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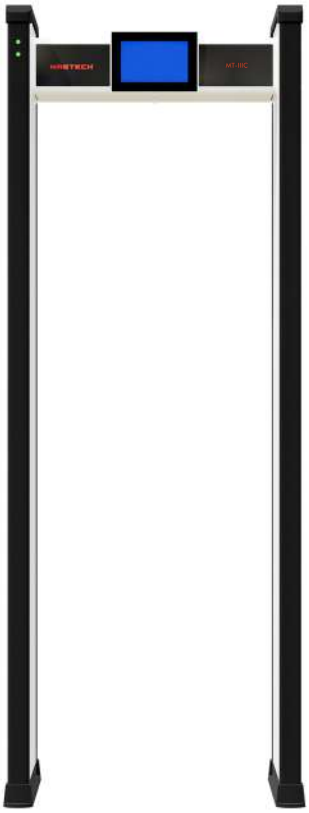
USER GUIDE



DOOR FRAME METAL DETECTOR

ULTRA DFMD

Thank you for purchasing our product.

To receive more complete service, please contact us on www.magtech.in

Model MT-IIIC Serial No. _____

TABLE OF CONTENTS

1. PREFACE

Thank you for choosing the Ultra DFMD product. The following installation and operation instructions are suitable for equipment installation and ordinary daily operations. In addition to these instructions, the equipment shall be installed and used in accordance with the relevant local site requirements.

Before installing or using the equipment, the user should read this manual and understand the contents. It contains information about equipment structure, installation, and use. Follow the correct operation and maintenance steps to ensure the stable operation of the equipment.

DEFINITION OF NOUNS

Sensitivity: This parameter defines the size of the metal object generating the alarm. Increased sensitivity allows the detection of smaller volumes of metal objects.

Recognition Power: This is the ability of the security gate to distinguish between non-dangerous goods and weapons. The alarm rate of the security door placed at the security point can indicate the identification ability of the equipment. Recognition power is affected by a variety of factors, such as the category of personnel passing through and the sensitivity level.

Irrelated Alarm: Also known as a "garbage alarm," this refers to an alarm caused by non-hazardous metal items carried by people passing through the security gate.

False Alarm: This is caused by factors other than metal objects (such as electronic interference). For security gates, an alarm caused by metal objects, whether related or irrelevant, is not considered a false alarm.

Alarm Rate: The number of alarms caused by metal items as a percentage of the total number of people passing through the security gate. The alarm rate is affected by the identification ability of the security check gate. If the identification power is poor, multiple alarms may be caused by non-dangerous metal items, resulting in a higher alarm rate.

Alarms caused by electromagnetic interference or other causes unrelated to items passing the security gate are not included in the alarm rate.

Pass rate: The maximum number of people allowed to pass per unit of time without affecting the security gate detection performance. The pass rate indicates the ability to restore standby mode after the security gate passes. In practice, the maximum pass rate is theoretical and usually cannot be achieved due to the inspection procedure and the maximum walking speed. The actual situation on the site shall prevail.

The ability of the security gate to maintain the sensitivity level unchanged when a person passes at different speeds.

Set the calibration parameters according to the requirements of the operation site in order to achieve the best performance.

Side-by-side use: If two or more side-by-side operation security checkpoints are too close together, their electromagnetic fields will affect the normal operation of each other. Interference between adjacent security gates can be reduced by using varying operating frequencies.

Operating frequency: The electromagnetic field frequency generated by the security gate. The security gate has multiple different working frequencies. When the security gate is calibrated at the installation site, select the working frequency with the minimum interference level. At the same time, through the use of multiple working frequencies, there is no need to use synchronous cables, allowing multiple security doors to be used side by side.

The detection uniformity does not consider the shape and direction of the metal object. The security gate maintains uniform sensitivity throughout the detection area, and the detection uniformity directly affects the recognition ability of the security gate. Usually, the security gate sensitivity is set according to the weakest position in the detection area. If the detection uniformity is poor, it may lead to unnecessarily high sensitivity at other positions in the channel, which significantly reduces the recognition accuracy. When testing the detection uniformity of security gates, physical objects such as weapons or simulated weapons should always be used. Using a column or a sphere as a test object may give an incorrect indication of the true detection uniformity of the security gate.

Anti-interference: The security gate operation may be affected by electronic or mechanical interference. Electronic interference is usually caused by other electronic devices located near the installation site. Electronic interference may be transmitted through the main power line or be a form of radiative interference. Mechanical interference is caused by moving metal objects near the security gate or by vibrations behind the wall or under the ground structure. Good anti-interference can only be achieved with effective hardware and software filtering measures and special coil design.

2. INTRODUCTION

The security door is used to detect metal objects. The main tests include (knife, gun, dime, chip, etc.). Typical application environments include:

- Court and government buildings for visitor checks
- Inspection by prison inspectors
- Access control for conference centers, public buildings, games, other occasions, stadiums, and concert halls
- Inspection of factory employees and visitors, and material loss control in industrial plants
- Guest checks at hotels, restaurants, casinos, and discos

If the equipment is used for the above-stated purposes, the manufacturer shall not bear any responsibility.

The equipment has passed the radiation test and meets the applicable magnetic field standard for human safety.

This equipment meets the applicable international standards for electrical safety and electromagnetic compatibility.

Note: This device may have an impact on personal medical electronic devices.

