USER MANUAL

ProCapture-X

Version: 1.1

Date: June 2017

About This Manual

- This manual introduces the operation of user interfaces and menu functions of ProCapture-X Access Control terminal.
- The pictures in this manual may not be exactly consistent with those of your product; the actual product's display shall prevail.
- Not all the devices have the function with ★, the real product prevails.

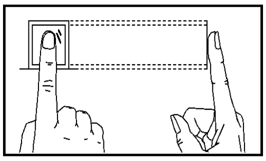
Contents

1 Guidance Notes

1.1 Method of Pressing Fingerprint

It is recommended to use the **index finger, middle finger** or **ring finger**; avoid using the thumb or little finger.

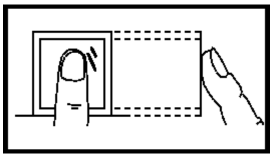
1. Correct way to press the fingerprint:



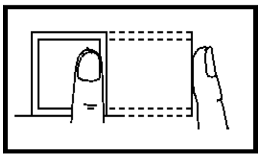
Press the finger horizontally onto the fingerprint sensor; the center of the fingerprint should be placed on that of the sensor.

2. Wrong ways to press the fingerprint:

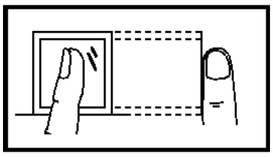
Vertical



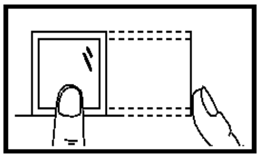
Sides



Slanted



Too Low



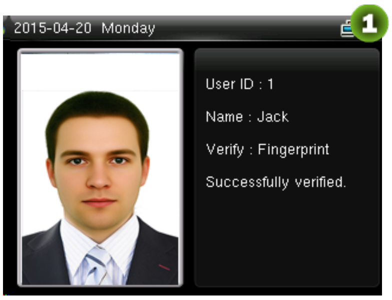
Please use the correct method of pressing fingerprint for registration and verification. Our company does not undertake the responsibility for the lowered verification performance caused by user's improper operation. The rights to final interpretation and amendment are reserved.

1.2 Verification Modes

1.2.1 1:N Fingerprint Verification

Under this fingerprint verification method, a fingerprint collected by the sensor is verified with all fingerprints stored in the device.

Please use the correct way to press fingerprint onto the fingerprint sensor (for detailed instruction, please refer to 1.1 Method of Pressing Fingerprint).

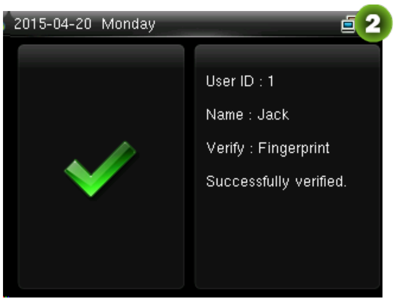


2015-04-20 Monday

1

User ID : 1
Name : Jack
Verify : Fingerprint
Successfully verified.

Verification Succeeds

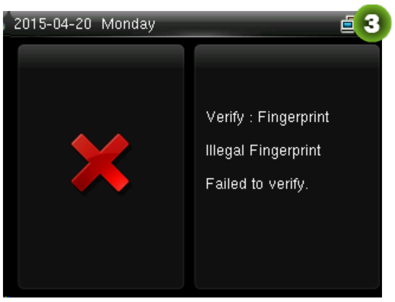


2015-04-20 Monday

2

User ID : 1
Name : Jack
Verify : Fingerprint
Successfully verified.

Verification Succeeds



2015-04-20 Monday

3

Verify : Fingerprint
Illegal Fingerprint
Failed to verify.

Verification Fails

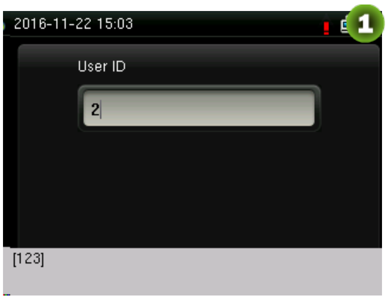
Remarks:

In the devices possessing Photo ID function, figure 1 will be displayed on screen after successful verification, otherwise, figure 2 will be displayed.

★ **Only some products are equipped with Photo ID function.**

1.2.2 1:1 Fingerprint Verification

Under this fingerprint verification method, a fingerprint collected by the sensor is verified with the fingerprint corresponding to the entered user ID. Please use this method when difficulty is encountered in 1:N fingerprint verification.



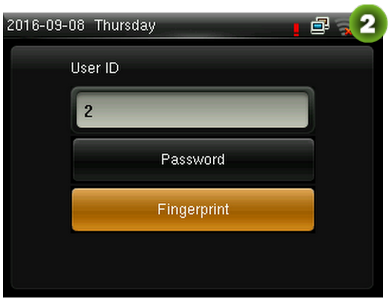
2016-11-22 15:03

1

User ID
2

[123]

Input the user ID and press **[M/OK]**

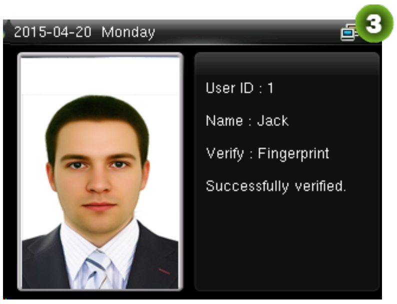


2016-09-08 Thursday

2

User ID
2

Press ▼ button to choose "**Fingerprint**" and press **[M/OK]**. Press finger on sensor afterwards

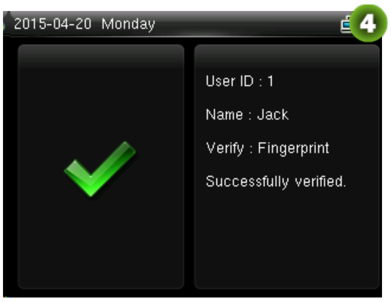


2015-04-20 Monday

3

User ID : 1
Name : Jack
Verify : Fingerprint
Successfully verified.

Verification succeeds



2015-04-20 Monday

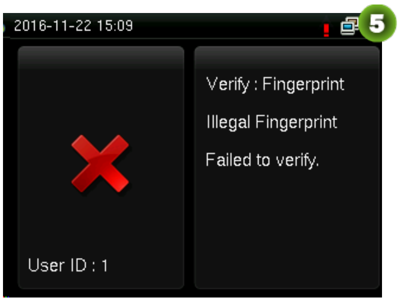
User ID : 1

Name : Jack

Verify : Fingerprint

Successfully verified.

Verification succeeds



2016-11-22 15:09

Verify : Fingerprint

Illegal Fingerprint

Failed to verify.

User ID : 1

Verification fails

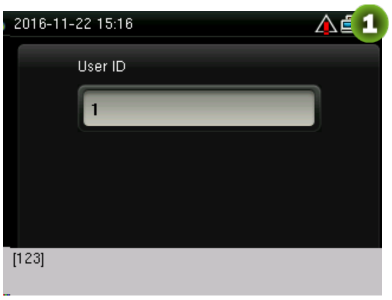
Remarks:

1. Input user ID in the initial interface and press **[M/OK]** button. If "Invalid ID" is displayed, this means the user ID does not exist.
2. When the device displays "please press your finger again", press your finger again onto the fingerprint sensor. If verification still fails after 2 attempts, it will exit to the initial interface.
3. In the devices possessing Photo ID function, figure 3 will be displayed on screen after successful verification, otherwise, figure 4 will be displayed.

★ **Only some products are equipped with Photo ID function.**

1.2.3 Password Verification

Under this verification method, the entered password is verified with the password of the entered user ID.



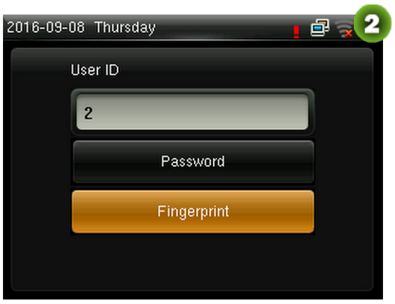
2016-11-22 15:16

User ID

1

[123]

Input the user ID and press **[M/OK]**

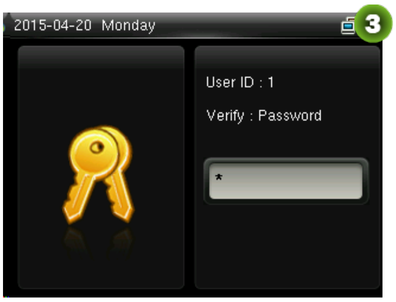


2016-09-08 Thursday

User ID

2

Choose "**Password**" and press **[M/OK]**



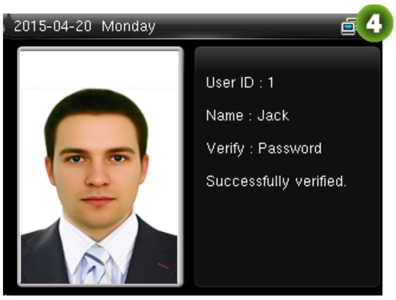
2015-04-20 Monday

User ID : 1

Verify : Password

*

Input password



2015-04-20 Monday

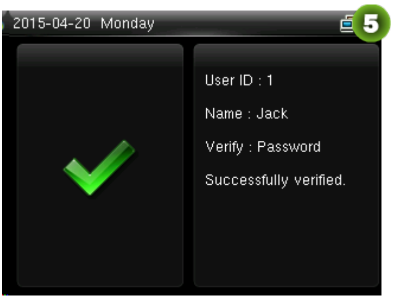
User ID : 1

Name : Jack

Verify : Password

Successfully verified.

Verification succeeds



2015-04-20 Monday

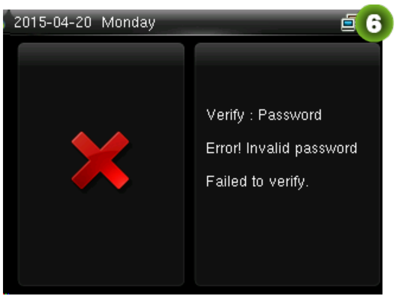
User ID : 1

Name : Jack

Verify : Password

Successfully verified.

