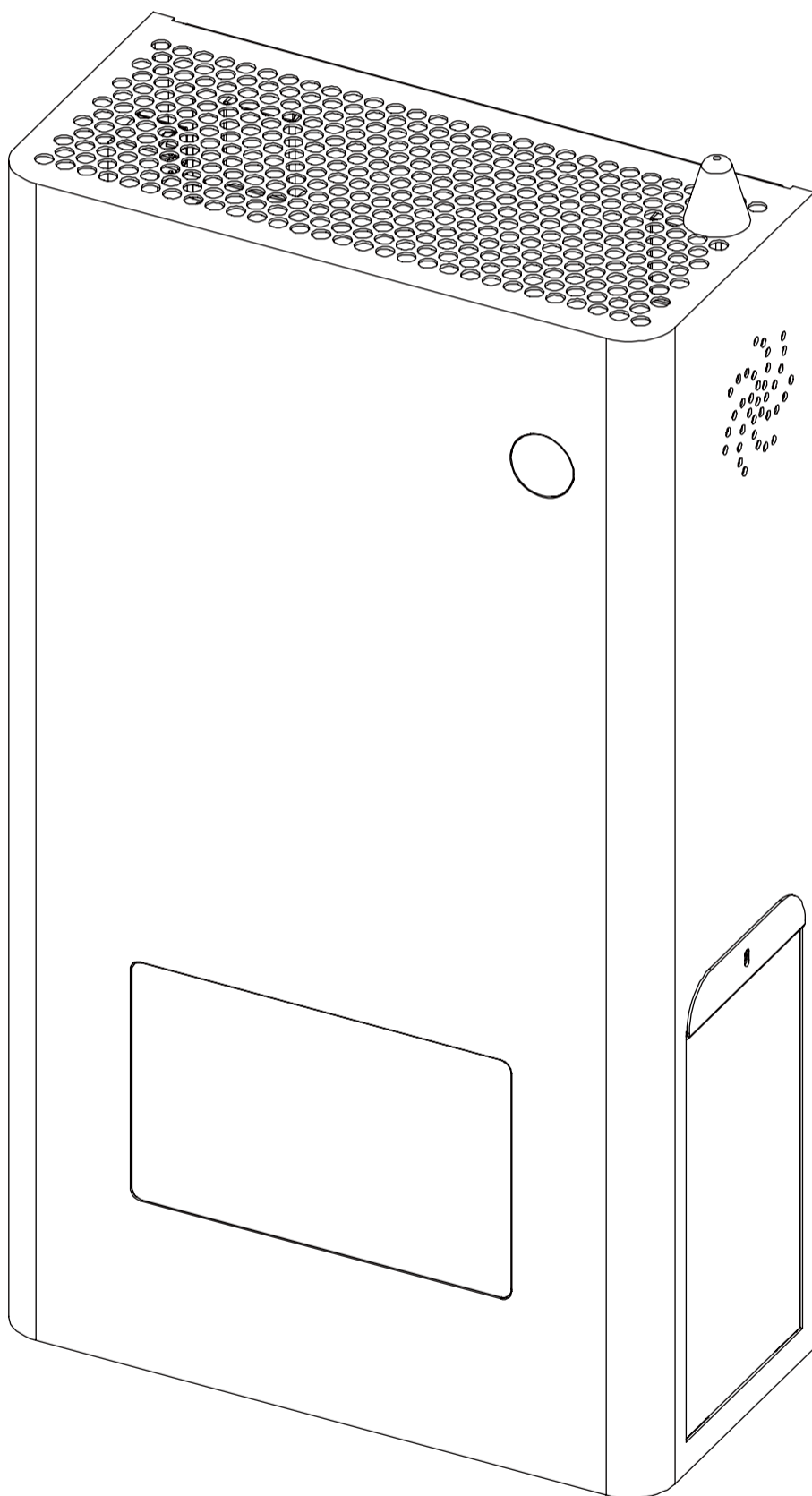




Air disinfection purifier

WD020A Instruction Manual



This product has passed the safety inspection of the national authority
Please read the instruction carefully before use
Please keep it properly after reading

OPEN LETTER TO USERS

Respected user:

We appreciate your decision to purchase and use our Ruiwan brand series items.

With a focus on air governance and public health research, Ruiwan was founded in 2006 and has long adhered to the product philosophy of "harmonious cohabitation between man and nature." It is a company that specializes in R&D, manufacture, and sales of air purification systems.

It has won awards for "National National High-tech Enterprise," "National Science and Technology Smallest Enterprise," ISO9001 International Quality Management System Certification, its superior product quality, and technological innovation. It has more than 50 national technical patents.

According to national air quality testing standards, the product has passed the EU CE certification, ROHS regulations, US FDA certification, etc.

The inspiration behind this line of air sterilizers

- 1) GB/T 18801-2015 "Air Purifier"**
- 2) GB/T 18883 "Indoor Quality Air Standard"**
- 3) Subpart B of FCC 47 CFR Part 15**
- 4) EN55014-1:2017+A11:2020/EN55014-2:2015**
- 5) EN61000-3-3:2013+A1:2019/EN61000-3-2:2019**

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USE GUIDELINES FOR THE PRODUCT

 Please carefully read the accompanying safety instructions before using this product.

Disclaimer (Our company is not responsible for equipment damage caused by the following operating conditions) (Our company is not responsible for equipment damage caused by the following working environment)

This product's power supply voltage does not match the power supply label.

In settings where there are flammable, explosive, and corrosive gases, this product is used.

In areas with high temperatures, humidity, and water, like bathrooms, this product is employed.

PRECAUTIONS FOR PRODUCT USE

When the power cord is damaged or if it is not properly plugged into the socket, you shouldn't turn the machine on.


Hold the plug of the power cord tightly and do not pull the power cord when unplugging it.

Electric shock could result when touching the power wire plug with damp palms. When a device is inactive for a prolonged period, it should remove the power plug.

To prevent risks like fire and electric shock, nobody else but trained maintenance workers is permitted to disassemble and reassemble the equipment without permission.

Avoid risk or poor product quality by not putting your hands inside the machine when cleaning the dust.

To avoid the machine from toppling and injuring your body when you need to move it, grab the fuselage firmly.

 Use of combustible materials (such as alcohol, gasoline, paint thinner, etc.) to clean the machine's exterior, interior, or machine itself is strictly prohibited.

In order to prevent a serious fire or accident from exploding, any filter accessories, notably the primary filter, cannot be cleaned with flammable substances.

Please refrain from washing or reusing the plasma catalytic filter element or the composite filter element with water. Small objects into the air inlet or air outlet to avoid danger or damage to the product.

OVERVIEW OF THE PRODUCT'S PRIMARY COMPONENTS AND STERILIZING PRINCIPLES

OVERVIEW

A ceiling-mounted air disinfection device under the Ruiwan trademark HD060B is intended for use in public areas including hotels, hospitals, schools, and other buildings.

The new embedded IoT control system enables one-key equipment identification, management, and control in the background of APPs and websites, among other things.

It is a highly integrated technological air disinfection system. This equipment uses a novel low-temperature plasma HPSP sterilization technology with nanosecond-level sterilization speed and up to 99.99% efficiency, which significantly decreases the risk of microbial cross-infection.

Possibility; In contrast to conventional plasma, ultraviolet light, or ozone, it has the capacity to remove aldehyde and TOVC with zero consumables. And other sterilization techniques that are safer and more effective can make it possible for humans and machines to coexist.

STRUCTURE OF THE PRODUCT

This product's metal chassis, filtration system, low-temperature plasma disinfection module, Internet of Things technology controller, and fan system make up its primary framework. The machine's air inlet allows indoor air to enter the device when the fan is operating, and low-temperature plasma is employed toGerms, formaldehyde, TVOC, PM2.5, and other harmful substances can all be removed from the air by using the filter system to clean it.

WORKING PRINCIPLE

- ①The primary filter removes larger particles in the air and prolongs the service life of the composite filter element;
- ② The low-temperature plasma module kills viruses and bacteria in the air, and eliminates TVOC pollutants such as formaldehyde;
- ③The composite filter element efficiently traps microscopic particles and different allergies, as well as odors and secondhand smoke in the air;
- ④To make sure that the air emitted is pure and safe, the plasma catalytic filter eliminates O3 from the atmosphere.

CORE STERILIZATION TECHNOLOGY FOR HPSD

The new RWPL-05W low-temperature plasma coupled with imported chips from Japan forms the basis of HPSD disinfection technology.

Large numbers of charged active particles (OH-, H2O+, etc.), reactive oxygen species (ROS), and active molecules are continuously produced by excessive pulse discharge along the surface.

Plasma density for nitrogen (RNS), excited state O2 and N2, etc., is as high as $7.78 \times 10^{18} \text{m}^{-3}$, the airborne viruses formaldehyde and other TVOC pollutants will rapidly oxidize and disintegrate when they come into touch with bacteria. The coexistence of man and machine is made possible by the nanosecond disinfection and decomposition rates, which are free of residue and contamination. This method of disinfection costs nothing, uses no consumables, and its effectiveness won't degrade for five years.