TECHNICAL PARAMETER

1. Rated voltage: 100~240 VAC
2. Allowable voltage range: 90~264 VAC
3. Power supply frequency (rated): 50-60 Hz
4. Power consumption: 31W (AC) or 25W (12V DC)
5. Power consumption: 60W (AC) or 50W (12V DC)
6. Length of power line: 1 m (standard).5
7. Ambient temperature: -20°C ~ 45°C
8. Relative humidity: 0 to 95%, no condensation
9. Protection class: IP 55, excluding external power supply, used in dry environment
10. Size (lateral height): 226 cm
11. Dimensions (lateral width): 80 cm
12. Medial height: 207 cm
13. Inner-side width: 71 cm
14. Depth: 64 cm
15. Net weight: about 62 kg

PACKING LIST

The required parts are placed in the packing box of the security door header box:

1. Launch door panel: 1 piece
2. Receiving door panel: 1 piece
3. Security gate control host: 1 piece
4. Power adapter (including power cord): 1 set
5. Assembly screws and inner hexagon wrench: 1 set
6. Product operation manual: 1 set

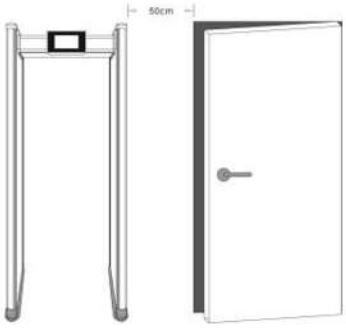
3. CONFIRM THAT IT IS ON THE INSTALLATION SITE

Important for Installation Site:

It is very important to minimize the interference impact caused by different sources on the security gate. The following factors are considered to ensure the best working condition of the security gate and to maximize the number of people passing through the security checkpoint.

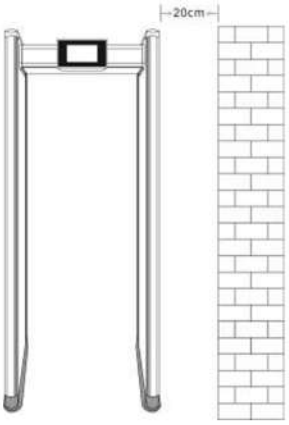
Active Metal Objects

Large metal objects moving outside the security gate should be kept more than 0.5 to 2 meters away from the security gate to avoid false alarms. Depending on the size of the metal object, the minimum distance between the moving metal object and the security gate may differ.



Fixed Metal Objects

Fixed or motionless large metal objects should be at least 20 cm away from the security gate. Fixed metal objects have less effect on sensitivity, but their vibration may make the security gate more susceptible.



Ground Vibration

The ground shall be flat and provided with strong support to prevent vibration. Especially when there is a vibrating metal structure under the ground, personnel will cause unnecessary alarms when passing through the security gate.

EMI

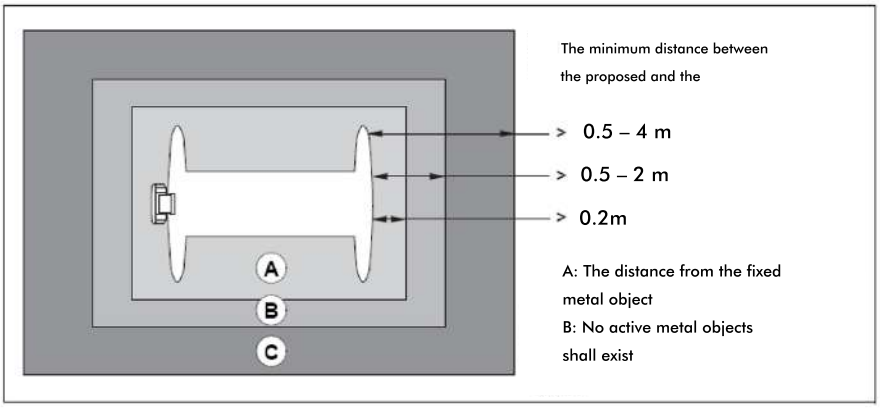
The distance between the electronic interference source and the receiving door panel should be as large as possible. The recommended minimum distance is 0.5-4 meters. However, the actual distance needs to be determined. For example, you can adjust the relative positions of the security door and the interference source until you find the best position.

"Interference may be generated by electronic control panels, radios, computers, image displays, high-power motors and transformers, AC lines, thyristor control circuits, flash fluorescent tubes, arc welding equipment, and more."

Conductive electron interference

"The line connected to the power line shall not be connected to other large loads, such as high-power motors, etc. These large loads may cause significant power or voltage fluctuations in the line, which could affect the security gate's operation."

Note: When the equipment is in normal working condition, if the indicator light in the displayscreen does not exceed 2-4 grids, the distance between the equipment and the interference source is sufficient.



Security gate layout

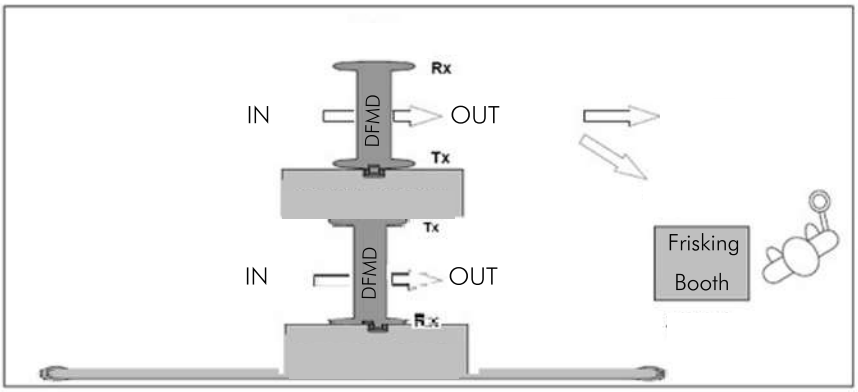
"In order to achieve the maximum flow of people, the layout of the security gate should be carefully planned before the installation of equipment, taking into account mechanical and electronic interference factors at the installation site to effectively conduct security inspections. The functionality of the examination is largely influenced by:

- Arranging for inspectors to pass through the security gate in turn, allowing only one person to pass at a time.

- Ensuring that reinspection of detected metal objects does not disrupt the normal operation of the security gate.

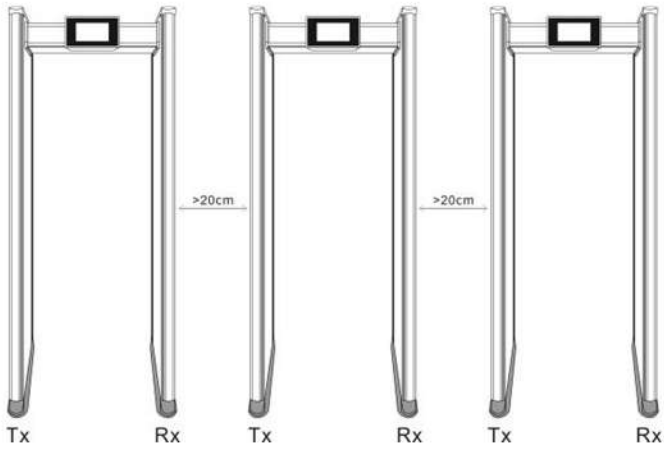
- Organizing personnel to inspect luggage to prevent false alarms and delays."