Verification succeeds



2015-04-20 Monday

Verify : Password

Error! Invalid password

Failed to verify.

Verification fails

Remarks:

1. If "Incorrect password" is displayed, please enter the password again. If verification still fails after 2

attempts, it will exit to the initial interface.

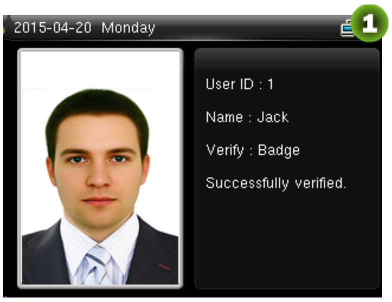
2. In the devices possessing Photo ID function, figure 4 will be displayed on screen after successful verification, otherwise, figure 5 will be displayed.

★ **Only some products are equipped with Photo ID function.**

1.2.4 Card Verification★

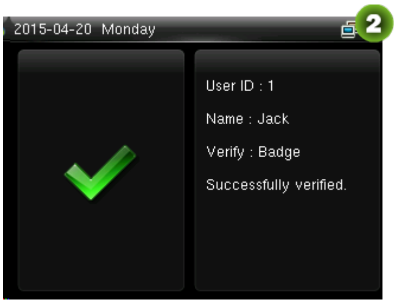
Remarks: Card function is optional, only products with a built-in card module are equipped with card verification function. Please contact our technical support as required.

1. Swipe the card above the card reader (the card must be registered first)
2. Verification succeeds
3. Verification fails



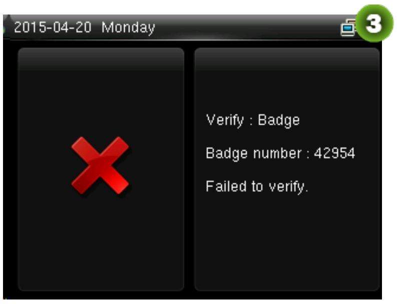
2015-04-20 Monday

User ID : 1
Name : Jack
Verify : Badge
Successfully verified.



2015-04-20 Monday

User ID : 1
Name : Jack
Verify : Badge
Successfully verified.



2015-04-20 Monday

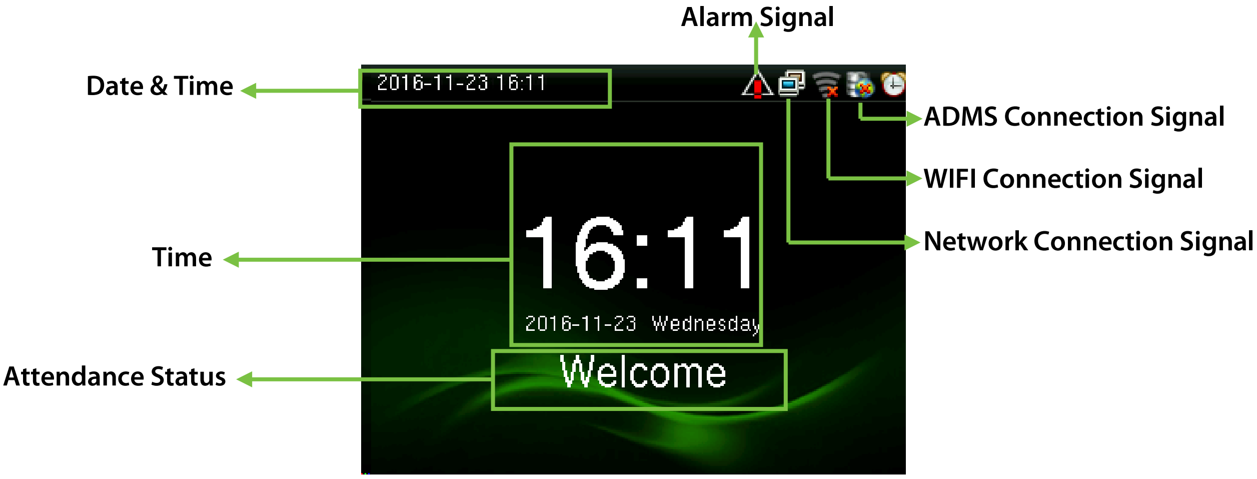
Verify : Badge
Badge number : 42954
Failed to verify.

Remarks: In the devices possessing Photo ID function, figure 1 will be displayed on screen after successful verification, otherwise, figure 2 will be displayed.

★ **Only some products are equipped with Photo ID function.**

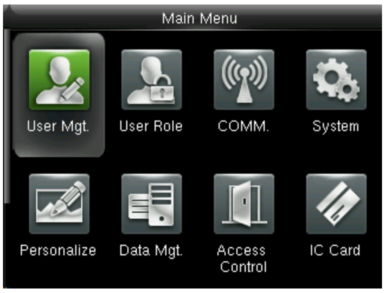
1.3 Initial Interface

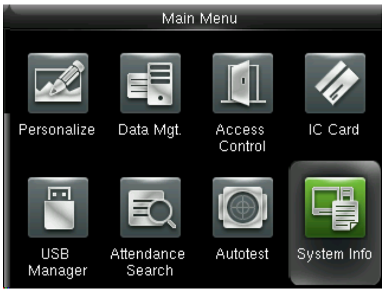
When the device is turned on, the initial interface is shown as below:



2 Main Menu

When the device is in standby mode, press **[M/OK]** to open the Main Menu.





User Mgt.: Basic information of registered users, including user ID, user role, fingerprint, badge number, password and access control role.

User Role: To set user roles for accessing into the menu and changing settings.

Comm.: To set the related parameters of the communication between the device and PC, including Ethernet parameters such as IP address etc., PC connection, Wireless Network★, ADMS and Wiegand settings.

System: To set related parameters of the system and upgrade firmware, including setting date & time, attendance and fingerprint parameters and resetting to factory settings.

Personalize: This includes interface display, voice, bell, punch state key mode and shortcut key settings.

Data Mgt.: Delete attendance data, delete all data, delete admin role and delete screen savers etc. and backup, restore data.

Access Control: To set the parameters of the control lock and access control devices, including parameters of access control, time schedule, holidays, access groups, combined verification, anti-passback and duress options.

IC Card★: This menu supports integrate fingerprint and ID card attendance to other systems or devices by the enrolled Mifare card, and supports multi- verification mode to meet the demands of different people.

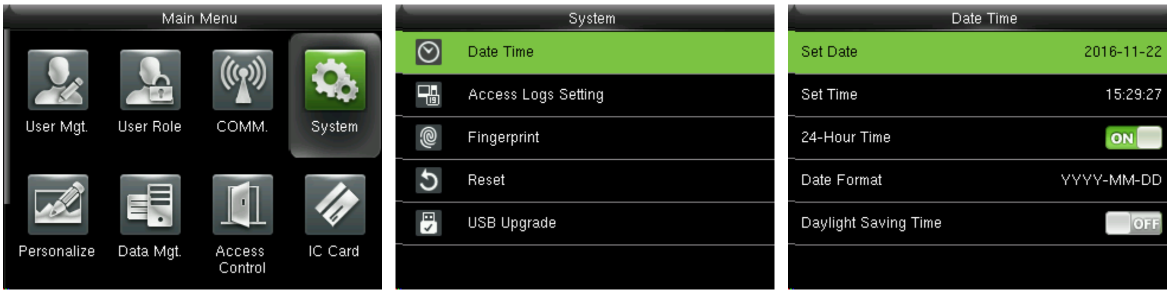
USB Manager: To transfer data such as user data and attendance logs from the USB disk to the supporting software or other devices.

Attendance Search: To search for the records stored in the device after successful verification.

Autotest: To automatically test different module's functions, including the LCD, voice, keyboard, fingerprint sensor and clock RTC test.

System Info: To check device capacity, device and firmware information.

3 Date/Time Settings



Set Date 2016-11-22
Set Time 15:29:27
24-Hour Time ON
Date Format YYYY-MM-DD
Daylight Saving Time OFF

In the initial interface, press **[M/OK]** > **System** > **Date Time** to enter the date/time setting interface. It includes setting date, time, 24-hour clock, date format and daylight saving time.

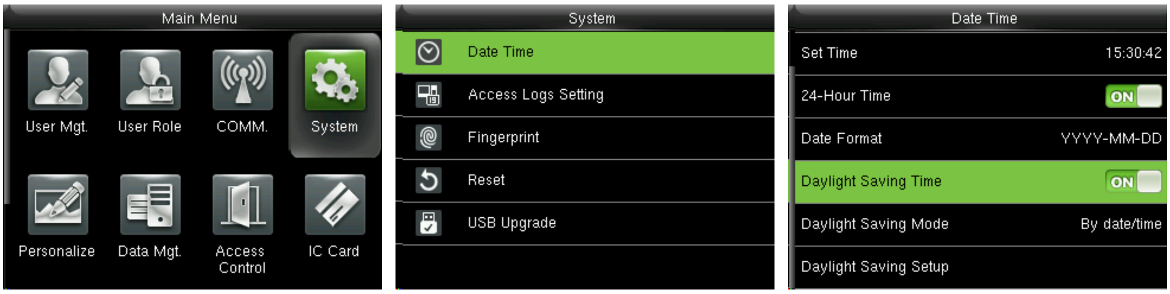
When resetting to factory settings, the date format can be restored (YYYY-MM-DD).

Remarks: When resetting to factory settings, the device's date/time will not be restored (if the date/time is set to 18:30 on January 1, 2020, after settings are reset, the date/time will stay at 18:30 on January 1, 2020.

3.1 Daylight Saving Time

DST, which is also called **Daylight Saving Time**, is a system adjusting local time in order to save energy. The time adopted during the set dates is called "DST". Usually, the time will be one hour forward in summer. This enables users to sleep or get up earlier, and also reduce device's lighting to save power. In autumn, the time will resume the standard time. Regulations are different in different countries. At present, nearly 110 countries adopt DST.