CHARACTERISTICS OF LOW-TEMPERATURE PLASMA

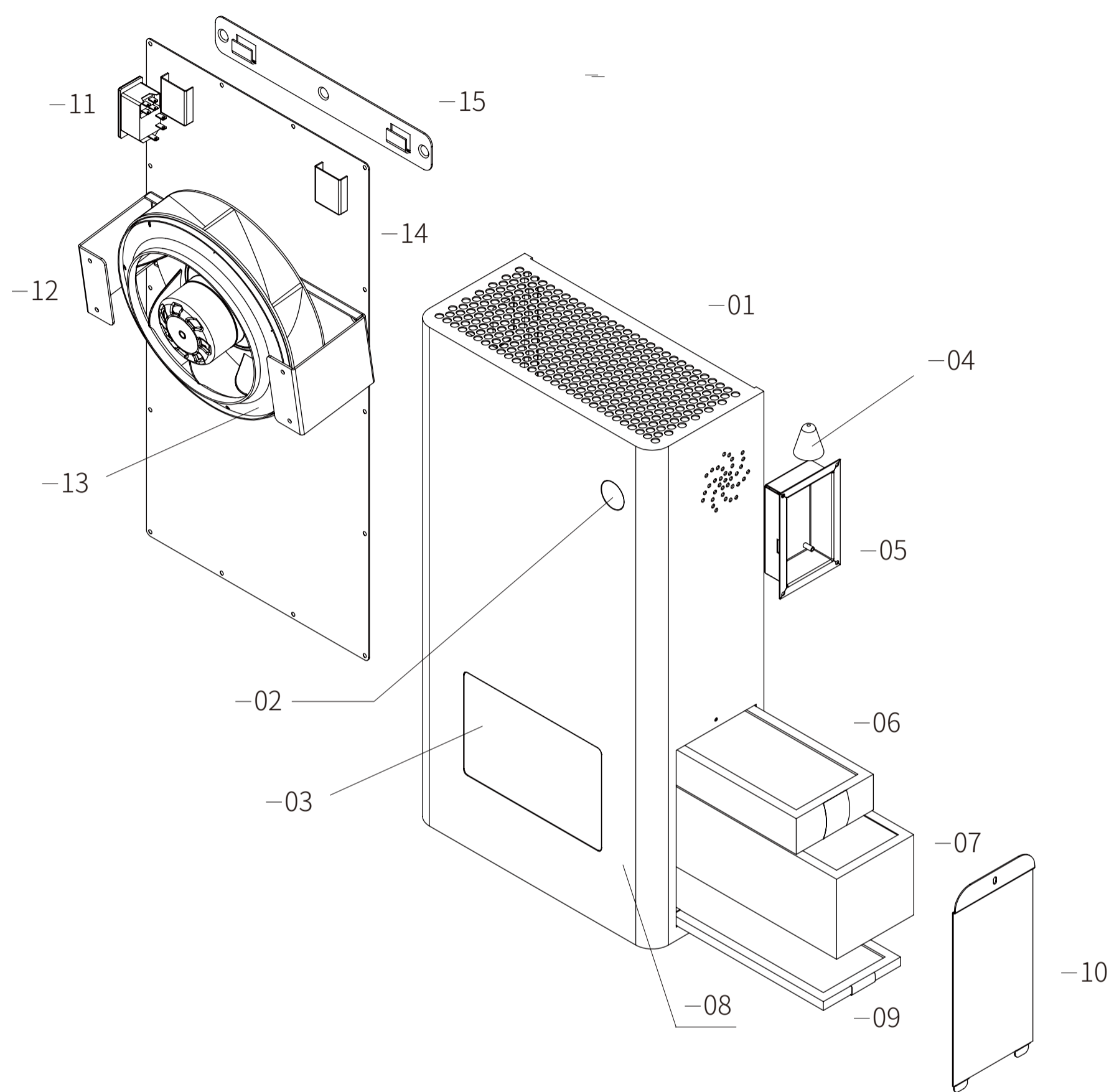
Brand	RUIWAN	Model	RWPL-05W
Working power	5W	Plasma electron temperature	0.43eV
Plasma density	$7.78 \times 10^{18} \text{m}^{-3}$	Charge leakage index	<0.5

*The information was obtained from Fudan University's Point Electric Light Source Research Institute Report No. 2021201.

LOW TEMPERATURE PLASMA PARAMETERS

Brand	RUIWAN	Model	WD020A
Power	95W	Voltage	100~127V/60Hz、 220~240V/50Hz
Specification of fuses	250V 3A	Minimal temperature plasma	RWPL-05W
CADR (particulate matter)	200m³/h	Circulating air volume	275m³/h
Rate of formaldehyde elimination	≥60%	PM2.5 removal rate	≥99.99%
Removal of bacteria naturally	≥99.99%	H1N1 removal rate	≥99.99%
N.W	12kg	Size	310*145*560mm
Packing weight	/	Package size	/

PRODUCT COMPOSITION



01	Machine metal frame	08	Low temperature plasma (built-in)
02	Filter compartment door panel	09	Primary filter
03	Display Screen	10	Filter compartment door panel
04	2.4G antenna	11	Three-in-one switch
05	Sensor bottom box	12	Fan support
06	Plasma catalytic filter element	13	Fan assembly
07	Composite filter element	14	Back plate
15	Wall hanging panel		

PRODUCT INSTALLATION

PRODUCT WORKING CONDITIONS

1. Power supply conditions: The installation site's power supply is properly grounded, as indicated by the device power supply label.
2. Ambient temperature ranges from 0 to 50 degrees Celsius; relative humidity ranges from 0 to 90% without condensation; and atmospheric pressure ranges from 700 to 1060 hPa.
3. This product must be installed by skilled contractors in exact accordance with the installation diagram.

APPLICATION ENVIRONMENT AND OPERATION METHOD

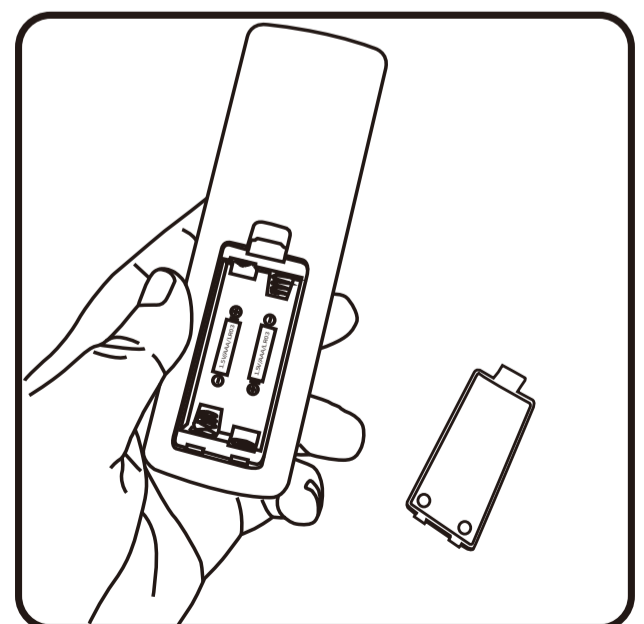
1. This product is suitable for indoor air disinfection in human environment. This product is not allowed to be used in the environment with flammable, explosive, high temperature gas.
2. This product conforms to the requirements of the field test of "Disinfection Technical Specification" (2002 edition) -2.13, please feel free to use.

UNPACKING CHECK AND POWER-ON CHECK

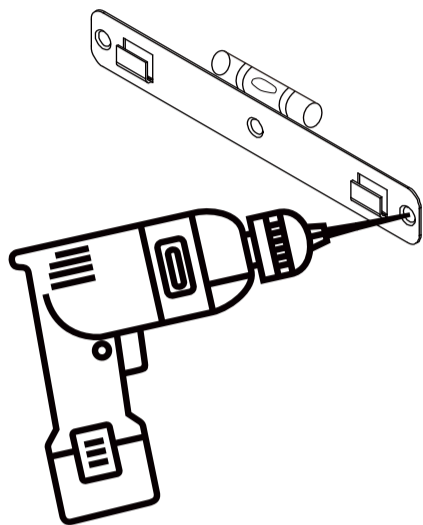
1. Check whether the products and accessories in the packing box are complete and in good condition. If the actual products and accessories are missing or damaged, please contact the company in time.
2. Before installation, turn on the power to check whether the LED display is normal. If there is any problem, please contact the customer service center of the company in time.

REMOTE CONTROL INSTALLATION

- 1, The remote control before use, please install AA battery, if not used for a long time, please remove the battery.
- 2, The effective distance of the remote press is about 6 meters, please align the infrared receiving window of the device when using, so as to avoid operation failure.
(Note: Due to logistics and transportation problems, the remote control of this product is not equipped with batteries by default. Please bring it by yourself.)