Example of a security checkpoint layout



Work side by side

Side-by-side work involves two or more security gates operating close to each other. When operating side by side, security gates may interfere with each other to some extent. The level of interference depends on the distance between the security doors, the operating frequency, and their sensitivity.



Install the security gates as shown in the figure. Place two receiving panels (RX) or transmitting panels (TX with power interface) close together to achieve the minimum side-by-side distance. If possible, position the two receiving panels close to each other, ensuring they are within the maximum allowable distance range. During installation, keep the TX side of the transmitting panel close to any potential sources of interference. Use a frequency combination with the lowest interference intensity.

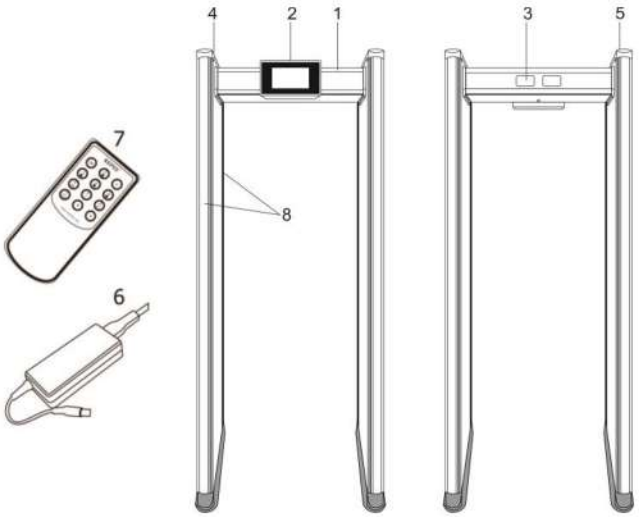
Note: The side-by-side working distance depends on the sensitivity level and frequency combination used, and should be determined based on the installation site.

Frequency selection

When working side by side, you can use either automatic frequency search or manual frequency selection. If automatic frequency search is used, there may be temporary interference with the security gate at the selected frequency. However, it is not recommended to use automatic frequency search during the startup process. Please refer to the 'calibration' section for details.

4. ASSEMBLY AND STARTUP SETTINGS

Parts and Assembly:



1. Security gate host
2. Display screen
3. Traffic indicator light
4. Launch door panel
5. Receiving door panel
6. Power adapter
7. Remote control (optional)
8. Front/rear location display light bar

Linkage network port (optional): add alarm output network port under the security door panel: "blue" for infrared signal; "brown" for infrared negative electrode 12V-; "white and green" for empty terminals.

Place the launch and receiving door panels flat on the ground to facilitate assembly. The security door head can be installed in either direction. Check the installation site before assembly.

1. The direction of personnel should be set according to the actual situation of the installation site.
2. The location display lights are located in the front and back of the launch door panel.
3. The display screen is located in the main control box of the security check door. For assembly, set the display toward the "exit" side.
4. The equipment is equipped with 8 screws and an internal hexagon wrench to assemble the security door head and door panel together.
5. When the motherboard left and right DB25 bus interface and the connection line of the bus head is not corresponding, it is necessary to loosen the motherboard screw left and right to change direction.
6. The assembly hole can effectively fix the door panel and the main control box to maintain the level.
7. In order to prevent the security door from losing balance, the security door is designed with a fixed hole position, which can be fixed with the ground through screws.
8. Remote control matching method: point the remote control at the window on the left side of the screen and press the remote control OK button with one hand, hold the LEARN button on the motherboard and hold it for 3 seconds. At this time, an ID input box will pop up on the screen to represent the matching success.

Pay attention: Power supply must be provided by the manufacturer. Do not connect the DC power cord to any other power sources.

Pay attention: Do not insert the cable into the wrong interface to avoid damaging the cable and interface.

5. SCREEN DISPLAY AND PROGRAMMING

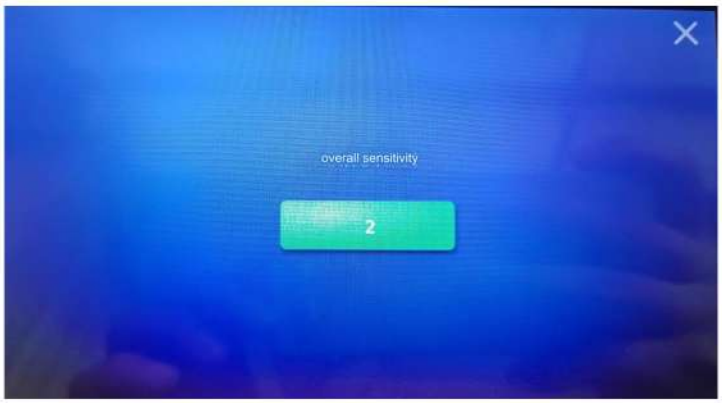
Touch screen main interface

1. Show the number of people passing through.
2. Display the number of alarms.
3. Display the alarm percentage.
4. Device serial number (SN).
5. Display the current alarm and defense area.
6. Show the channel.
7. Show the date and time.
8. Display the dynamic diagram of magnetic field interference.

Ordinary password interface

"Click on the screen to display the current user's ID; input '0', then click the confirmation key in the lower right corner and press 'OK'. Next, enter the password '66' in the displayed password interface, click the confirmation key in the lower right corner, and then click 'OK' to enter the menu."