To meet the demand of DST, a special option can be customized. Make the time one hour forward at XX (hour) XX (day) XX (month), and make the time one hour backward at XX (hour) XX (day) XX (month)



Set Time 15:30:42
24-Hour Time ON
Date Format YYYY-MM-DD
Daylight Saving Time ON
Daylight Saving Mode By date/time

Press **[M/OK]** > **System** > **Date Time** > **Daylight Saving Time**, then press **[M/OK]** to enable Daylight Saving Time.

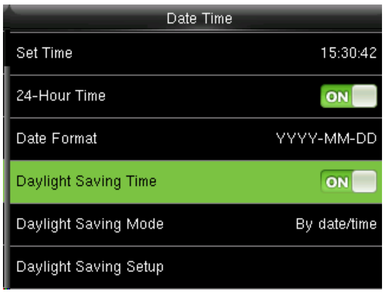
Daylight Saving Mode: Daylight Saving Time Mode, by date/time mode and by week/day mode for selection.

Daylight Saving Setup: Set date/time or week/day of the Daylight Saving Time according to the selection in Daylight Saving Mode.

How to set the Daylight Saving Time?

For example, adjust the clock forward one hour at 08: 00 on April 1 and backward one hour at 08: 00 on October 1 (the system turns back to the original time).

- **By date/time mode:**



Date Time

Set Time 15:30:42

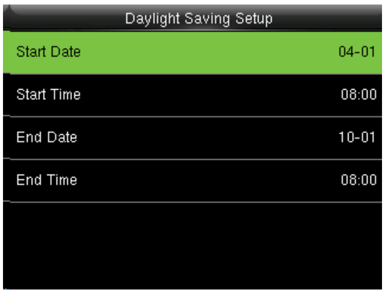
24-Hour Time ON

Date Format YYYY-MM-DD

Daylight Saving Time ON

Daylight Saving Mode By date/time

Daylight Saving Setup



Daylight Saving Setup

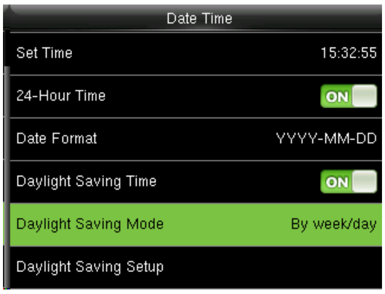
Start Date 04-01

Start Time 08:00

End Date 10-01

End Time 08:00

- **By week/date mode:**



Date Time

Set Time 15:32:55

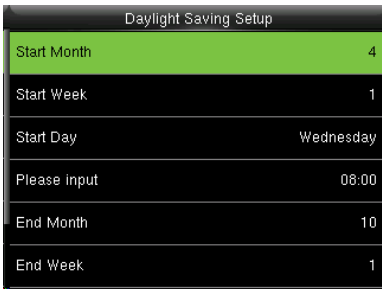
24-Hour Time ON

Date Format YYYY-MM-DD

Daylight Saving Time ON

Daylight Saving Mode By week/day

Daylight Saving Setup



Daylight Saving Setup

Start Month 4

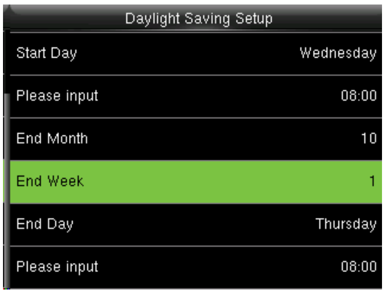
Start Week 1

Start Day Wednesday

Please input 08:00

End Month 10

End Week 1



Daylight Saving Setup

Start Day Wednesday

Please input 08:00

End Month 10

End Week 1

End Day Thursday

Please input 08:00

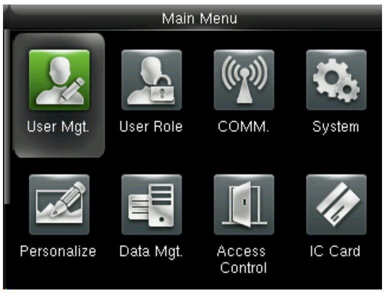
Remarks:

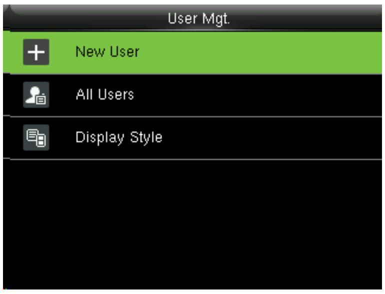
1. If the month when DST starts is later than that when DST ends, DST spans two different years. For example, the DST start time is 2014-9-1 4:00 and the DST end time is 2015-4-1 4:00.
2. Assume that the week /day mode is selected in **[Daylight Saving Mode]** and the DST starts from Sunday of the sixth week of September in 2013. According to the calendar, September of 2014 does not have six weeks but has five weeks. In this case, in 2014, DST starts at the corresponding time point of the last Sunday of September.
3. Assume that the DST starts from Monday of the first week of September in 2014. According to the calendar, the first week of September in 2015 does not have Monday. In this case, the DST starts from the first Monday of September in 2015.

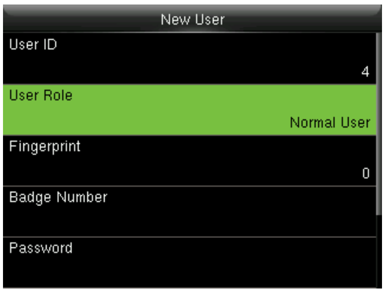
4 User Management

4.1 Adding User

Including adding super admin and normal user.






New User

User ID 4

User Role Normal User

Fingerprint 0

Badge Number

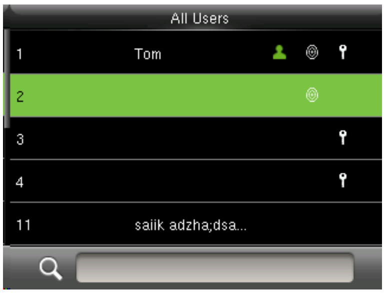
Password

In the initial interface, press **[M/OK]** > **User Mgt.** > **New User** to enter **New User** setting interface.

Settings include inputting User ID, choosing User Role, registering Fingerprint and Badge Number, setting Password and setting Access Control Role.

Add a Super Admin: Choose "Super Admin" in [**User Role**], who is allowed to operate all the functions on the menu.

As shown below, the user with User ID 1 is a super admin.


All Users

```
1    Tom
2
3
4
11   saiik adzha;dsa...
```

Add a Normal User: Choose "Normal User" in **[User Role]**. When the Super Admin is set, Normal Users can only use fingerprint, password or card★ for verification; when the Super Admin is not yet set, Normal Users can operate all functions on the menu.

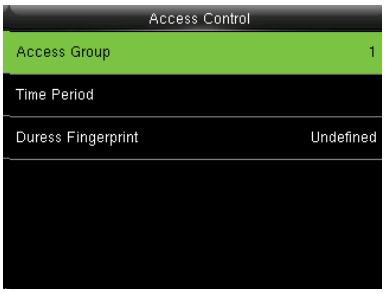
Password: 1 to 8 digits of password is accepted.

Remarks:

1. The device automatically allocates user ID for users in sequence, but user can set it manually as well.
2. The device supports user ID ranged from 1 to 14 digits.

4.2 Setting Access Control

User access control option is to set open door access aimed at everybody, including access group setting, using time zone, duress fingerprint management.


Access Control

Access Group 1

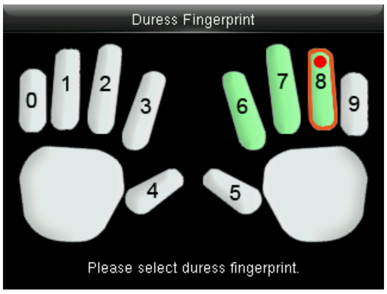
Time Period

Duress Fingerprint Undefined

Access group: To allocate users to different access control groups for management. New users belong to Group 1 in default settings, who can be reallocated to other groups.

Time Period: Select time rules for the user. Time rules are set under the **Access Control** menu and a maximum of 50 time rules are supported. The effective door opening time period of the user is the sum of the selected time rules.

Duress Fingerprint: User can choose one or more registered fingerprint(s) as Duress Fingerprint. When that fingerprint is verified, duress alarm will be triggered.

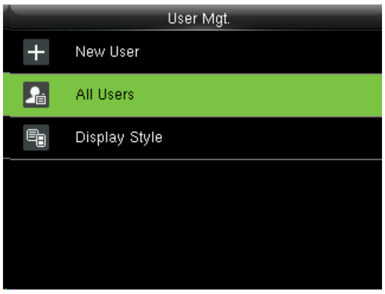

Duress Fingerprint

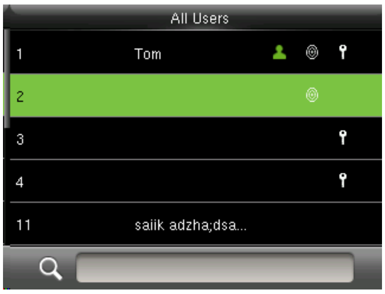
Please select duress fingerprint.

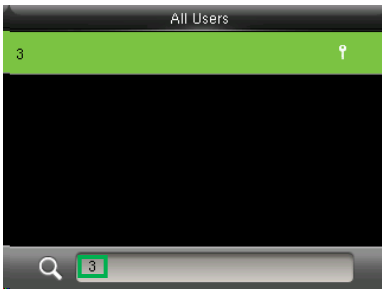
Example: Among those registered fingerprints (6, 7, 8), choose the 8th fingerprint as the duress fingerprint.

4.3 Searching User

Enter user ID on the User List to search for a user.







In the initial interface, press **[M/OK]** > **User Mgt.** > **All User** to enter **All User** interface. Input "User ID" or "User Name" in 🔍, the corresponding user will be shown. As shown in the above figure, search for the user with the user ID of "3".