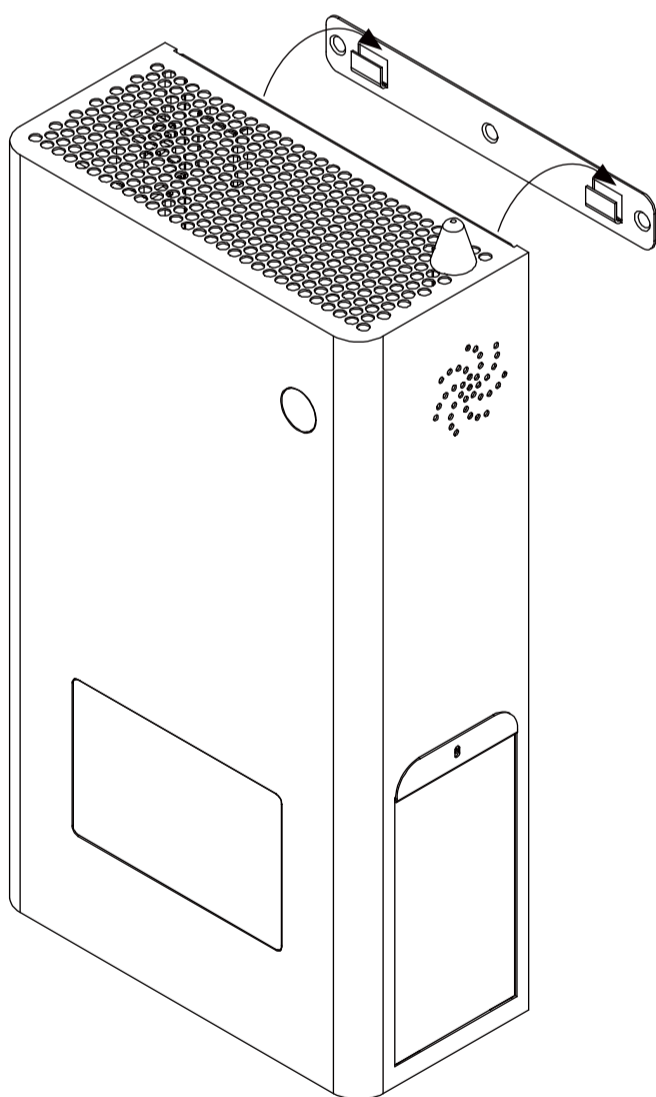


THE INSTALLATION DIAGRAM IS AS FOLLOWS



THE FIRST STEP

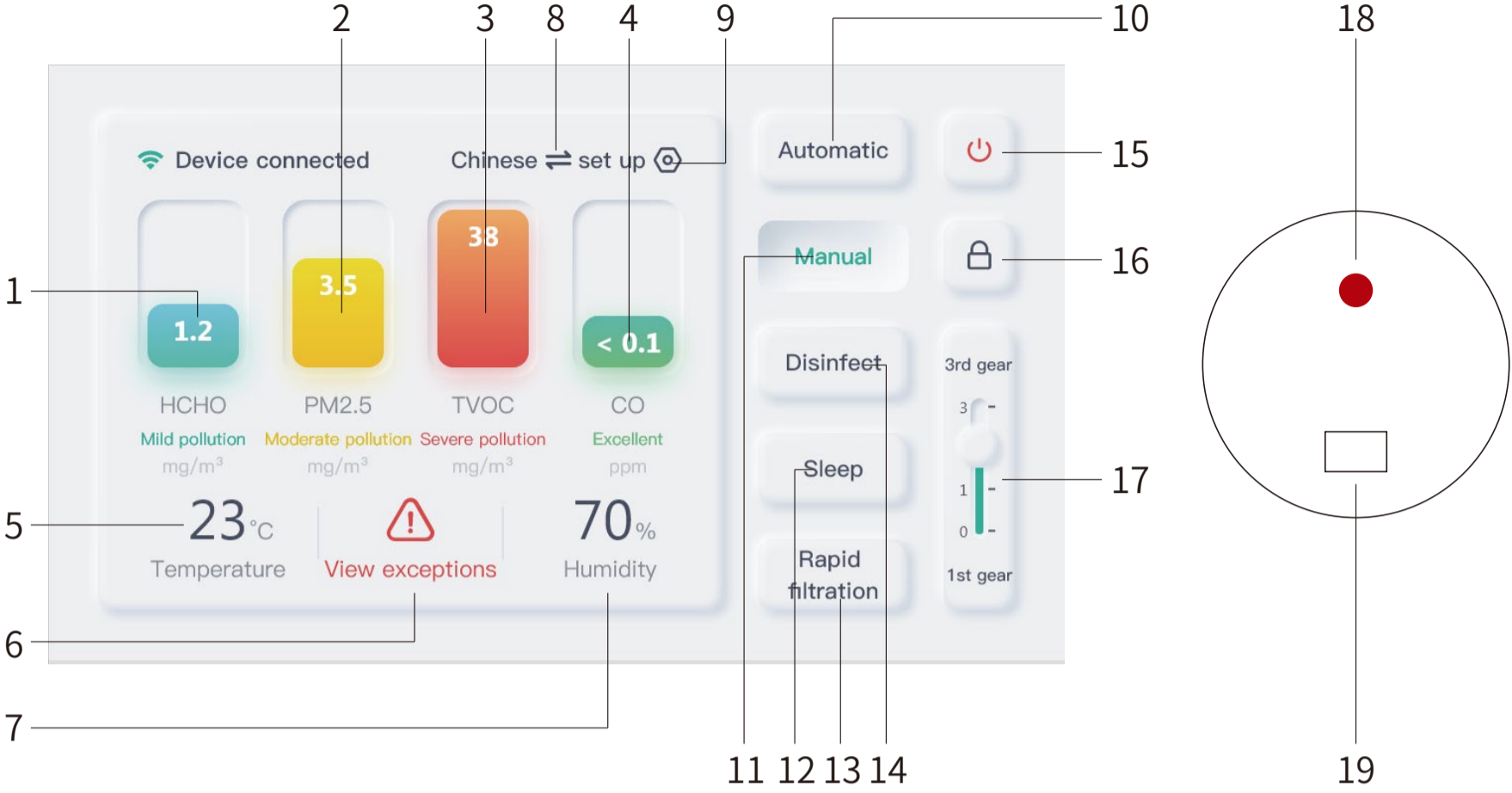
- 1, Set up hanging plate on the wall, according to the horizontal bubble to maintain the level;
2. Mark the hole position on the wall, and use 6mm drill bit to punch holes in the mark position;
3. Put the bolt into the drilled hole position;
4. Fix the hanging plate on the wall with screws.



THE SECOND STEP

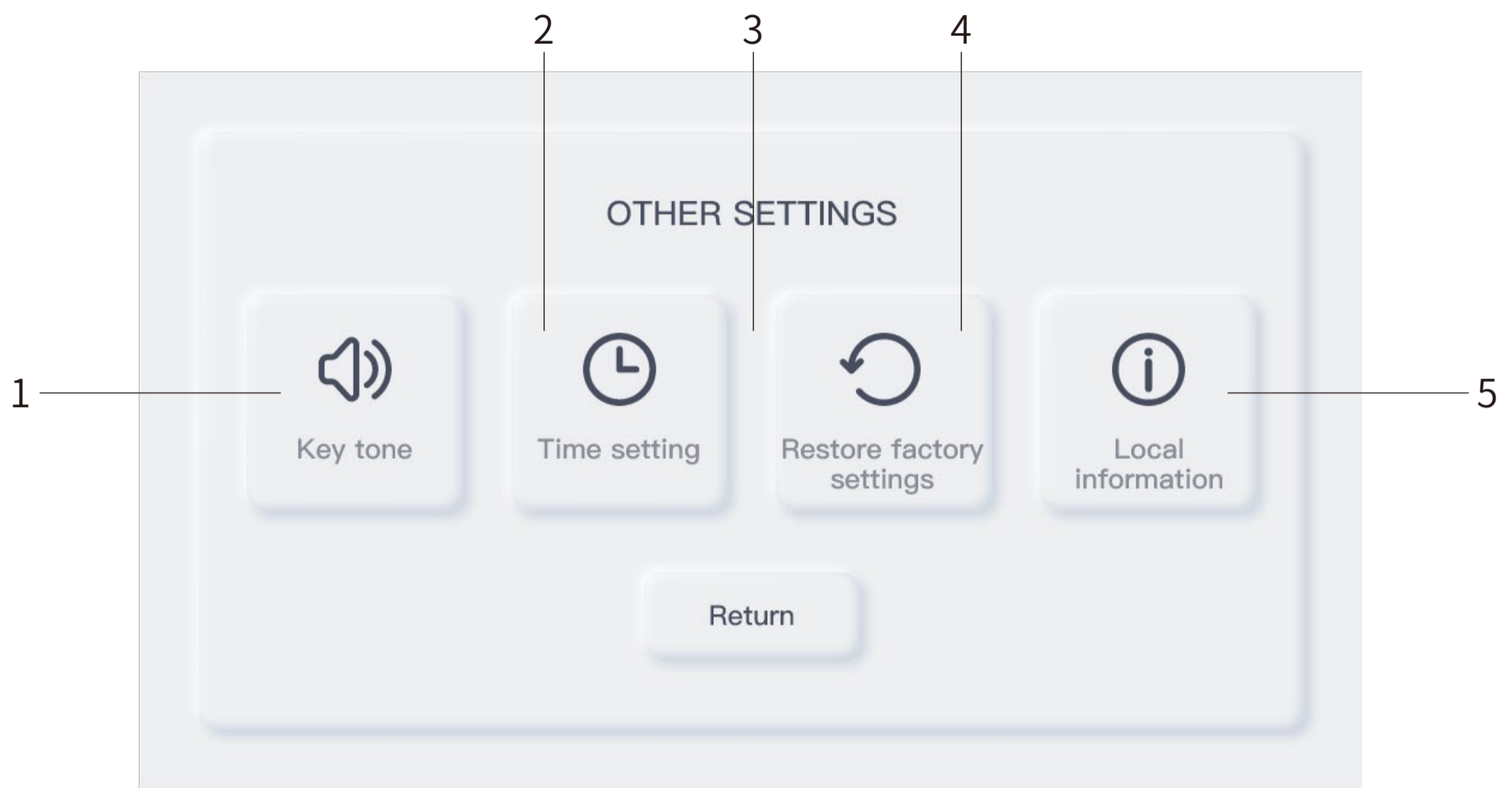
Align the backplane with the mounting plate hook and hang the device.