Metal detection parameter interface



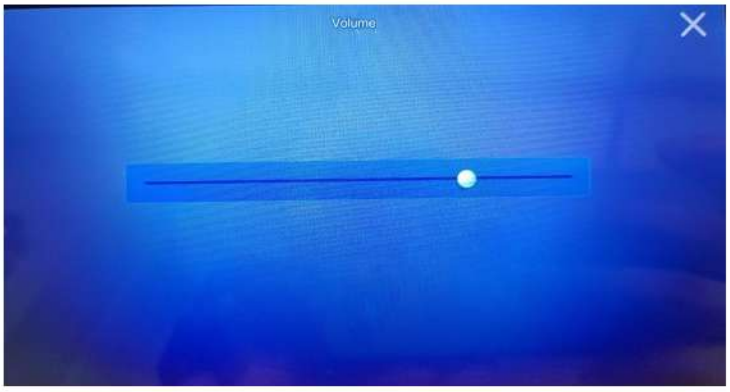
(1) The overall sensitivity is currently displayed: click the sensitivity icon to enter the input parameters and save automatically. Click "Close" to exit the interface, then click the return button in the upper left corner to go back to the main interface.

(2) Current sensitivity interval display: There are 8 intervals from 1 to 8, each allowing separate sensitivity settings. Click on the interval to modify and input the corresponding sensitivity (Interval 1 defaults to 50, others default to 100). Click "Close" to exit the interface and return to the main interface by clicking the upper left corner.

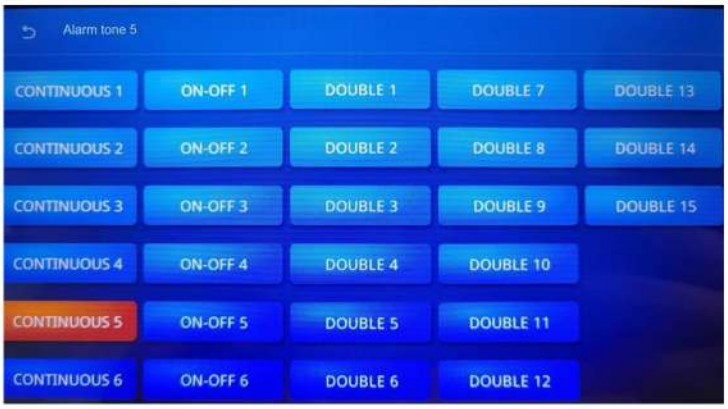
(3) Current Display Program Interface: Provides 32 program selections. The default program is the "20 All Metal" program. Each program corresponds to different sensitivities and is tailored to specific item materials. To select a program, click on the corresponding program icon for modification. Press the return button in the upper left corner to return to the main interface.

(4) Current Display Channel Interface: Offers 10 channel selections. Choose the most appropriate channel based on the device's installation environment to minimize interference. If the security gate alarms automatically with no one passing through, adjust the channel accordingly. To make changes, click on the corresponding icon. After returning to the main interface, you can observe the dynamic diagram of the magnetic field interference strength percentage. The smaller the digital percentage, the more stable the environment is.

Sound visual parameters



(1) Alarm volume setting: Pull the small dot to the right to increase the volume and to the left to decrease it.



(2) Alarm tone setting: Choose from 27 tone selections. To change the tone, simply click the corresponding icon. Click the return button in the upper left corner to return to the main interface.

(1) The advanced password is "98". First, click the screen to enter the current user ID "0", then click the confirmation key in the lower right corner. Next, click "OK", enter the password "98" in the display password interface, click the confirmation key again, and then click OK to enter the interface.

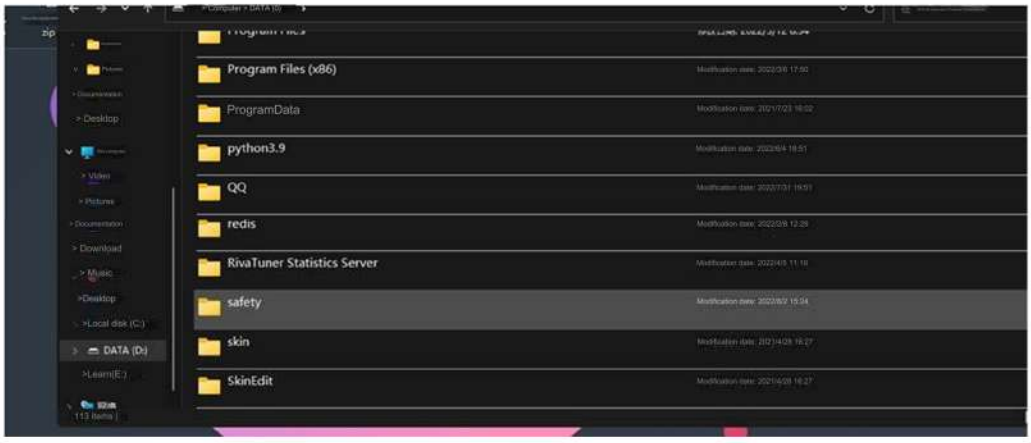
(2) Alarm tone setting: We provide 27 tone selections. If you need to change the tone, simply click the corresponding icon to complete the change. Click the return button in the upper left corner to return to the main interface.

Current display network configuration interface: Click the "other Settings" icon to enter the network configuration options. The security gate has networking functions. Once the configuration connection is completed, the data can be synchronized to the background computer for viewing and parameter modification. Additionally, you can set up email reminders; when abnormal alarm values are detected, notifications can be sent to the specified mailbox.