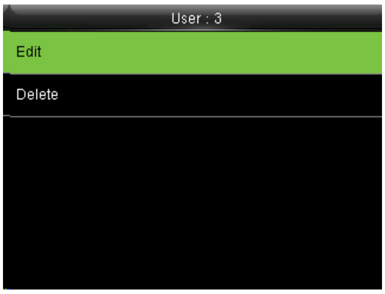
For input of user name, please refer to 17.1 Text Input Operation Instructions for detail.

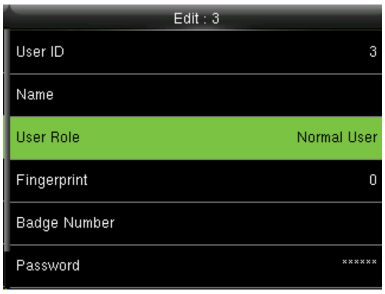
4.4 Editing User

After a user is chosen through 4.3 Searching User, press **[M/OK]** and select **[Edit]** to enter user editing interface.

Or in the initial interface press **[M/OK]** > **User Mgt.** > **All User** > Search a user > Press **[M/OK]** > **Edit** to enter user editing interface.

The operation method of editing user is the same with that of adding user, but the user ID cannot be edited.




Edit : 3

User ID 3

Name

User Role Normal User

Fingerprint 0

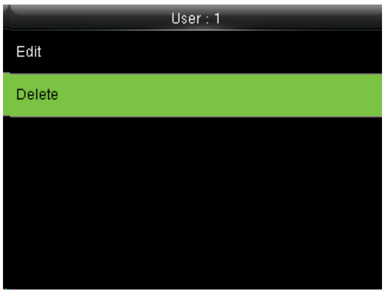
Badge Number

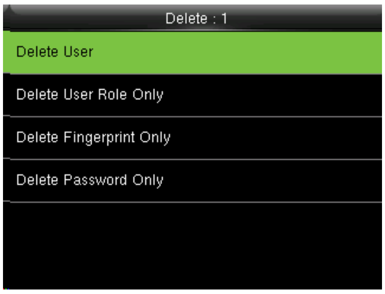
Password ******

4.5 Deleting a User

After a user is chosen through 4.3 Searching User, press **[M/OK]** and select **[Delete]** to enter user deleting interface.

Or in the initial interface press **[M/OK]** > **User Mgt.** > **All User** > Search a user > Press **[M/OK]** > **Delete** to enter user deleting interface.

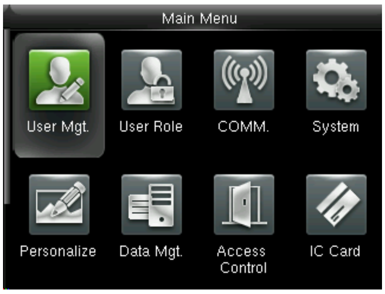


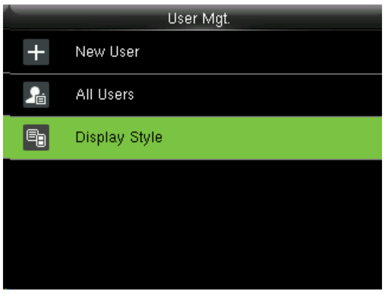


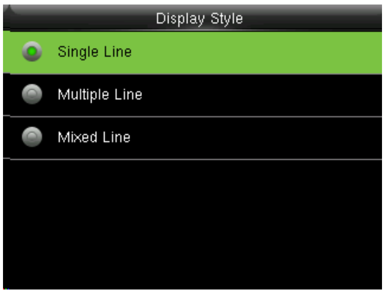
☺**Notes:**

1. Only when the user has registered fingerprint, password, badge★, will the corresponding to-be-deleted item be shown.
2. Card function is optional.

4.6 User Display Style

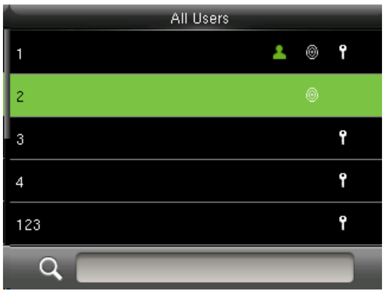




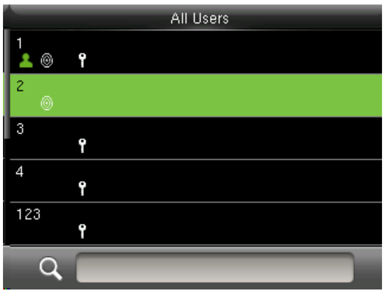


In the initial interface, press **[M/OK]** > **User Mgt.** > **Display Style** to enter **Display Style** setting interface.

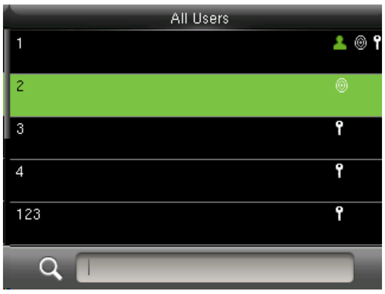
Several Display Styles are show as below:



Single Line Style



Multiple Line



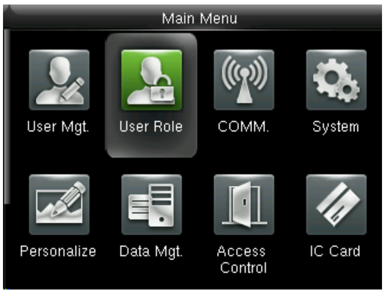
Mixed Line

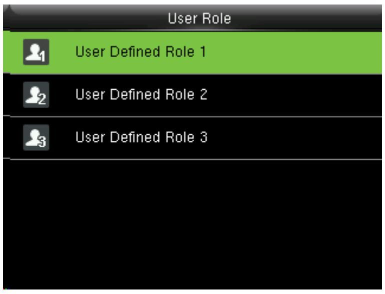
5 User Role

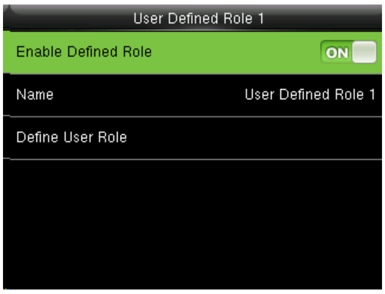
Setting user rights of operating the menu (a maximum of 3 roles can be set). When user role is enabled, in **[User Mgt.]** > **[New User]** > **[User Role]**, you can allocate suitable user role to each user.

Role: Super user needs to allocate different rights to new users. To avoid setting rights for each user one by one, you can set user roles to categorize different permission levels in user management.

5.1 Enabling User Role





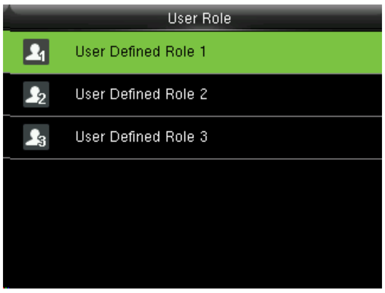


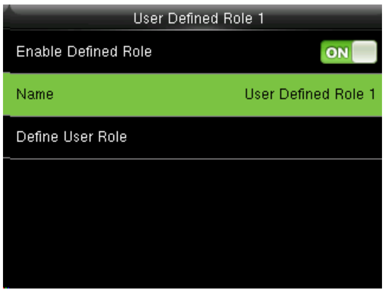
In the initial interface, press **[M/OK]** > **User Role** > **User Defined Role 1 (2 / 3)** > **Enable Defined Role**, Press **[M/OK]** to enable defined role.

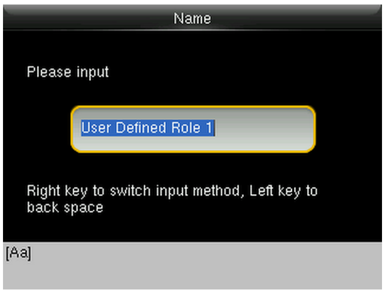
After enable defined roles, you can check the enabled user roles in **[User Mgt.]** > **[New User]** > **[User Role]**.

Remark: At least one registered Administrator is required to enable user role.

5.2 Input User Role Name



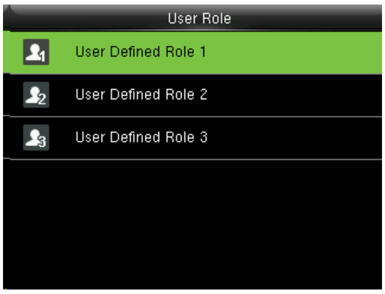


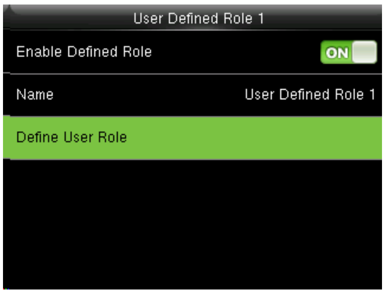


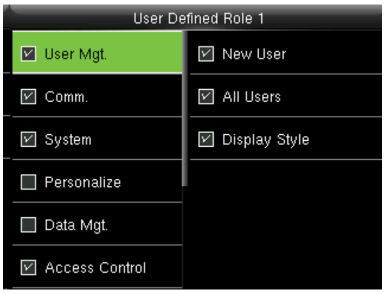
In the initial interface, press **[M/OK]** > **User Role** > **User Defined Role 1 (2 / 3)** > **Name**, Press **[M/OK]** to enter the name editing interface. Enter a name using the T9 input method, and press **[M/OK]** to save the settings and return to the previous interface.

For detailed about how to enter a name, see 17.1 Text Input Operation Instructions.