EQUIPMENT INTERFACE--FIRST LEVEL MENU PAGE



01	Formaldehyde digital display: Displays the formaldehyde data of the current environment.
02	PM2.5 digital display: displays the PM2.5 data of the current environment
03	TVOC digital display: Displays the TVOC data of the current environment.
04	CO digital display: displays the carbon monoxide concentration of the current environment
05	Temperature digital display: Displays the temperature of the current environment.
06	Fault information: displays device fault information
07	Humidity digital display: Displays the humidity of the current environment.
08	Chinese/English: Switches the system language
09	Setting key: Go to the secondary menu page to set system parameters
10	Automatic mode: In this mode, the equipment automatically adjusts the air volume/open or close disinfection according to the current indoor air quality
11	Manual mode: In this mode, the fan speed is controlled by the gear set manually
12	Sleep mode: The device operates in a minimum noise mode and is not adjustable
13	Speed filter mode: In this mode, disinfection is started by default, and the fan runs at the highest speed (this mode is noisy, so start it carefully).
14	Disinfection mode: open plasma sterilization
15	On key: Press this key when starting up, the machine will enter the standby/standby state, click the screen to wake up the system
16	Lock: Press to enter Screen lock/unlock. Hold down the screen unlock button for 5s
17	Air volume key: manual/disinfection mode sliding effective
18	Running status indicator: The standby indicator is red/The running indicator is green
19	Infrared receiving window: Receives infrared signals from the remote control

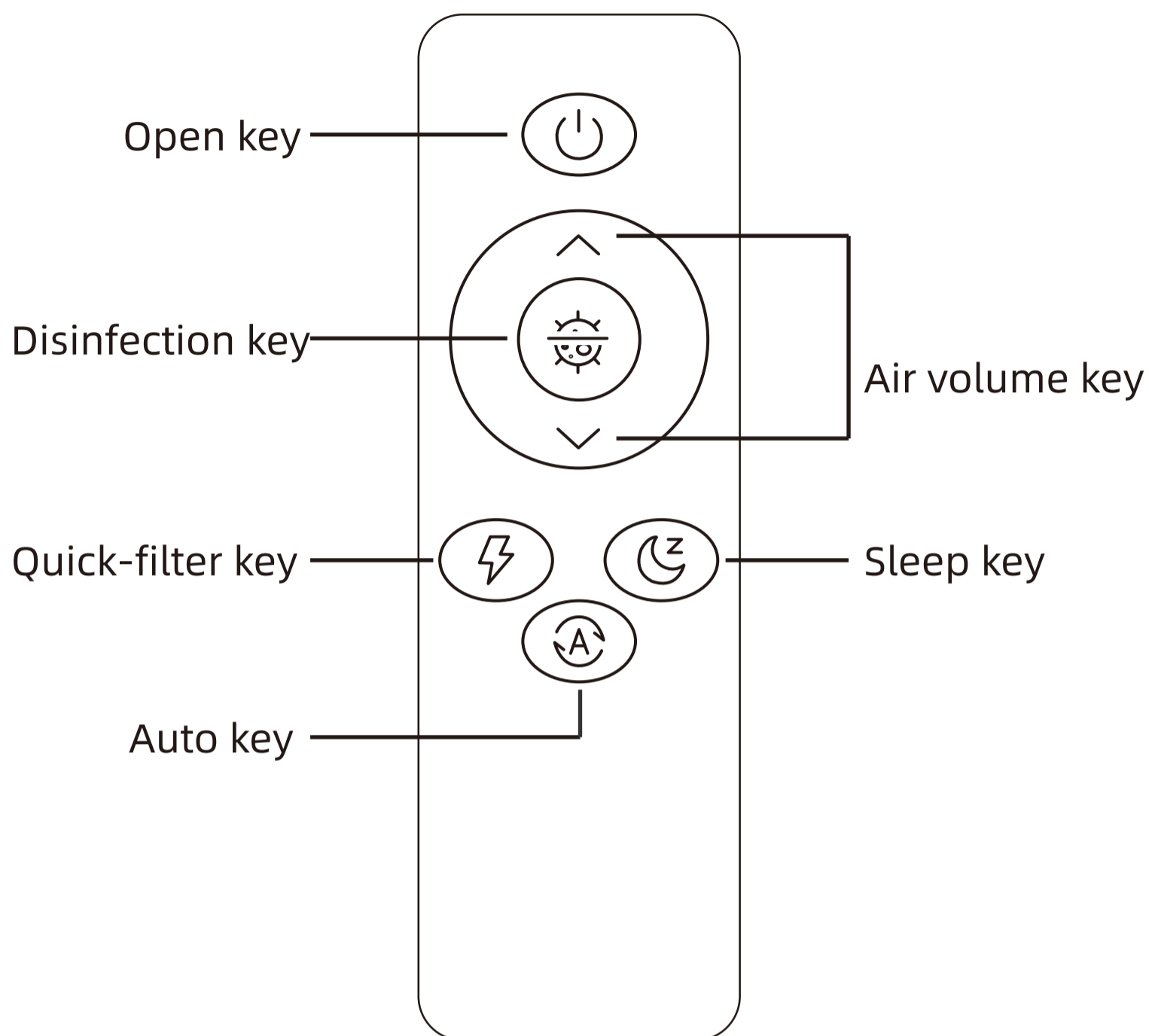
EQUIPMENT INTERFACE——SECONDARY MENU PAGE



1. **Wi-Fi Network:** Manually connect to a nearby wireless network
2. **Screensaver Settings:** Disable the screensaver/Set None Time for the operating system to enter the screensaver
3. **Periodic disinfection Settings:** set the disinfection period by yourself
4. **Consumable information:** displays the remaining life of the current filter element of the device, and reminds to replace the filter element on time
5. **Other Settings:** key tone/time Settings/Factory Settings restoration/local information

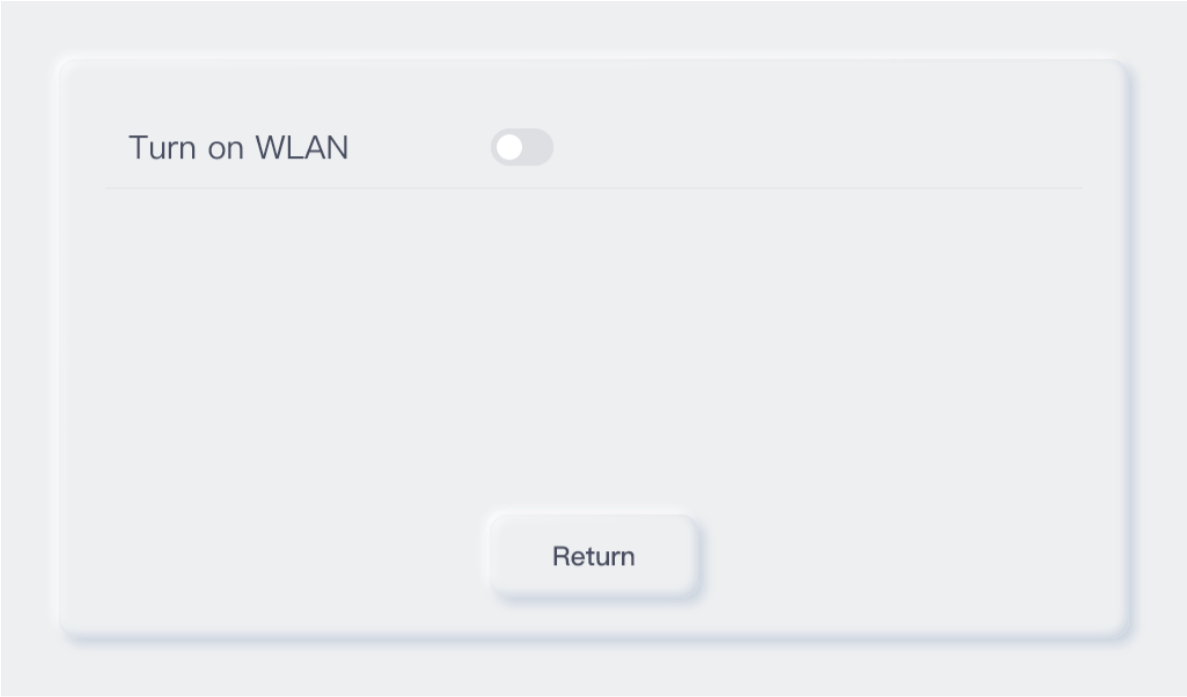
Note: After the device is connected to the network, it automatically obtains the time in the current time zone