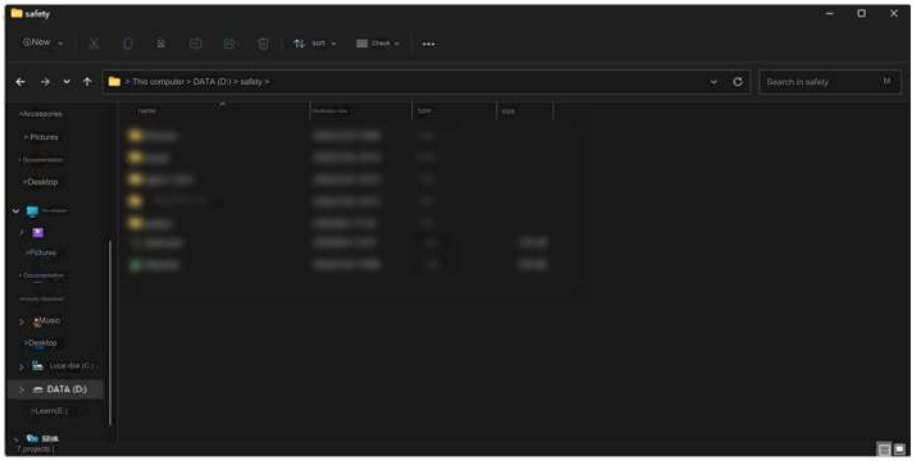
6. MANAGE THE INSTALLATION METHOD OF THE SOFTWARE PLATFORM

Software installation

1. Unpress the compression package and place it in the D root directory as shown in the following figure



(2) Project Startup



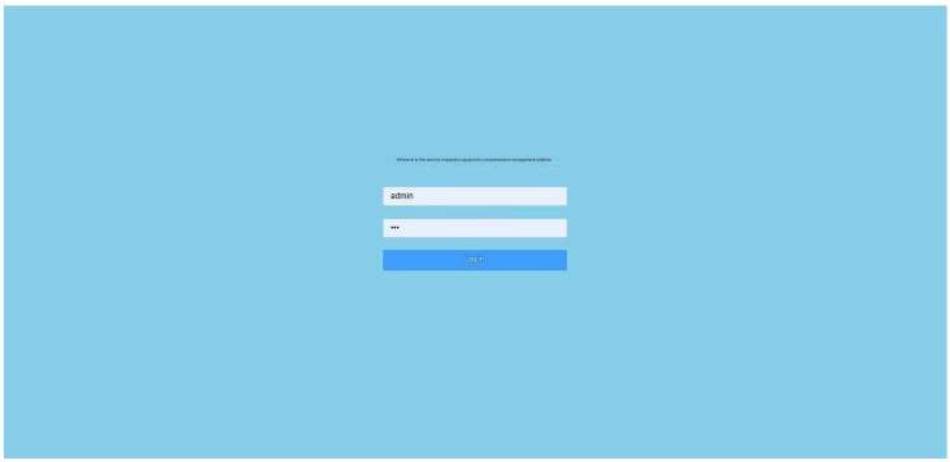
Click to open: Exexe can initiate the project (create a shortcut to place on the desktop). To stop the project, click 'Stop'. The executable file can both stop and start the project (allow about 5 seconds for the background to initialize).

Usage method

① Entry:

The default account for super administrators is as follows:

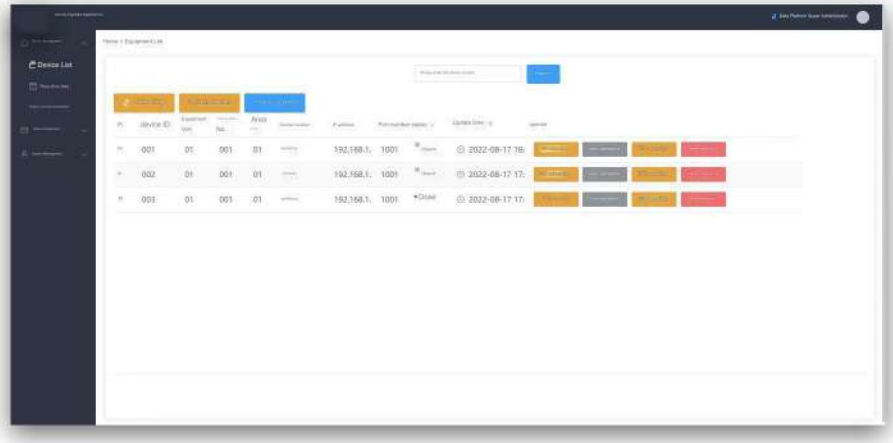
Username - admin, Password - 111.



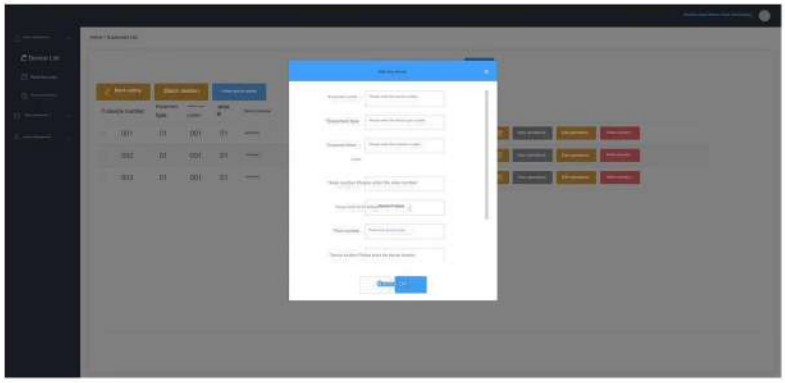
② After successful login, enter the data display interface as shown in the figure below.

If there is no device, you need to click the "background" button in the upper right corner to enter the background and add devices.

③ To add a device, click on the "Device Management" submenu and select "Device List" to enter the device addition interface, as shown in the following figure:



Click on the new device, as shown in the figure below:

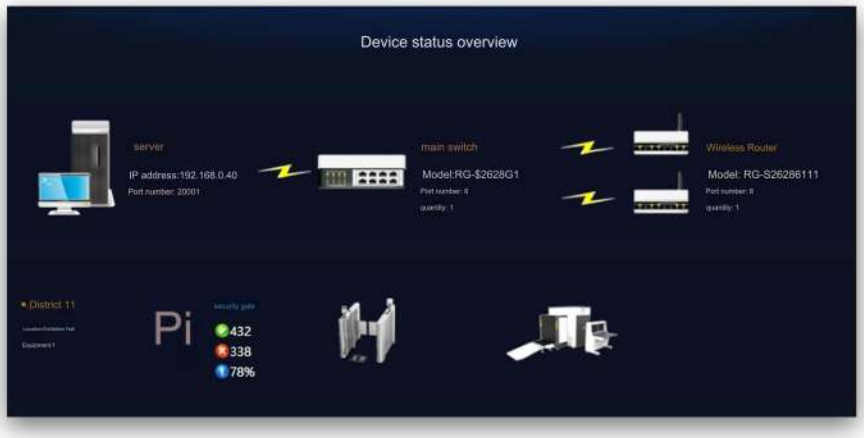


1. Software Interface Equipment Parameters:
   - Obtain the following parameters from the serial port screen:
   - Device ID (3 digits, if displayed as 1, input 001)
   - Device Type (2 digits, if displayed as 1, input 01)
   - Customer Editor Number (3 digits, if displayed as 1, input 001)
   - Area Number (2 digits, if displayed as 1, input 01)
   - IP Address (Use the IP address displayed on the serial screen)