5.3 Rights Allocation



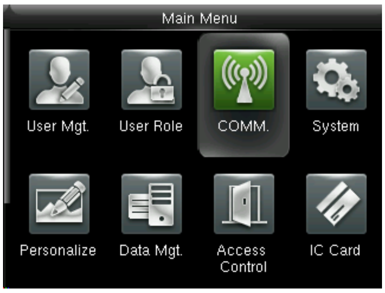


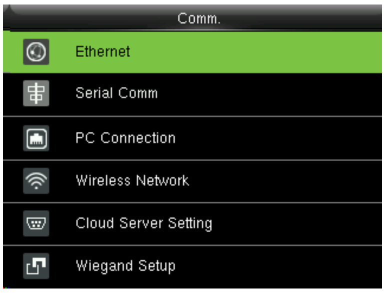


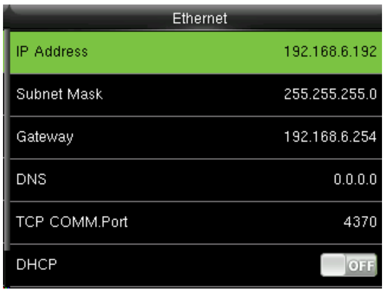
In the initial interface, press **[M/OK]** > **User Role** > **User Defined Role 1 (2 / 3)** > **Define User Role** to enter **User Defined Role 1 (2 /3)** rights allocating interface. Press **[M/OK]** to select or cancel the operating right to each menu for **User Defined Role 1 (2 /3)**.

6 Comm. Settings

6.1 Ethernet Settings






Ethernet

IP Address	192.168.6.192
Subnet Mask	255.255.255.0
Gateway	192.168.6.254
DNS	0.0.0.0
TCP COMM.Port	4370
DHCP	OFF

In the initial interface, press **[M/OK]** > **COMM.** > **Ethernet** to enter the **Ethernet** setting interface.

The parameters below are the default values, please adjust them according to the actual network.

IP Address: 192.168.6.192

Subnet Mask: 255.255.255.0

Gateway: 192.168.6.254

DNS: 0.0.0.0

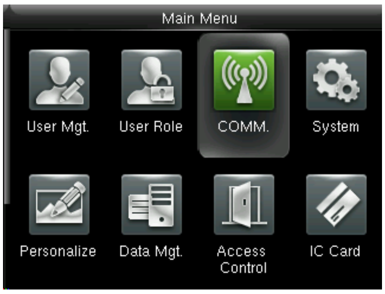
TCP COMM. Port: 4370

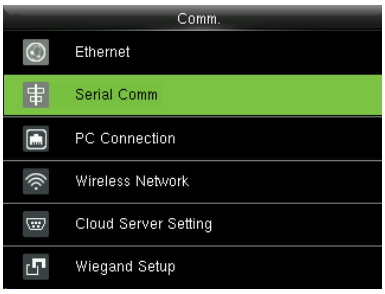
DHCP: Dynamic Host Configuration Protocol, which is to dynamically allocate IP addresses for clients via server. **If DHCP is enabled, IP cannot be set manually.**

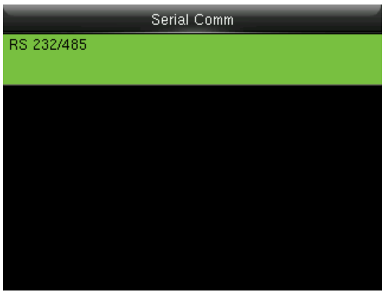
Display in Status Bar: To set whether to display the network icon 🖧 on the status bar.

6.2 Serial Comm. Settings

- **Turning On /Off RS485 Function**







In the initial interface, press

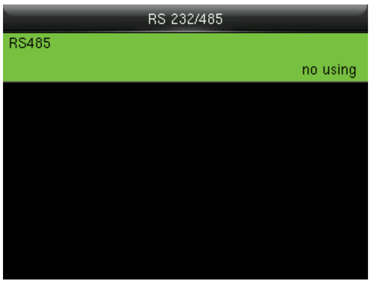
Press▼key to select **Serial**

Select **RS232/485** and press⇥

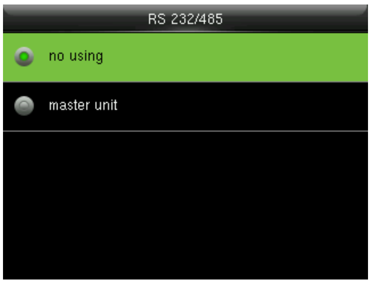
[M/OK] to enter main menu, and press ▶ to select **Comm.**

Comm and press **[M/OK]** to enter

to enter



Select **RS485** and press **[M/OK]** to enter



Press▼key to select RS485 as the function of "master unit" or choose to disable RS485

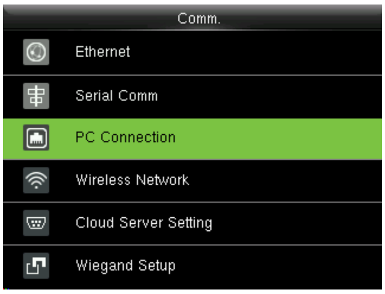
☺**Remarks:**

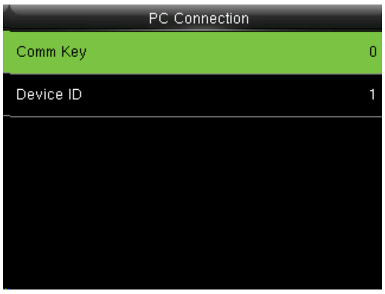
When RS485 is used as the function of "**master unit**", the device will act as "master unit", and it can be connected to RS485 fingerprint reader.

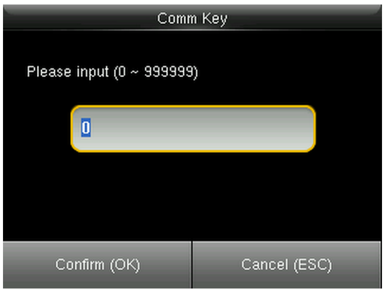
6.3 PC Connection

- **Comm key Settings**

To improve security of data, **Comm Key** for communication between the device and PC needs to be set. If a **Comm Key** is set in the device, the correct connection password needs to be entered when the device is connected to the PC software, so that the device and software can communicate.





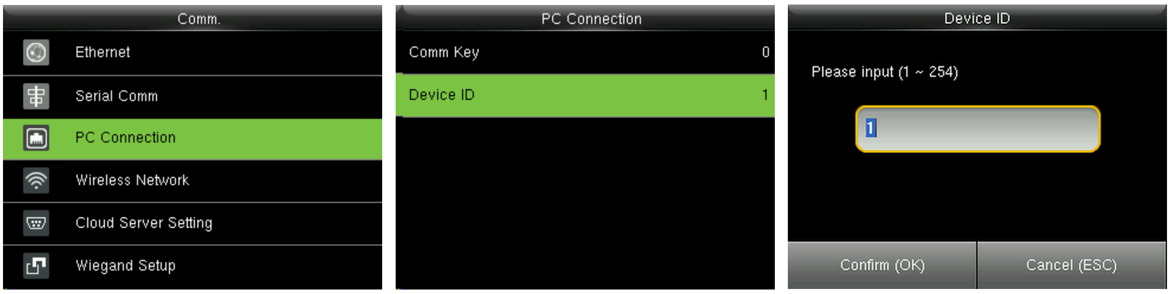


In the initial interface, press **[M/OK]** > **COMM.** > **PC Connection** > **Comm Key** to enter the **Comm Key** setting interface.

Comm Key: The default password is 0 (no password). **Comm Key** can be 1~6 digits and ranges between 0~999999.

- **Device ID Settings**

If the communication method is RS485, inputting this device ID in the software communication interface is required.



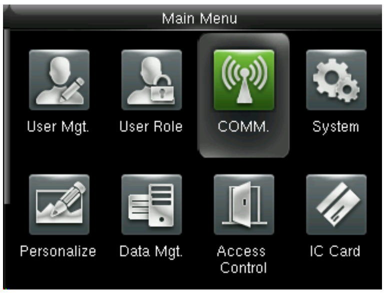
In the initial interface, press **[M/OK]** > **COMM.** > **PC Connection** > **Device ID** to enter the **Device ID** setting interface.

Device ID: Identity number of the device, which ranges between 1~254.

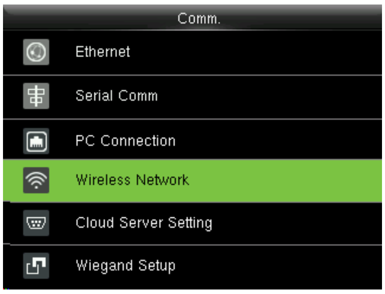
6.4 Wireless Network★

WIFI is the short of Wireless Fidelity. Our device has a built-in WIFI module to achieve the wireless network function. Data transmit through WIFI, provides a wireless network environment for the device.

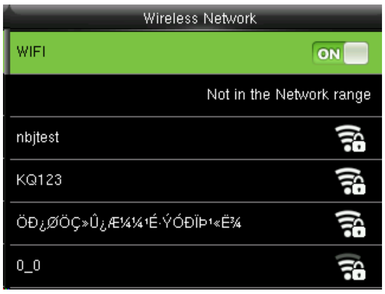
- **WIFI Connection**



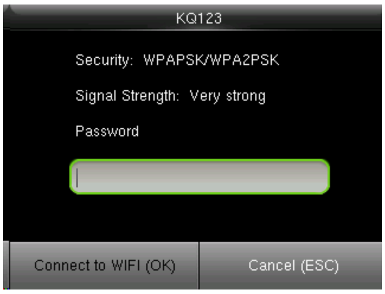
In the initial interface, press **[M/OK]** to enter main menu, press ▶ to select **COMM.**



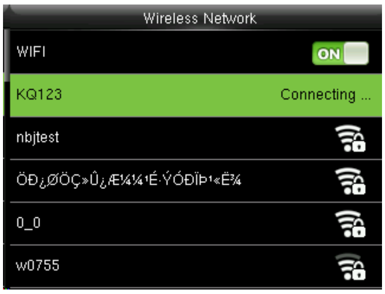
Press▼key to select **Wireless Network** and press **[M/OK]**



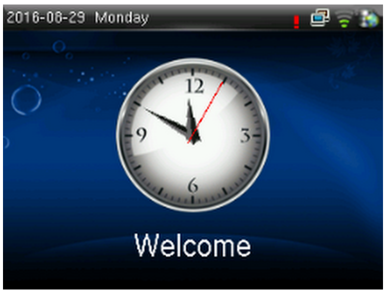
Press **[M/OK]** to enable WIFI, the device will search available WIFI in the network range



Select an available WIFI, press **[M/OK]** to enter the password



Connecting…

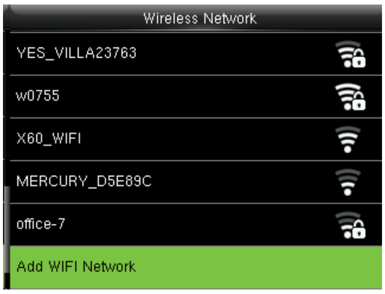


When the WIFI is connected successfully, the initial interface input interface. Input password and press **[M/OK]**

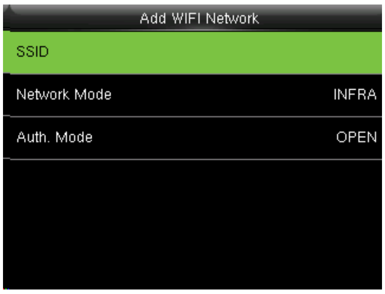
will display the logo.