REMOTE CONTROL SIGNAL

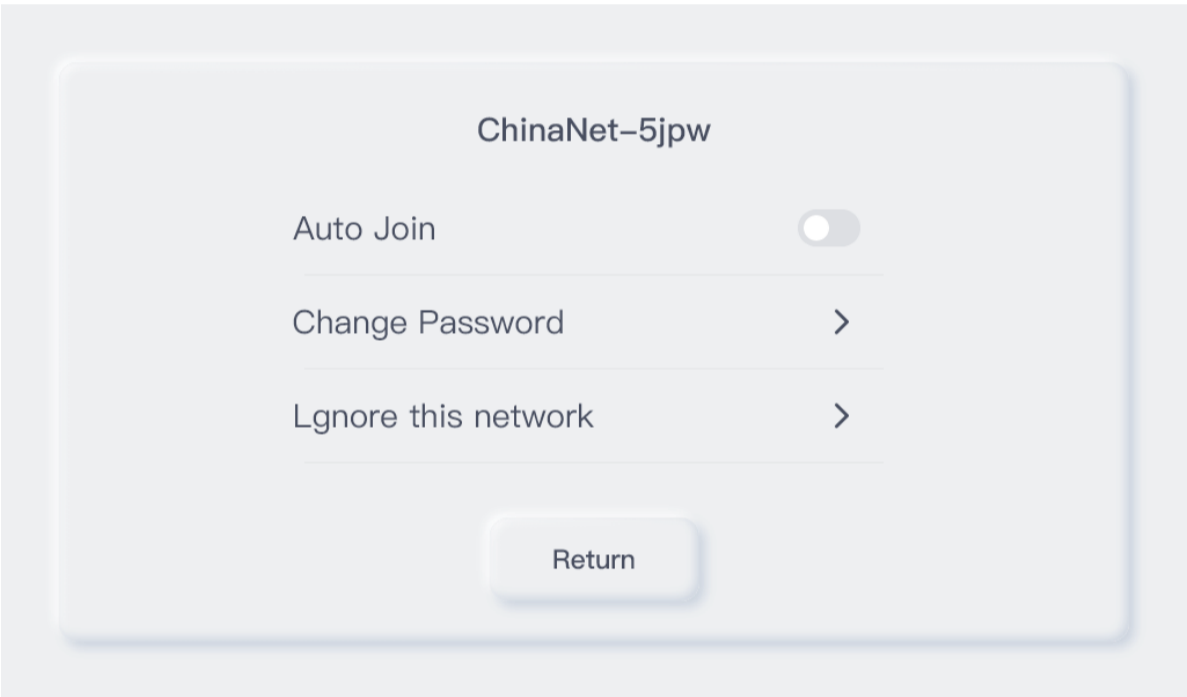


1. **Turn on the key** Press this key to enter standby mode when the device is powered on. In the standby state, press this key to wake up the system.
2. **Air Volume key** Press the Air Volume key to adjust the air volume, and the device automatically switches to manual mode.
3. **Sterilization key** Press the "sterilization" key to start plasma sterilization.
4. **Speed filter key** Press the "speed filter" key to start disinfection, and the fan can run at the highest speed.
5. **Sleep button** Press the Sleep button. By default, the fan runs in the first gear with low noise.
6. **Auto key** Press the "Auto" key, and the air quality sensor will automatically detect the air quality of the indoor air.
The standby will automatically adjust the wind speed and disinfection according to the indoor air quality.

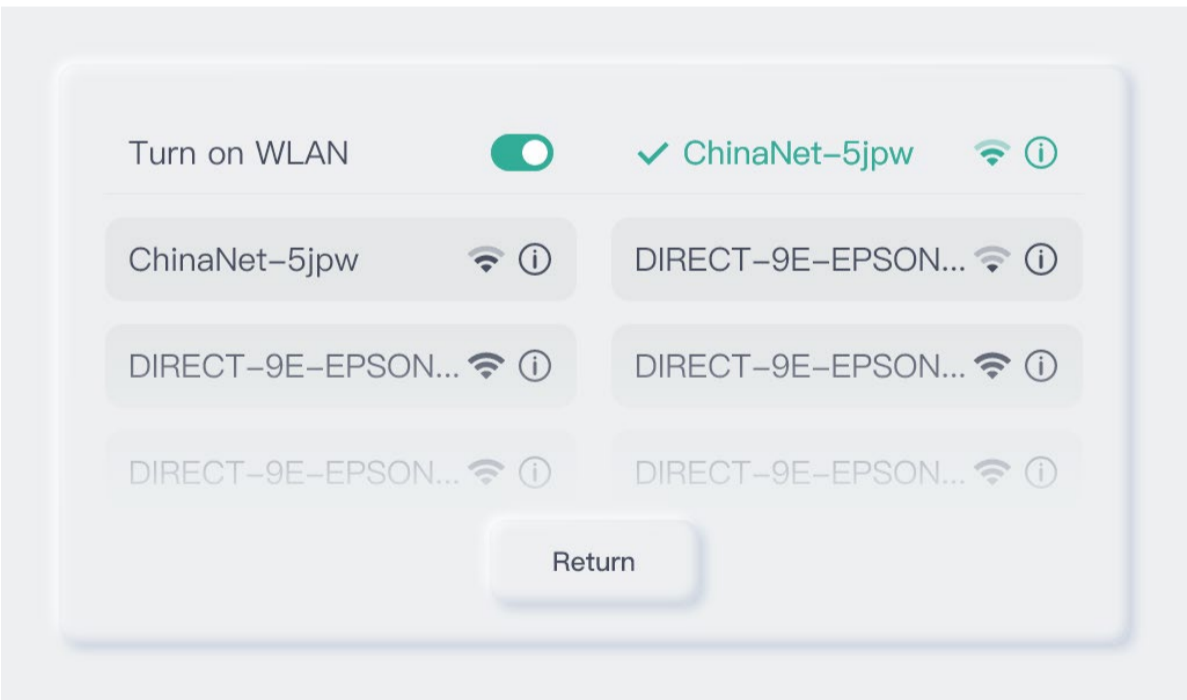
EQUIPMENT NETWORK



① Open the "Configuration" of the device, click "WiFi distribution network",



② Search ——choose network; Enter the password ——preservation



③ The device is connected successfully

Note: All functions of the Internet of Things can be used only when the device is connected to the Internet and bound to the APP account.

APP INSTALLATION AND USE

APP BINDING DEVICE METHOD 1

1. Scan the QR code to download and install, or search the "Ruijingbao" APP to download and install

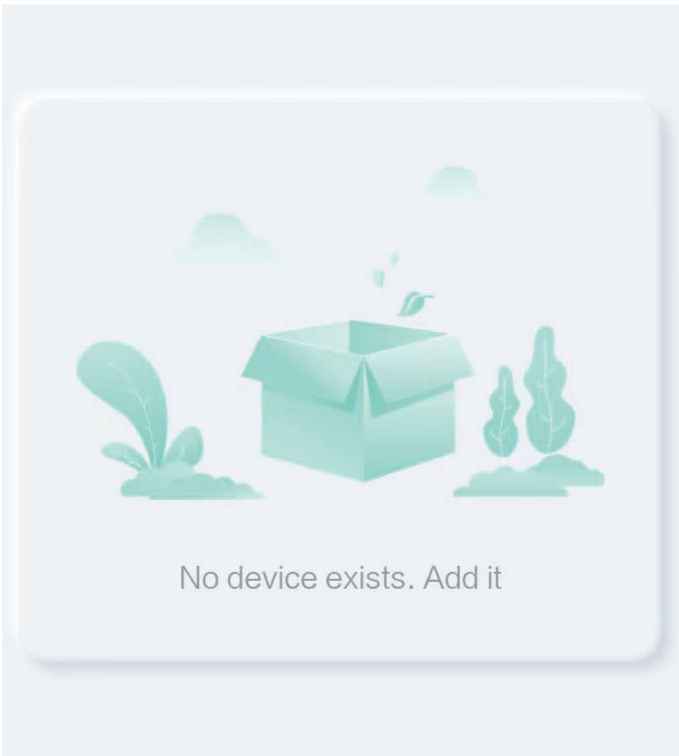


IOS app download

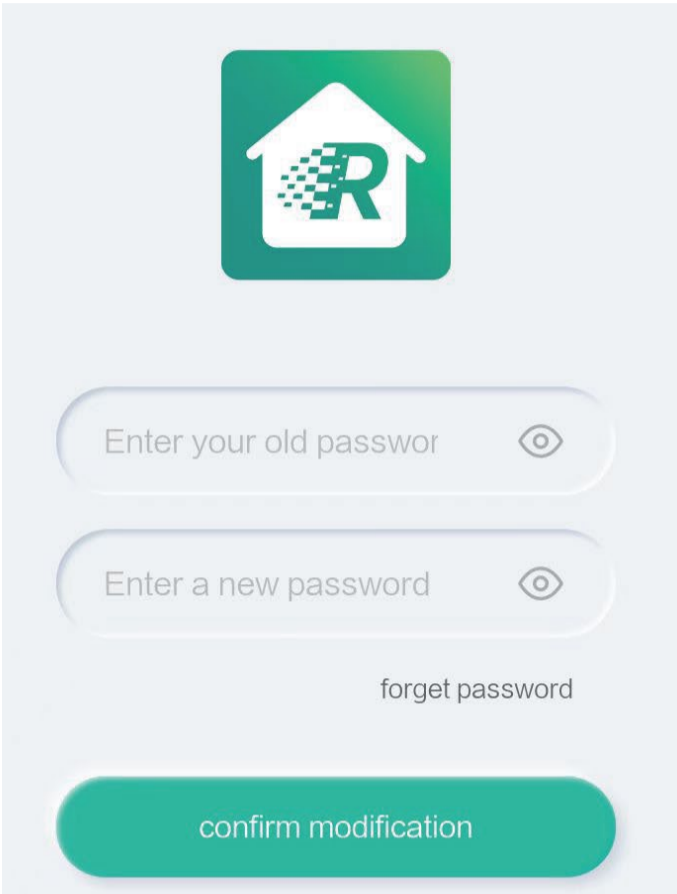


Google app download

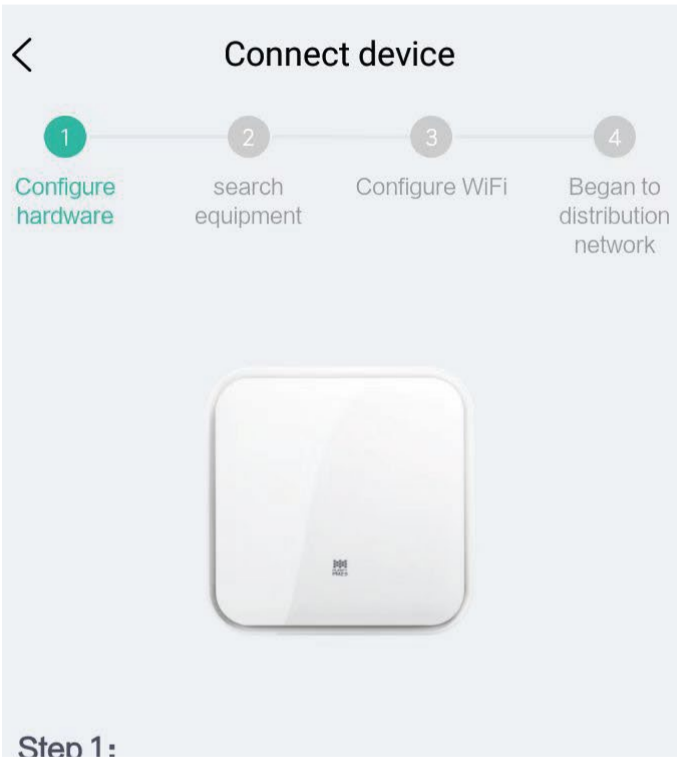
3. Power on the device, turn on the device, turn on the Bluetooth of the phone, and click "Add smart Device" on the APP interface.



