
- ② Remove cleaning device.
- ③ If the tip of emitting needle is passivated, it needs to be replaced;
- ④ Use pliers to remove the ion emitting needle glue cover;
- ⑤ Pull out the passivated emitting needle and replace it with a new one. (Please use the accessories from the original factory)



⚠ Note: The ion emitting needle can be changed according to the use, otherwise it will have a serious impact on static electricity elimination ability.

• Changing fuse:

- ① After power off , unplug the power cord from the power receptacle;
- ② Remove the fuse cover and remove the fuse;
- ③ Replace new fuse; (Please use the accessories from the original factory)
- ④ Put the fuse cover back.



07/Maintenance

Description	Reason	Guide
Unable to start	Fuse unequipped or damaged.	Check if the fuse is damaged (if so, please replace the fuse according to the conditions).
	Poor contact of cover connector.	Check whether the back cover connector is damaged or deformed. If there is any problem, replace it in time or adjust it to a reasonable position.
	Motherboard burnout.	Please contact the local dealer or manufacturer for assistance.
Lose the ability to electrostatic removal capacity	Ion emitting needle dust affects performance.	Set automatic clean in the system.
	The upper limit value is too small.	Reset the upper limit.
The voltage on the screen is abnormal	Emitting needle passivation.	Please contact the local dealer or manufacturer for assistance.
	Ion emitting cover dust affects performance.	Clean ion emitting cover.
	No high voltage output.	Please contact the local dealer or manufacturer for assistance.

• After-sales contact

- If the machine fails, or cannot work normally due to unknown reasons, please contact the local dealer or manufacturer for consultation.
- After-sales service department tel: 400-998-6633

08/ Product warranty

• Warranty regulations:

- ① The warranty period of this product is calculated from the date of purchase. During the warranty period, under the condition of normal use of this product, if the fault occurs due to the quality problem of the product itself, according to the content of this warranty card, you can enjoy free maintenance serve at the authorized repair place designated by the company (or the company) by presenting the original warranty card. Please keep the proof of purchase and this warranty card, and present them together when maintenance.
- ② During the warranty period, paid maintenance services will be implemented in the following situations:
 - a. Failure to provide a valid warranty card or valid certificate.
 - b. Items such as the date of purchase and the name of the sales unit are not completely filled in or the warranty card is altered.
 - c. Damage caused by failure to operate in accordance with the usage methods and precautions written in the instruction manual.
 - d. Damage caused by natural disasters or force majeure.
 - e. Damage caused by dismantling, repairing or modifying the product without the authorization of the manufacturer.
 - f. Replacement of fragile and consumable parts.
- ③ All items of the warranty card must be filled in completely by the agent or user directly to obtain a 24-month warranty period.
- ④ Please keep this warranty card properly, it will not be reissued if it is lost.
- ⑤ In special circumstances, the two parties shall negotiate and deal with it.
- ⑥ The final interpretation right belongs to our company.

User Notice

The warranty period of this product is valid within 24 months from the date of purchase. For any product quality problem, the company will be responsible for free maintenance with this card and purchase certificate.

Note: When this product is returned to the factory for maintenance, the warranty card must be attached, other wise it will not be repaired for free, thank you for your cooperation (please read the warranty regulations for warranty related instructions)

Product warranty card

Product Model: _____ Product No.: _____

EX-Factory No.: _____ Sold Date: _____

This product test result is qualified and met the technical standard.

SHENZHEN ATTEN TECHNOLOGY CO., LTD.

- Soldering Iron ● Soldering Station ● Hot Air Rework Station
- Multi-function Rework System ● Switching DC Power Supply
- Regulated DC Power Supply ● Solder smoke purify machine
- Programmable Power Supply

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