Add WIFI Network Manually

You can manually add the WIFI network when there is no WIFI in the list that you want to connect to.



Press ▼ key to select **"Add WIFI Network"** and press **[M/OK]**


Add WIFI Network

SSID

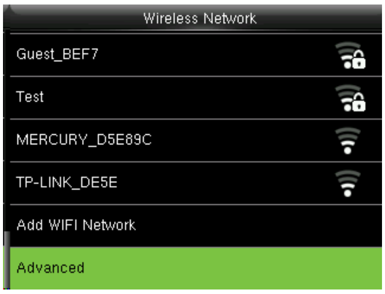
Network Mode INFRA

Auth. Mode OPEN

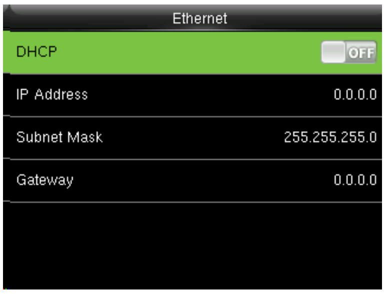
Enter the relevant parameters (The added network must exist)

Remark: After manual add the WIFI network successfully, to find the added user name in the WIFI list, for the connecting method, please refer to WIFI Connection.

Advanced Setting



Press ▼ key to select **"Advanced"** and press **[M/OK]** to enter


Ethernet

DHCP OFF

IP Address 0.0.0.0

Subnet Mask 255.255.255.0

Gateway 0.0.0.0

Set the relevant parameters as required

DHCP: Dynamic Host Configuration Protocol, which is to dynamically allocate IP addresses for clients via server. If DHCP is enabled, IP cannot be set manually.

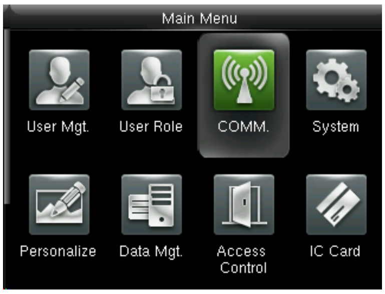
IP Address: IP address for WIFI network, the default is 0.0.0.0, you can modify it as the actual network environment.

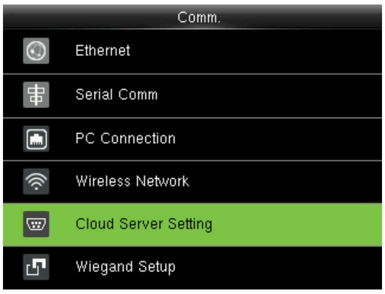
Subnet Mask: The default is 255.255.255.0, you can modify it as the actual network environment.

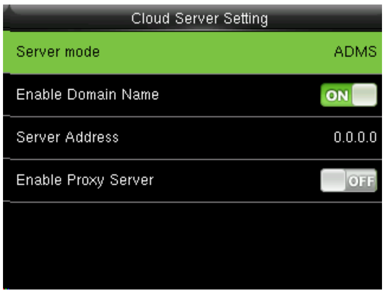
Gateway: the default is 0.0.0.0, you can modify it as the actual network environment.

Remark: WIFI function is optional, only products with a built-in WIFI module are equipped with WIFI function. Please contact our technical support as required.

6.5 Cloud Server Settings





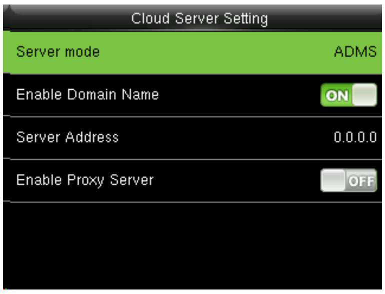

Cloud Server Setting

Server mode ADMS
Enable Domain Name ON
Server Address 0.0.0.0
Enable Proxy Server OFF

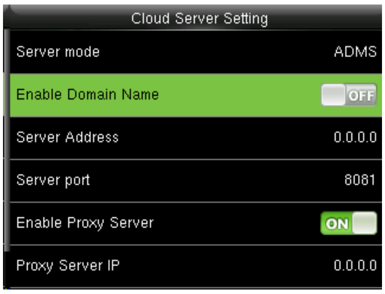
In the initial interface, press **[M/OK]** > **COMM.** > **Cloud Server Setting** to enter the **Cloud Server Setting** interface.

6.5.1 ADMS

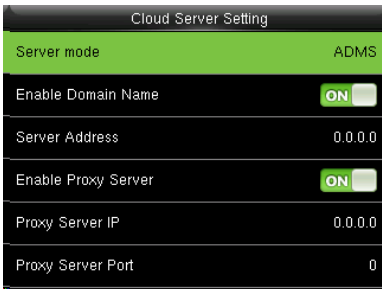
Settings used for connecting with ADMS server, such as IP address and port settings, and whether to enable proxy server etc.


Cloud Server Setting

Server mode ADMS
Enable Domain Name ON
Server Address 0.0.0.0
Enable Proxy Server OFF


Cloud Server Setting

Server mode ADMS
Enable Domain Name OFF
Server Address 0.0.0.0
Server port 8081
Enable Proxy Server ON
Proxy Server IP 0.0.0.0


Cloud Server Setting

Server mode ADMS
Enable Domain Name ON
Server Address 0.0.0.0
Enable Proxy Server ON
Proxy Server IP 0.0.0.0
Proxy Server Port 0

When the Webserver is connected successfully, the main interface will display the logo.

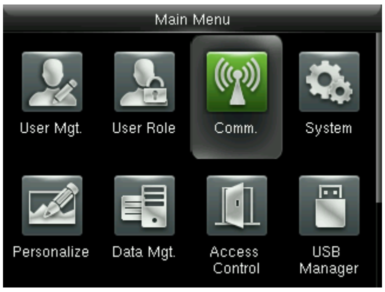
Enable Domain Name: When this function is turned on, the domain name mode http://... will be used, such as http://www.XXX.com. XXX denotes the domain name when this mode is on; when this mode is off, enter the IP address format in XXX.

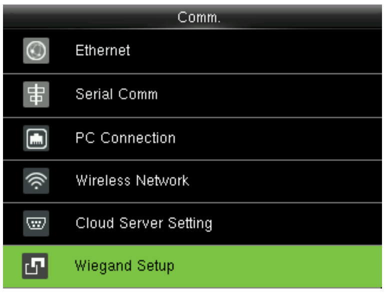
Server Address: IP address of the ADMS server.

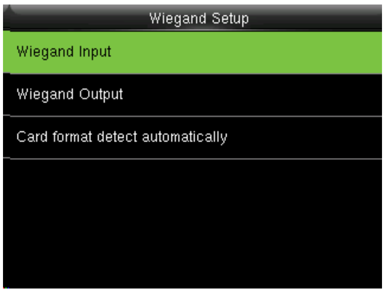
Server Port: Port used by the ADMS server.

Enable Proxy Server: Method of enabling proxy. To enable proxy, please set the IP address and port number of the proxy server. Entering proxy IP and server address will be the same.

6.6 Wiegand Setup



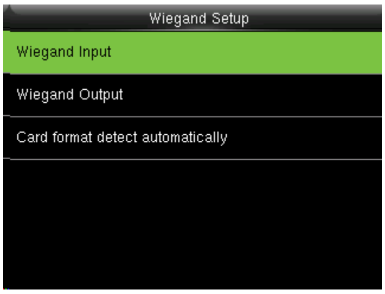


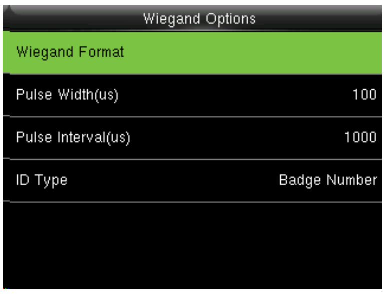


In the initial interface, press **[M/OK]** > **COMM.** > **Wiegand Setup** to enter the **Wiegand Setup** interface.

6.6.1 Wiegand Input

Wiegand Input connector supports card reader, or connects the device as a master device to another device (slave device), forming a master/slave system.





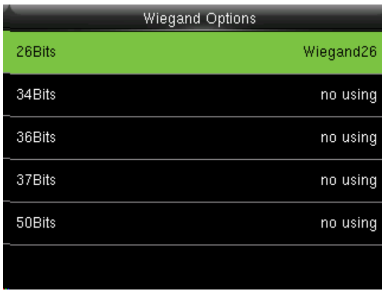
Wiegand Options

Wiegand Format

Pulse Width(us) 100

Pulse Interval(us) 1000

ID Type Badge Number



Wiegand Options

26Bits Wiegand26

34Bits no using

36Bits no using

37Bits no using

50Bits no using

Wiegand Format: User can choose among the following built-in Wiegand formats: Wiegand 26, Wiegand 26a, Wiegand 34, Wiegand 34a, Wiegand 36, Wiegand 36a, Wiegand 37, Wiegand 37a, Wiegand 50 and **No using**. The value **no using** means that the format with this bit number is not used. The following table describes all the formats.