2. Open the "Ruijingbao" APP, register a new user and log in the account



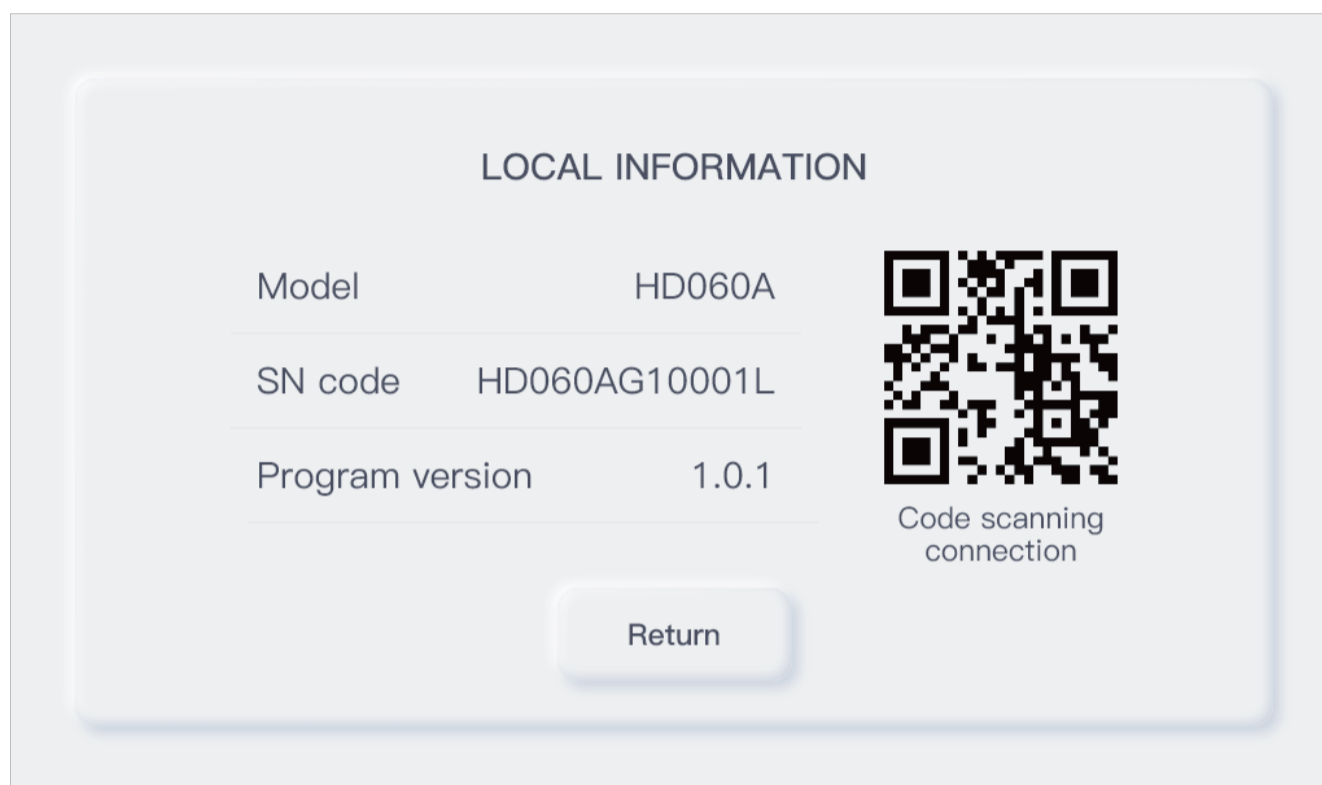
4. The mobile phone automatically searches for devices and selects the device to be bound



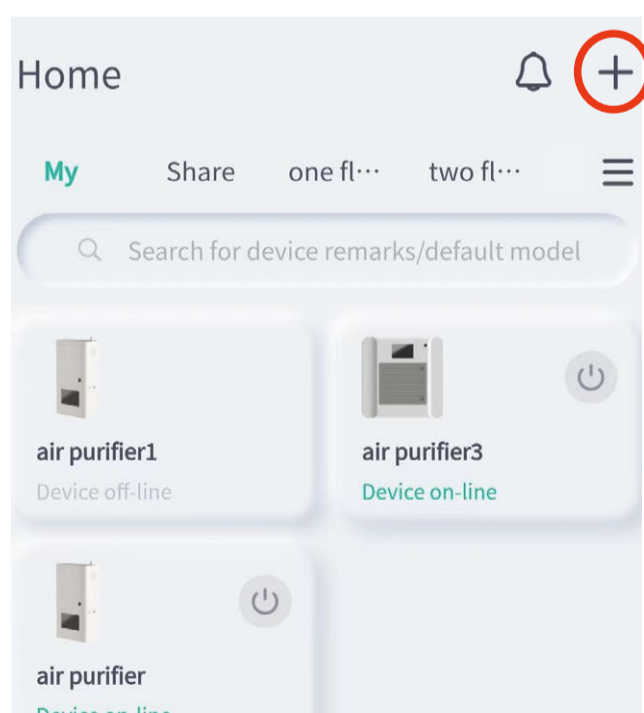
REMOTE CONTROL SCHEMATIC

APP BINDING DEVICE METHOD 2

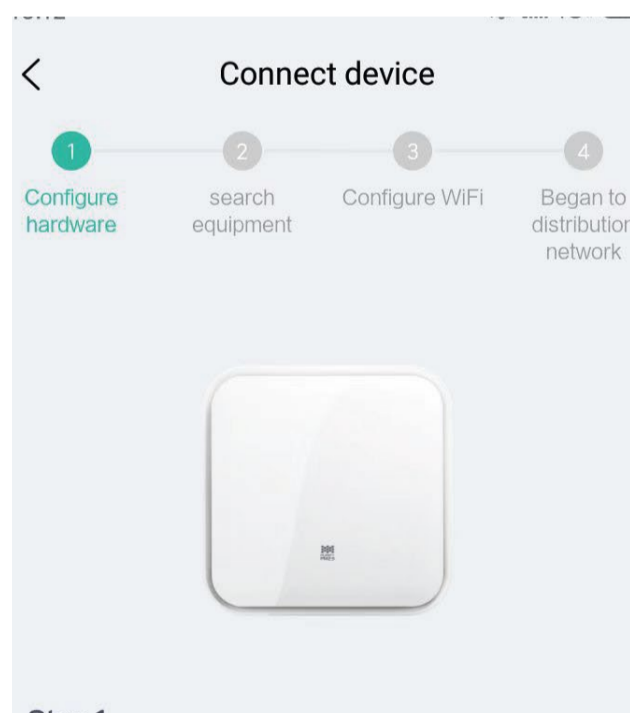
1. Open the device "Settings" -- "Other Settings"-- "Local Information" -- to view the device two-dimensional code



2. Click "+" at the upper right corner of the APP interface and click "Scan".

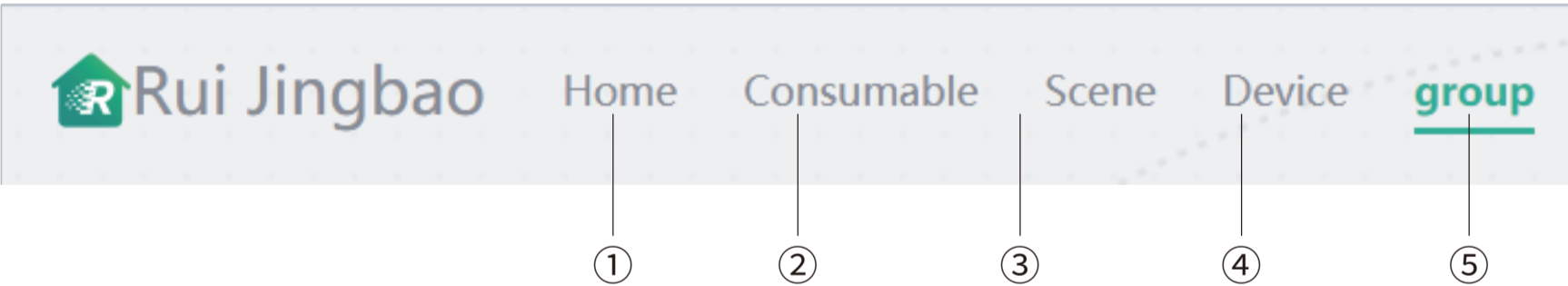


3. Wait until the mobile phone automatically searches for devices and select the device to be bound



WEB OPERATIONS

- 1. Login portal http://web.ruiwanchina.com/user_pc
- 2. There is no need to register the WEB background. Please use the account of the APP to log in and use it