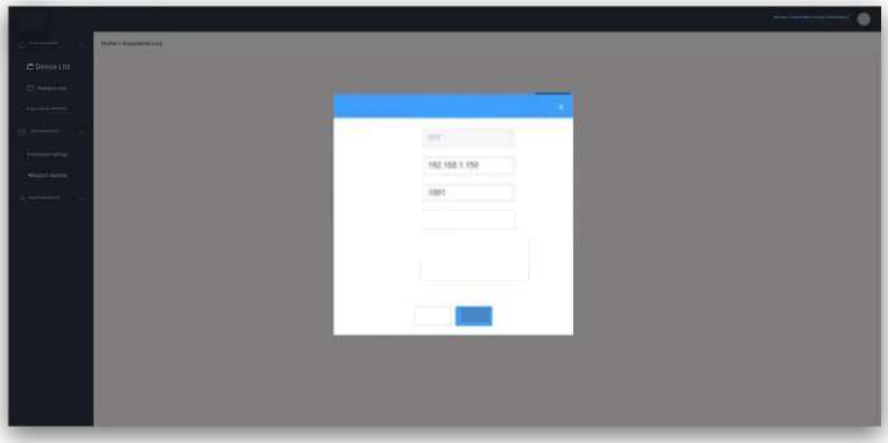
2. Parameter Setting of the Serial Port Screen:
   - Local Port Number: 1001
   - Local IP Address: Set in the same network segment as the server's IP address
   - Remote IP Address: IP address of the server
   - Remote Port Number: 20001
   - Device Type: Must be 01 (represents the security gate)

3. Setting Up in Software "Device New" Interface:
   - Enter the parameters obtained from the serial port screen into the software interface.
   - Ensure Device Type is filled as 01.

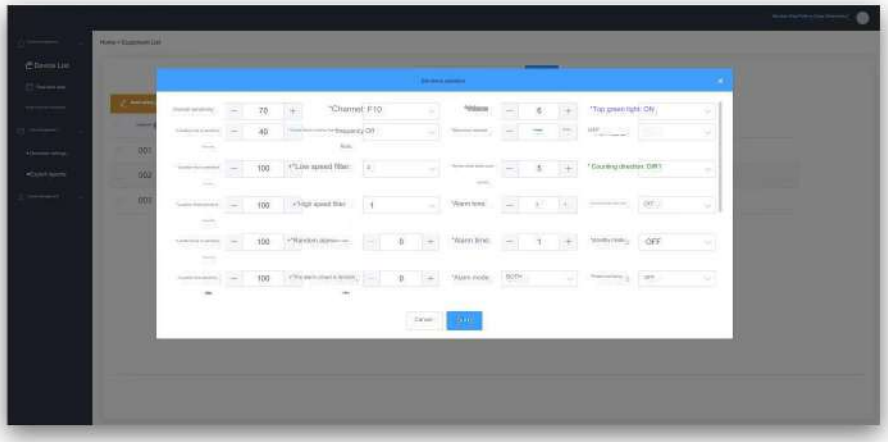
4. Final Steps:
   - Confirm that the Customer Editor Number, Area Number, and Device ID match the parameters set on the serial port screen and in the software interface.
   - Save and apply the settings.



After successful addition, if necessary, click on "Edit Information" to modify, as shown in the figure below:



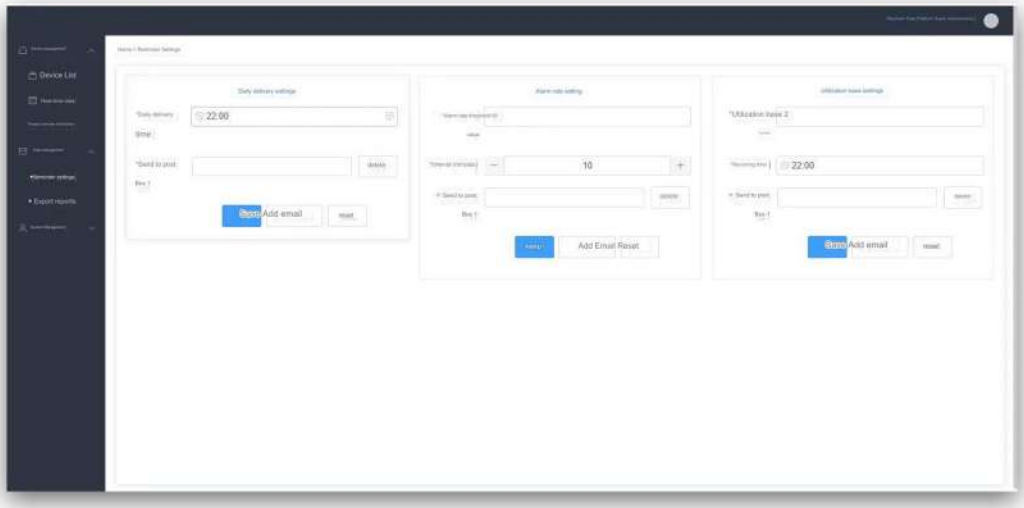
If you need to view and modify the security gate parameters, click "View Operation" and then "Edit Operation," as shown below:



(If the security gate parameters need to be modified, the display status of the security gate must be online; otherwise, the security gate parameters cannot be modified).