Pulse Width (us): The width of pulse sent by Wiegand. The default value is 100 microseconds, which can be adjusted within the range of 20 to 100 microseconds.

Pulse Interval (us): The default value is 1000 microseconds, which can be adjusted within the range of 200 to 20000 microseconds.

ID Type: Input content included in Wiegand input signal. **User ID** or **Badge Number** can be chosen.

Definitions of Wiegand Formats:

Wiegand Format	Definition
Wiegand26	ECCCCCCCCCCCCCCCCCCCCCCCCO Consists of 26 bits of binary code. The 1st bit is the even parity bit of the

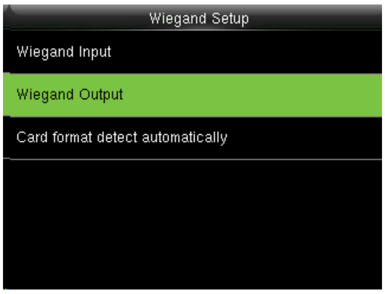
	2nd to 13th bits, while the 26th bit is the odd parity bit of the 14th to 25th bits. The 2nd to 25th bits are the card number.
Wiegand26a	ESSSSSSSSCCCCCCCCCCCCCCCCO Consists of 26 bits of binary code. The 1st bit is the even parity bit of the 2nd to 13th bits, while the 26th bit is the odd parity bit of the 14th to 25th bits. The 2nd to 9th bits are the site code, while the 10th to 25th bits are the card number.
Wiegand34	ECCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCO Consists of 34 bits of binary code. The 1st bit is the even parity bit of the 2nd to 17th bits, while the 34th bit is the odd parity bit of the 18th to 33rd bits. The 2nd to 25th bits are the card number.
Wiegand34a	ESSSSSSSSCCCCCCCCCCCCCCCCCCCCCCCCO Consists of 34 bits of binary code. The 1st bit is the even parity bit of the 2nd to 17th bits, while the 34th bit is the odd parity bit of the 18th to 33rd bits. The 2nd to 9th bits are the site code, while the 10th to 25th bits are the card number.
Wiegand36	OFFFFFFFFFFFFFFFFCCCCCCCCCCCCCCCCMME Consists of 36 bits of binary code. The 1st bit is the odd parity bit of the 2nd to 18th bits, while the 36th bit is the even parity bit of the 19th to 35th bits. The 2nd to 17th bits are the device code, the 18th to 33rd bits are the card number, and the 34th to 35th bits are the manufacturer code.
Wiegand36a	EFFFFFFFFFFFFFFFFFFCCCCCCCCCCCCCCCCO Consists of 36 bits of binary code. The 1st bit is the even parity bit of the 2nd to 18th bits, while the 36th bit is the odd parity bit of the 19th to 35th bits. The 2nd to 19th bits are the device code, and the 20th to 35th bits are the card number.
Wiegand37	OMMMMSSSSSSSSSSSSCCCCCCCCCCCCCCCCCCCE Consists of 37 bits of binary code. The 1st bit is the odd parity bit of the 2nd to 18th bits, while the 37th bit is the even parity bit of the 19th to 36th

	bits. The 2nd to 4th bits are the manufacturer code, the 5th to 16th bits are the site code, and the 21st to 36th bits are the card number.
Wiegand37a	EMMMFFFFFFFFFFSSSSSSCCCCCCCCCCCCCCCCO Consists of 37 bits of binary code. The 1st bit is the even parity bit of the 2nd to 18th bits, while the 37th bit is the odd parity bit of the 19th to 35th bits. The 2nd to 4th bits are the manufacturer code, 5th to 14th bits are the device code, 15th to 20th bits are the site code, and the 21st to 36th bits are the card number.
Wiegand50	ESSSSSSSSSSSSSSSSCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCO Consists of 50 bits of binary code. The 1st bit is the even parity bit of the 2nd to 25th bits, while the 50th bit is the odd parity bit of the 26th to 49th bits. The 2nd to 17th bits are the site code, and 18th to 49th bits are the card number.

Note: C denotes card number, **E** denotes even parity bit, **O** denotes odd parity bit, **F** denotes device code, **M** denotes manufacturer code, **P** denotes parity bit, and **S** denotes site code.

6.6.2 Wiegand Output

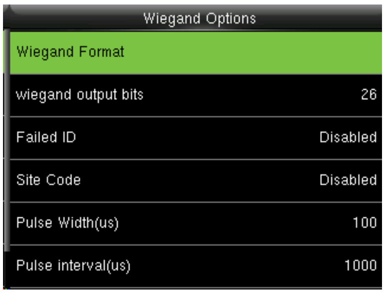
Wiegand Output connector supports connect the device as a slave device to another device (master device), forming a master/slave system.


Wiegand Setup

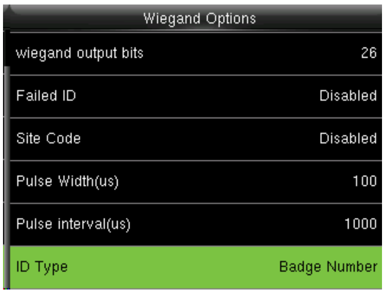
Wiegand Input

Wiegand Output

Card format detect automatically


Wiegand Options

Wiegand Format	
wiegand output bits	26
Failed ID	Disabled
Site Code	Disabled
Pulse Width(us)	100
Pulse interval(us)	1000


Wiegand Options

wiegand output bits	26
Failed ID	Disabled
Site Code	Disabled
Pulse Width(us)	100
Pulse interval(us)	1000
ID Type	Badge Number

Wiegand Format: User can choose among the following built-in Wiegand formats: Wiegand 26, Wiegand 26a, Wiegand 34, Wiegand 34a, Wiegand 36, Wiegand 36a, Wiegand 37, Wiegand 37a and Wiegand 50. Multiple selections are available, but the actual Wiegand format will depend on the option in **[Wiegand output bits]**.

For Example: If the 26-bit Wiegand26, 34-bit Wiegand34a, 36-bit Wiegand36, 37-bit Wiegand37a and

50-bit Wiegand50 are chosen in **[Wiegand Format]**, but 36 bits is selected in **[Wiegand output bits]**, then the actual Wiegand format for use will be 36-bit Wiegand36.

Wiegand output bits: Number of bits of Wiegand data. After choosing **[Wiegand output bits]**, the device will use the set number of bits to find the suitable Wiegand format in **[Wiegand Format]**.

Failed ID: It is defined as the output value of failed user verification. The output format depends on the **[Wiegand Format]** setting. The default value ranges from 0 to 65535.

Site Code: It is similar to device ID except that it can be set manually and repeatable with different devices. The default value ranges from 0 to 256.

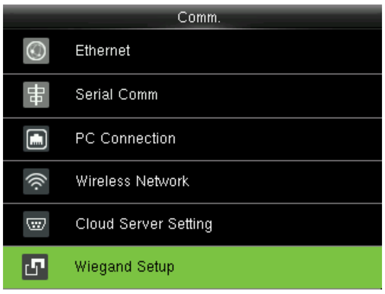
Pulse Width (us): The width of pulse sent by Wiegand. The default value is 100 microseconds, which can be adjusted within the range of 20 to 100 microseconds.

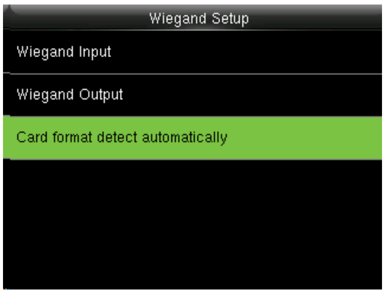
Pulse Interval (us): The default value is 1000 microseconds, which can be adjusted within the range of 200 to 20000 microseconds.

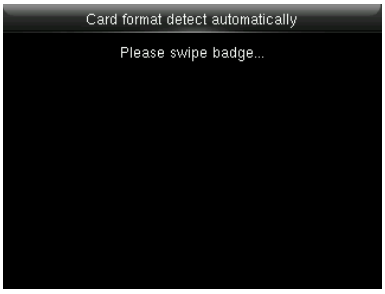
ID Type: Output content after successful verification. User ID or card number can be chosen.

6.6.3 Card Format Detect Automatically

[Card Format Detect Automatically] aims at assisting user with quickly detecting the card type and its corresponding format. Various card formats are preset in the device. After card swiping, the system will detect it as different card numbers according to every format; user only requires to choose the item equivalent to the actual card number, and set the format as the Wiegand format for the device. This function is also applicable to card reading function and auxiliary Wiegand reader.







Please swipe badge...

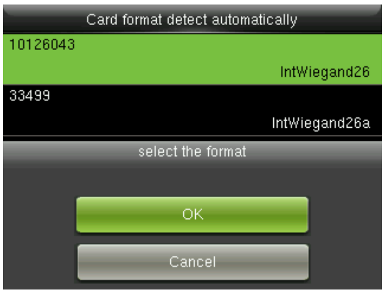
In the initial interface, press **[M/OK]** > **COMM.** > **Wiegand Setup** > **Card format detect automatically** to enter the **Card format detect automatically** interface.

Operating Procedure:

1. After entering the **[Card Format Detect Automatically]** interface of an ID device, swipe the ID card

above the card reader (on the local device or auxiliary card reader), the interface will show the automatically detected Wiegand formats and the analyzed card numbers.

2. Choose the item corresponding to the actual card number as the device's **[Wiegand format]**, which is the Wiegand format for reading that type of card.