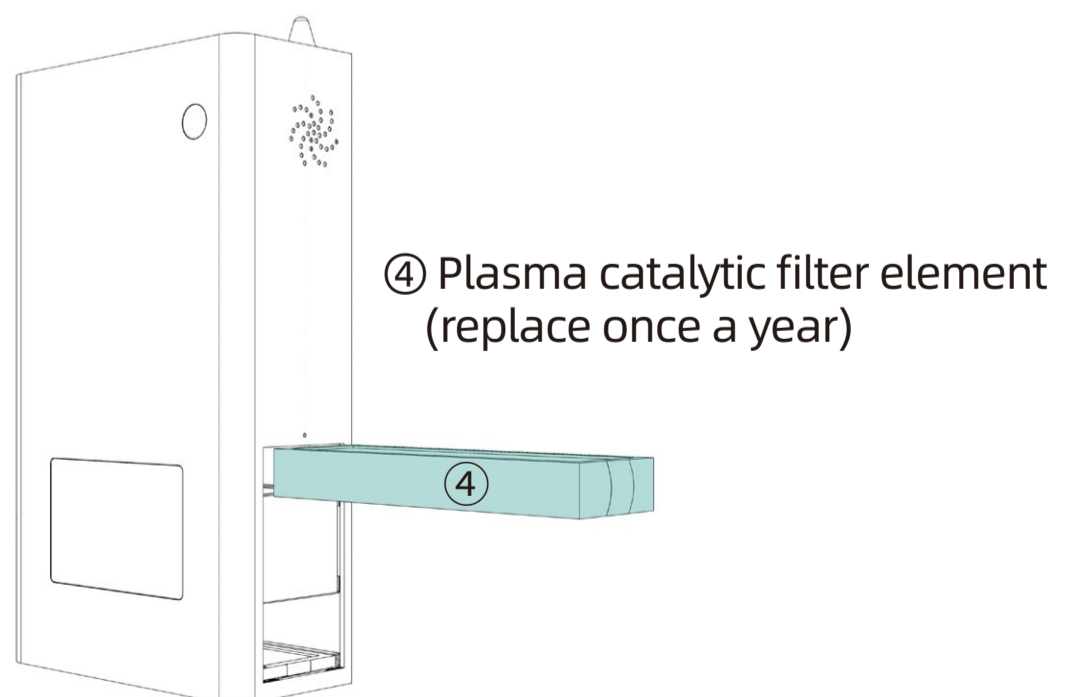
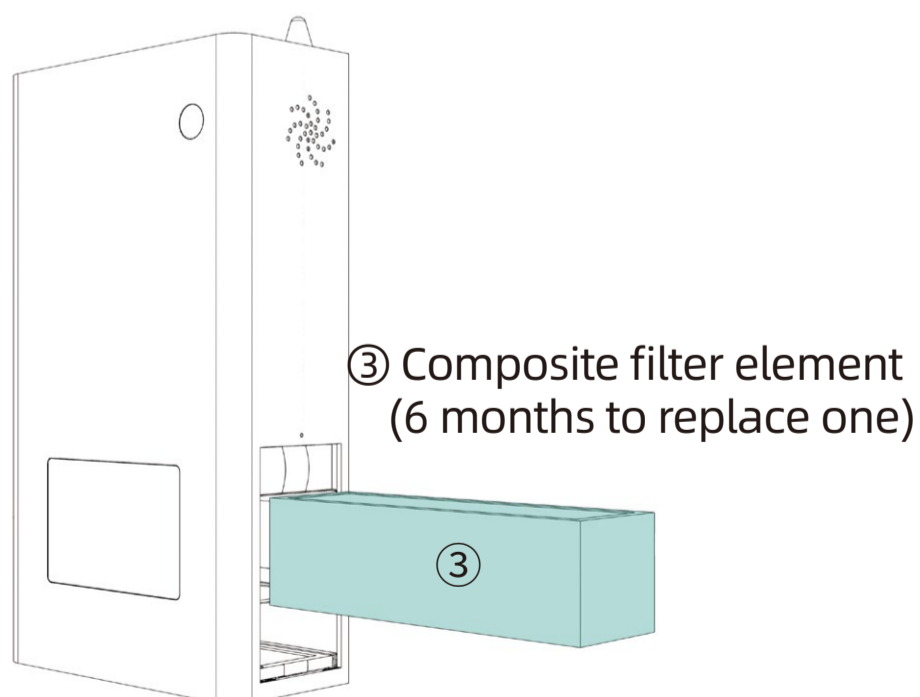
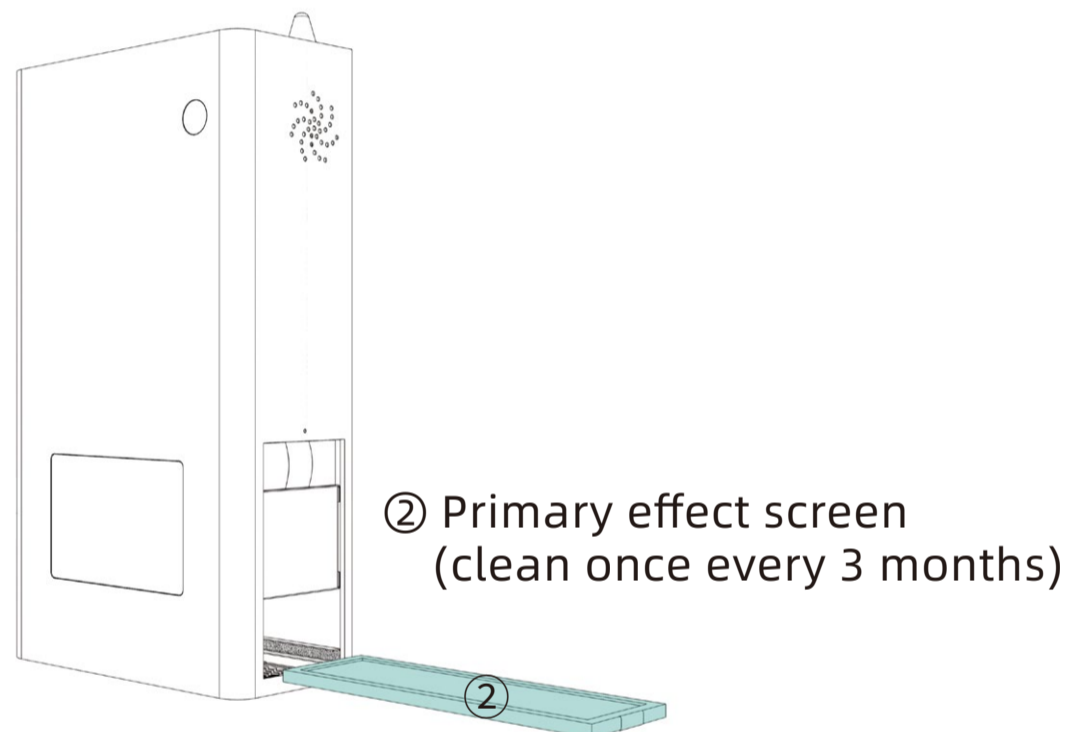
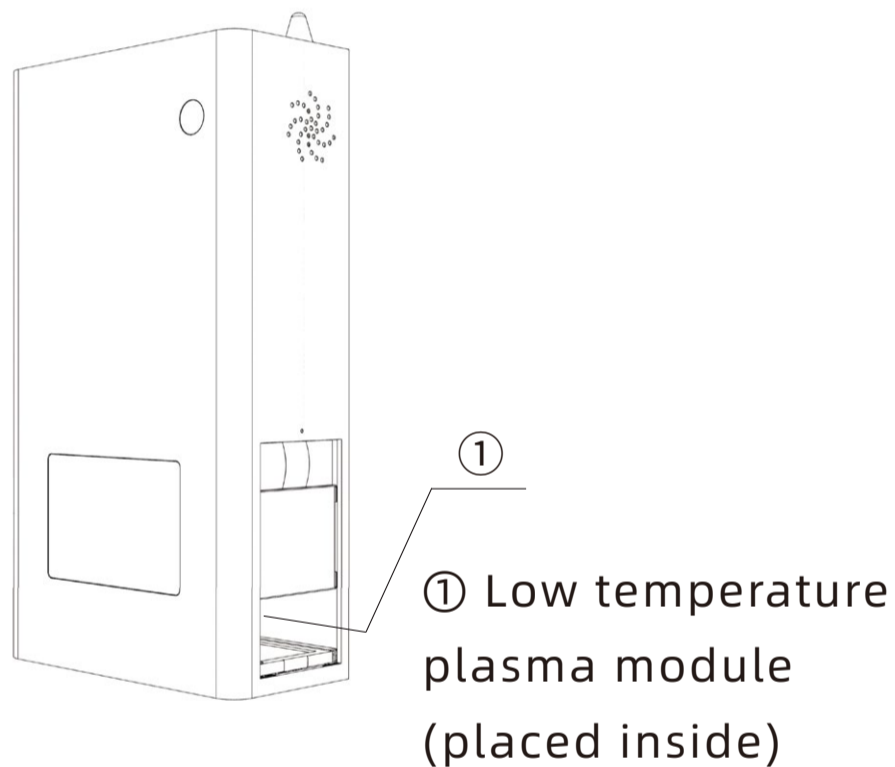
- ① View the running status/running record/filter element life statistics/ sensor data of all devices bound to the account
- ② View the remaining life of the current filter element of all devices under this account
- ③ View, modify, or set the automatic running scenarios of all devices under this account
- ④ View or control all devices bound to the account
- ⑤ Group or sort all devices bound to the account

PRODUCT MAINTENANCE

⚠ In order to ensure that the air disinfection and purification function of the product always achieve the best results, it is necessary to regularly maintain cleaning or replace the parts

⚠ WARNING

1. Before wiping the body of the machine, cleaning the air inlet and outlet, and opening the panel of the filter element cabin, be sure to shut down the machine and unplug the power.
Plug the source wire to avoid the risk of electric shock.
2. The machine must be shut down and unplugged before cleaning the low-temperature plasma module, replacing the consumables and maintaining the machine Wire plug. Do not use the power cable if it is damaged.