④ Email reminder settings

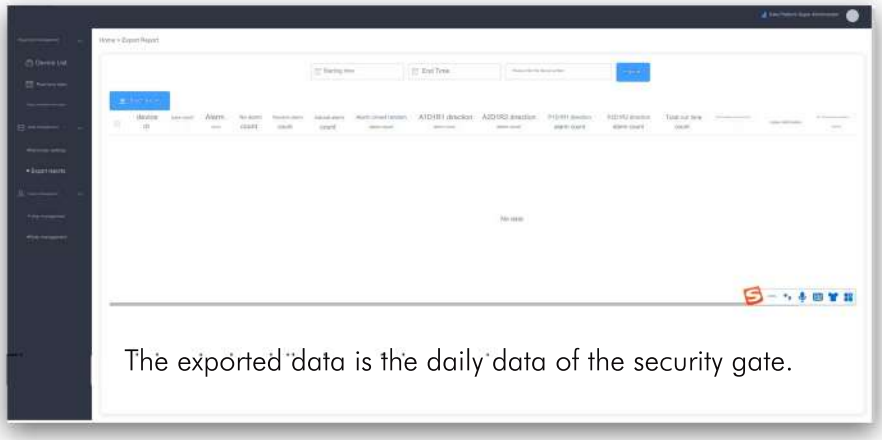
Click the 'Data Management' submenu, then select 'Reminder Settings' to enter the email reminder setting interface, as shown in the following figure.



Choose the send time and recipient (up to 2 types; it is recommended to fill in different recipients because a single recipient can only receive mail once per day). Set the alarm rate threshold for a single security gate; if exceeded, an email will be sent. Specify the interval for sending subsequent emails after the alarm rate threshold for a single security gate has been exceeded. The utilization base is set to the minimum number of people passing through a single security gate per day. If this number is low, it indicates low utilization of the security gate. The scheduled time to send the email is the next day.

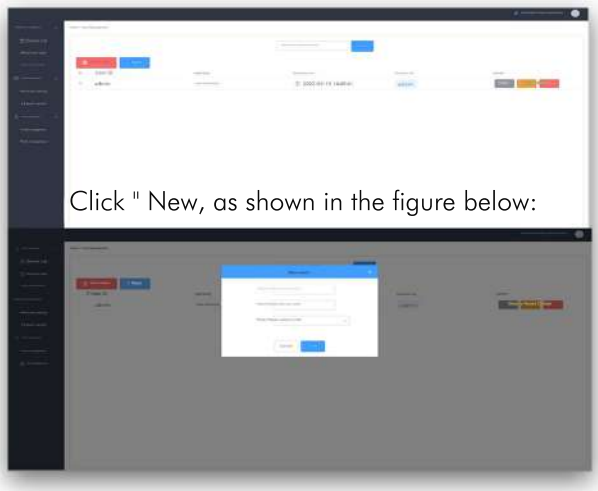
⑤ Export report

Click "Data Management" submenu "Export Report" to enter the export report interface, as shown in the following figure.

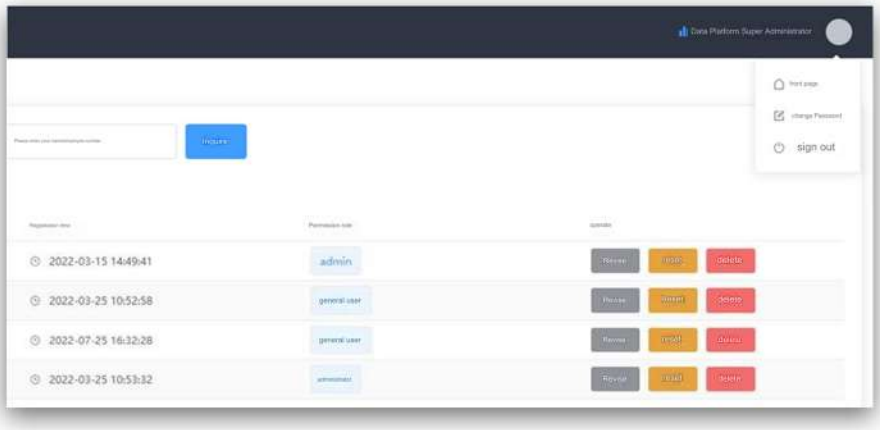


⑥ User management

Click "System Management" submenu "User Management" to enter the User Management interface, as shown below.



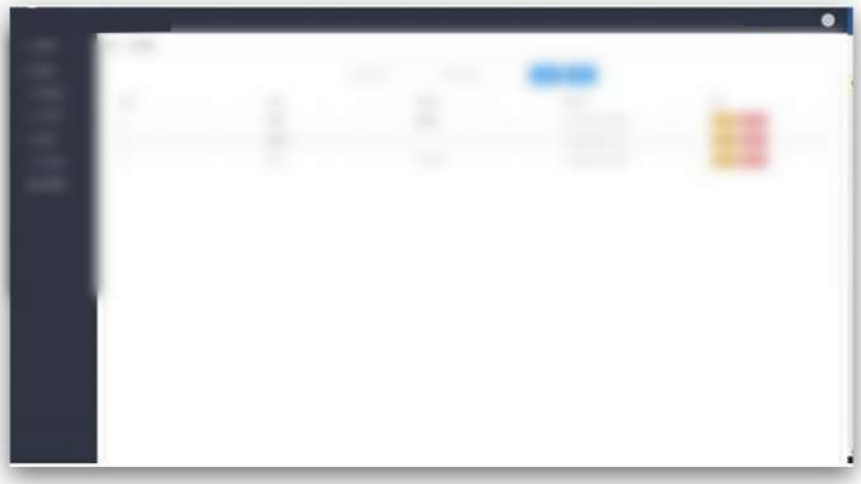
Enter the job number, name, and role. After successful addition, users can log in with the default password, which is the work number. If you need to change the password, move the mouse to the avatar, choose "Change Password," and exit the function.



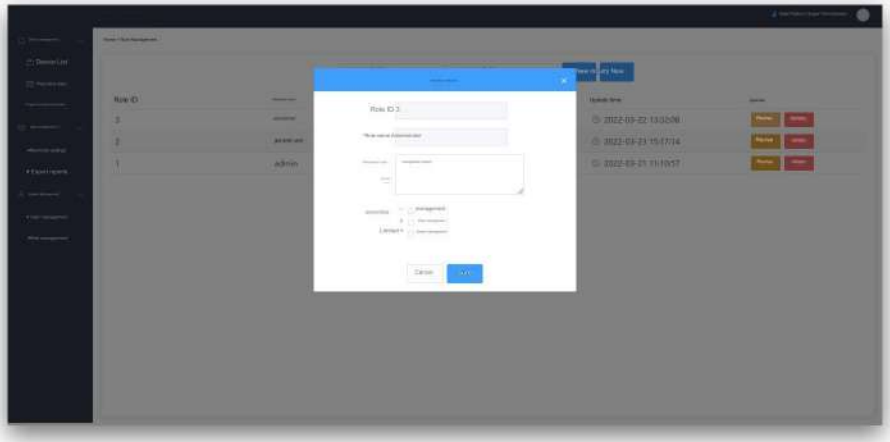
Employee information can be modified in the employee list.