LOW TEMPERATURE PLASMA MODULE CLEANING RECORD

⚠ Check the amount of dust adsorbed on the surface of the low-temperature plasma module every three months. If the amount of dust is obvious, please use wet. Towel gently wipe the surface, to dry and then turn on the power to use.

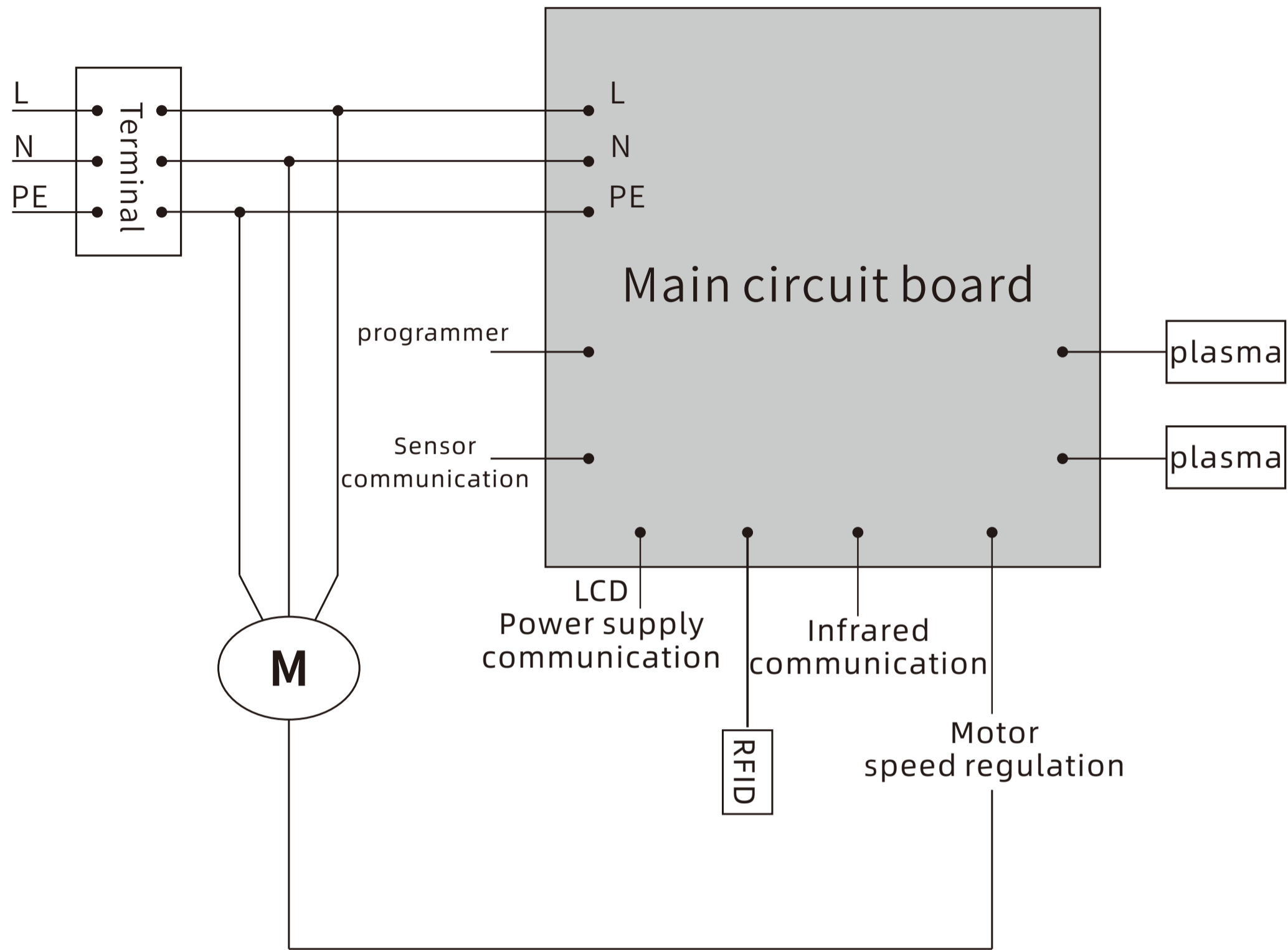
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

PACKING LIST

MODEL	QUANTITY	MODEL	QUANTITY
WD020A Air disinfecter	1 set	Infrared remote control	1 piece
Filter (installed in the equipment)	1 suit	Instructions	1 copy
Wall hanging panel	1 piece	Certificate	1 sheet
Power cord	1 piece	M6x30 Expansion tube +self-tapping screw	3 sets
Horizontal bubble	1 pcs	Primary filter	1 piece
Composite filter	1 piece	Plasma catalytic filter	1 piece

Note: The certificate of the three packages is on the last page of the manual, please cut it out and keep it properly.

ELECTRICAL SCHEMATIC DIAGRAM



TROUBLESHOOTING

When the machine fails, try the following procedures first. If the problem still unresolved, please contact our customer service Central connection.

SYMPTOMS	INSPECTION CONTENT	PROCESSING METHOD
machine Unable to start	Check wiring terminal/power plug Is it falling off or loose?	If there is such a phenomenon, connect and fix it again
	Is the power supply normal?	Check other appliances for proper operation
air purification capacity of the machine decreases	Check whether the primary filter is dusty?	Clean the primary filter and dry well
	Is the low temperature plasma module dusty?	Wipe the surface of the plasma module and dry thoroughly
	Check whether the composite filter element is full of dust?	Replace the composite filter element
	Check whether the plasma catalytic filter element is dusty?	Replace the plasma catalytic filter element
	Air inlet and air outlet Is it blocked?	Clear the blockage around the machine

Service hotline: 0760-85335032 400-006-6856
 mail box: zsruiwan@zsruiwan.com.cn

WARRANTY

Thank you for buying Ruiwan Air Disinfection Purifier

Ruiwan Company provides the following warranty contents for air disinfection purifier products purchased directly from our company or authorized agents:

1. If any defect is found in the product, it shall be found out within the stipulated warranty period, and the Company will repair or replace the defective product.
2. During the warranty period, the products can only be repaired at the headquarters of Ruiwan or the dealers designated by Ruiwan; When warranty, please show the three - package voucher or purchase invoice.
- 3, from the date of purchase, the whole machine warranty for 1 year.
(Note: as a consumable, the filter element is not covered by the warranty)
- 4, belongs to one of the following circumstances, even within the warranty period, can not be treated with warranty, but can be implemented fee treatment:
 - A. Failure to use, maintain and keep in accordance with the operation instructions, resulting in damage;
 - B. Damage caused by incorrect operation, abnormal power supply or fall;
 - C. Use non-original filter element or no filter element installed;
 - D. Disassemble the machine without the consent of the manufacturer and cause damage;
 - E. cannot prove that the machine is valid under warranty;
 - F. The information on the warranty certificate is inconsistent with the physical identification of the product or altered;
 - G. Damage caused by nuclearization or chemical corrosion;
 - H. Damage caused by force majeure (lightning, earthquake, flood, typhoon, fire, etc.).
5. **Before using the equipment, please strictly abide by the operation specifications, check and replace the filter element regularly, and do not use or store the equipment in high temperature (> 50°C), high humidity (> 90%RH or condensation), inflammable and explosive, corrosive and strong electric environment. If it causes safety accidents or machine failures, it has nothing to do with our company.**
6. Ruiwan reserves the right of final interpretation of after-sales service terms.

Service hotline: 86-0760-8533 5032

Official website: www.ruiwanchina.com

Ruiwan (Guangdong) Technology Co., Ltd

EQUIPMENT THREE-GUARANTEE CERTIFICATE

USER INFORMATION

Name: _____ Contact number: _____

E-mail: _____ Postal Code: _____

Address: _____

PRODUCT INFORMATION

Model: _____ Purchase date: _____

Invoice No: _____

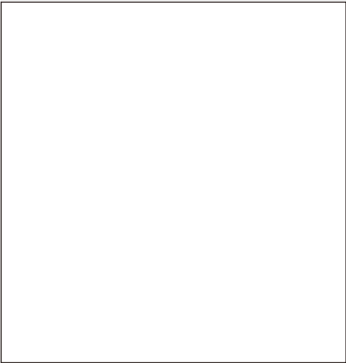
VENDOR INFORMATION

Vendor name: _____

Contact number: _____ Postal Code: _____

Address: _____

SN code pasting area



Seller's seal



MANUFACTURER

Ruiwan (Guangdong) Technology Co., Ltd

ADD : 5th Floor, Building No.133,Yixian Road,
Torch Development Zone, Zhongshan city, GD,China

FAX : 0760-85339519

WEB : www.ruiwanchina.com

TEL : 0760-85335032

TEL : +86 18666920370

EXPORTER

Zhuhai Qizhou Industrial Co., Ltd.

ADD : Room 1004, Building 3, No 1699 Qianhe South Road,
Xiangzhou District, Zhuhai City. China

FAX : 0760-85339519

WEB : www.ruiwanchina.com

TEL : 0760-85335032

TEL : +86 18666920370