⑦ Role Management

Click on the 'System Management' submenu and then select 'Role Management' to enter the role management interface, as shown in the following figure.



The role can be added and modified, as shown in the following figure.



The corresponding permissions can be checked (except for admin roles, which have all permissions, so admins need to be checked).

7. CONFIGURATION METHOD OF NETWORK BRIDGE (NETWORK BRIDGE EQUIPMENT SELECTION)

Digital pairing method:

Digital pairing operation is simple and fast. It allows easy dialing of codes and adjustment of the master and slave device digital tubes to the same value. It supports point-to-point and point-to-many connections (up to 8 points) and offers 13 wireless channel options.

Digital tube values range from 0 to C (0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C). Each value corresponds to a wireless channel from 1 to 13.

One-to-many pairing method:

"Push one transmitter network bridge to the main AP and the other receiver network bridge to the AP. Short press the digital tube switch/reset button. With each press, the digital tube value will increase by one (0-9-A-C cycle). Set the matching bridge to the same value for successful configuration.

Interface:

The bridge is divided into transmitters and receivers, with the main bridge connected to the router/switch and the security screen."

8. EQUIPMENT MAINTENANCE

Phenomenon description	Maintenance measures
system info: The MDPU power supply is too low	Replace the connection cable Replace either the MCDS or the MELS
system info: The MDPU temperature is too low	Waiting for equipment to warm up
system info: MDPU hyperpyrexia	Move the device to a cool position
system info: MDPU EEPROM Initialization	Power cycle the device and confirm that all parameters are set correctly!
system info: Access code initialization	Reset all of the access codes
Remote control battery power is exhausted!	Replace the battery
Remote control battery level is too low!	Prepare to replace the battery
system info: The MCCU power supply is too low	Replace the power supply renewal MELS
system info: The MCCU temperature is too low	Wait for the equipment to warm up
system info: MCCU hyperpyrexia	Move the security gate to a cool position renewal MELS
system info: MCCU EEPROM Initialization	Power cycle the device and confirm that all parameters are set correctly!
system info: RX cable failure!	Check the cable connection of the receiving door panel
system info: TX cable failure!	Check the transmitter panel cable connection
system info: Receiving door panel X failure! (The X is the channel number.)	Check the receiving coil resistance renewal MRXS Check the receiving cable connector

	renewal MRXS renewal MELS
system info: Launch gate plate X failure! (The X is the channel number.)	Check the transmission coil resistance renewal MTXS Check the transmitter cable connector renewal MTXS renewal MELS
System FPGA interrupt failed!	Power to cycle the equipment and replace the MELS
Operation failed: MCCU no response!	Determine that the cable connection of the display unit is intact; Replace the display unit cable Replace display device cable, replace display assembly, replace electronic component s
Maximum number of verified remote controls is reached!	Cancel all remote controls and try again Note: This operation will cancel all remotes previously written to the security gate
No custom parameters are set!	Save the parameter settings before loading
Data cannot be read by the MCCU	Check the connection cable of the display unit to cycle power on the device Replace display device cable, replace display assembly, replace electronic components
MCCU parameter error	Power cycle the device and confirm that all parameters are set correctly! Replace the display unit connection cable Replace electronic components
Operation failed: MDPU no response!	Determine that the cable connection of the display unit is intact; Replace the display unit cable Replace electronic components
warn! Power off equipment!	Press "C" to clear the alarm or reconnect the power supply
system info: CTX cable fault!(X is the counting emitter	Check cable connection Replace the cable

number)	
system info: CRX cable failure!(X is the emission counter number)	Check cable connection Replace the cable Random alarm
Random alarm	Change the operating frequency, or move the detector to other locations and reduce the sensitivity.
The controller is off power	Check the power cord Replace the power cord Connect the power supply directly to the MELS for inspection Replace the power cord
The location display indicator light cannot be lit up	Change location display
The traffic counter does not work properly, and the traffic lights always show red	Check cable connection Change the fault cable Please refer to the equipment maintenance manual for the specific operation Replace the faulty infrared device
The security gate cannot start	Check power connection Check and determine that the power switch is on.
The interference level is too high	Change the frequency of work (The interference level can be further reduced by lowering the High speed setting) Move the location of the interference source or the security gate Increase the distance between the security gates and the metal objects Strengthen the ground support, or move the security gates to other locations.

9. WARRANTY INSTRUCTIONS

One year from the date of purchase of the company's products, if there is no performance failure due to human damage, the company will be responsible for free maintenance.

During the warranty period, if the fault is caused by quality problems of the product itself, please bring the completed warranty card and purchase invoice to the maintenance center authorized by the company for free maintenance, or send it back to the company.

For faults or damages caused by man-made or natural disasters during the free maintenance period, the maintenance cost shall be charged.

Maintenance costs shall be charged for services beyond the free maintenance period.

The following conditions are not covered by the warranty:

- Damage caused by abnormal operation and man-made or natural disasters.
- Damage caused after removing any part of the machine (such as lines and parts).
- Failure caused by installation directed by our designated professional technicians.
- Machines with faulty issues due to unauthorized modification or installation of other functions.

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IMPORTANT INFORMATION

DISCLAIMER: THE INFORMATION PROVIDED IN THIS MANUAL IS FOR GENERAL INFORMATIONAL PURPOSES ONLY. WHILE EVERY EFFORT HAS BEEN MADE TO ENSURE THE ACCURACY OF THE CONTENT, WE CANNOT GUARANTEE THAT IT IS FREE FROM ERRORS. THE USE OF THIS MANUAL IS AT YOUR OWN RISK.

CONTACT US

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