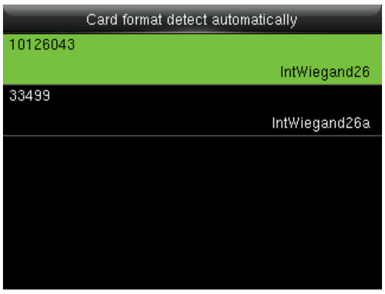


Card format detect automatically

10126043
IntWiegand26

33499
IntWiegand26a

✍ **Remark:** In the **[Card format detect automatically]** interface of an IC device, the device cannot detect the card number or Wiegand format only by swiping an IC card. For detecting the Wiegand format of an IC card, it is needed to connect an IC card reader with the device and swipe an IC card above the auxiliary card reader, so that the device will show the card number and the Wiegand format.



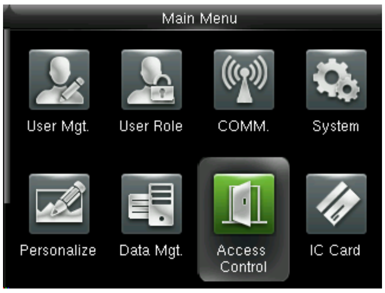
Card format detect automatically

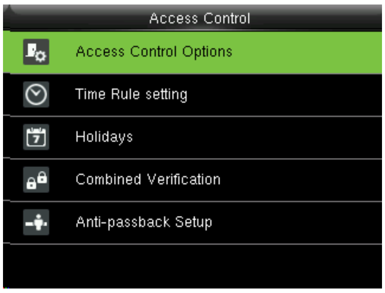
10126043
IntWiegand26

33499
IntWiegand26a

7 Access Control

Access Control option is used to set the Time Schedule, Holidays, Access Groups, Combined Verification etc., the related parameters for the device to control the lock and other devices.





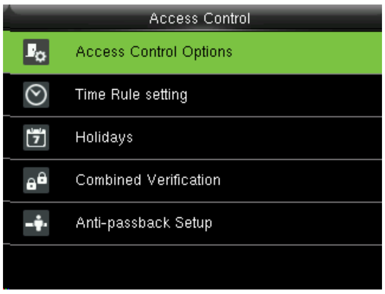
In the initial interface, press **[M/OK]** > **Access Control** to enter **Access Control** setting interface.

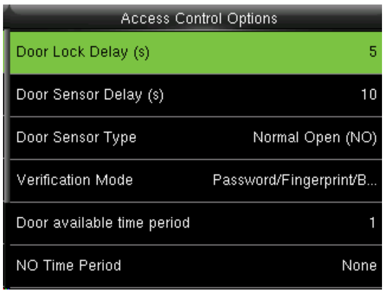
To gain access, the registered user must meet the following conditions:

1. User's access time falls within either user's personal time zone or group time zone.
2. User's group must be in the access combo (when there are other groups in the same access combo, verification of members of those groups are also required to unlock the door).

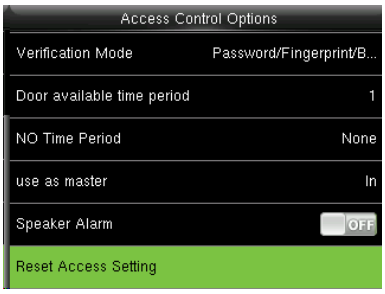
In default settings, new users are allocated into the first group with the default group time zone and access combo as "1", and set in unlocking state.

7.1 Access Control Options Settings




Access Control Options

Door Lock Delay (s) 5
Door Sensor Delay (s) 10
Door Sensor Type Normal Open (NO)
Verification Mode Password/Fingerprint/B...
Door available time period 1
NO Time Period None


Access Control Options

Verification Mode Password/Fingerprint/B...
Door available time period 1
NO Time Period None
use as master In
Speaker Alarm OFF
Reset Access Setting

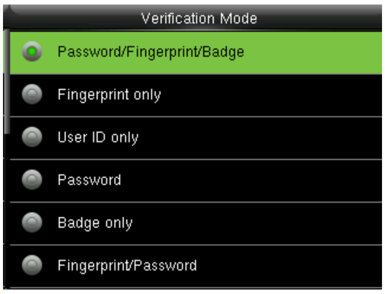
In the initial interface, press **[M/OK]** > **Access Control** > **Access Control Options** to enter the **Access Control Options** setting interface.

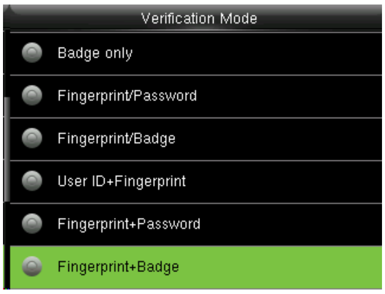
Door Lock Delay (s): The period of time of unlocking (from door opening to closing automatically) after the electronic lock receives an open signal sent from the device (value ranges from 0 to 10 seconds).

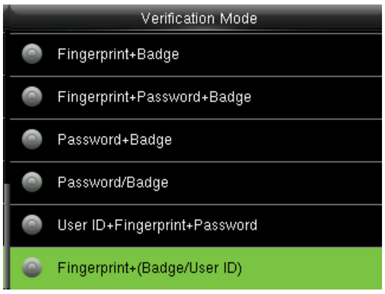
Door Sensor Delay (s): When the door is opened, the door sensor will be checked after a time period; if the state of the door sensor is inconsistent with that of the door sensor mode, alarm will be triggered. The time period is the **Door Sensor Delay** (value ranges from 1 to 255 seconds).

Door Sensor Type: It includes **None**, **Normal Open (NO)** and **Normal Close (NC)**. **None** means door sensor is not in use; **Normal Open** means the door is opened when electricity is on; **Normal Close** means the door is closed when electricity is on.

Verification Mode: Select verification mode to open door, including password / fingerprint / badge, fingerprint only, user ID only, password, badge only, fingerprint / password, fingerprint / badge, password / badge, user ID + fingerprint, fingerprint + password, fingerprint + badge, fingerprint + password + badge, password + badge, user ID + fingerprint + password, fingerprint + badge + user ID.






Verification Mode
Fingerprint+Badge
Fingerprint+Password+Badge
Password+Badge
Password/Badge
User ID+Fingerprint+Password
Fingerprint+(Badge/User ID)

Remarks:

1. "/" means "or". "+" means "and".

2. In a combined verification mode, the corresponding verification information must be registered first. For example: When User A registers **fingerprint** only, and the **[Verification Mode]** is set as **"Password + Badge"**, User A will not pass verification.

Door available time period: Set periods to open the door for users.

NO Time Period: To set time period for Normally Open, so that the door is always unlocked during this period.

Use as master: While configuring the master and slave devices, you may set the state of the master as **Out** or **In**.

Out: A record of verification on the master device is a check-out record.

In: A record of verification on the master device is a check-in record.

Speaker Alarm: When the **[Speaker Alarm]** is enabled, the speaker will raise an alarm when the device is being dismantled.

Reset Access Setting: To reset parameters of door lock delay, door sensor delay, door sensor type, verification mode, door available time period, NO time period, use as master, speaker alarm and anti-passback direction. However, the content of the Access Data Deletion in **[Data Mgt.]** will not be affected.

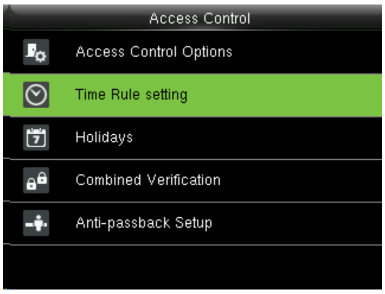
Access Parameters	**Factory Default**
Door Lock Delay	5 s
Door Sensor Delay	10 s
Door Sensor Type	Normal Open (NO)
Verification Mode	Password/Fingerprint/Badge
Door Available Time Period	1
NO Time Period	None
Use as master	In
Speaker Alarm	Off
Anti-Passback Direction	No anti-passback

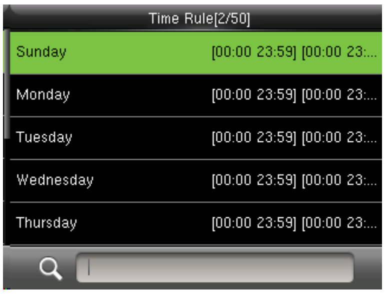
Remark: After setting **NC Time Period**, please lock the door well, otherwise alarm might be triggered during **NC Time Period**.

7.2 Time Rule Settings

Time Rule is the minimum time unit of access control settings; at most 50 **Time Rule** can be set for the system. Each **Time Rule** consists of 7 time sections (a week) and 3 holiday time schedules,, and each time section is the valid time within 24 hrs.

You may set a maximum of 3 time periods for every time schedule. The relationship among these time periods is "or". When the verification time falls in any one of these time periods, the verification is valid. The time period format is HH:MM-HH:MM in the 24-hour system with precision to minute.




Time Rule[2/50]

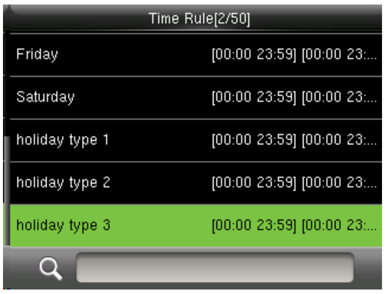
Sunday [00:00 23:59] [00:00 23:...

Monday [00:00 23:59] [00:00 23:...

Tuesday [00:00 23:59] [00:00 23:...

Wednesday [00:00 23:59] [00:00 23:...

Thursday [00:00 23:59] [00:00 23:...


Time Rule[2/50]

Friday [00:00 23:59] [00:00 23:...

Saturday [00:00 23:59] [00:00 23:...

holiday type 1 [00:00 23:59] [00:00 23:...

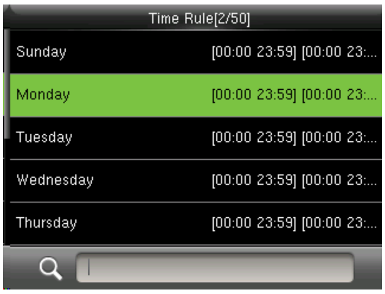
holiday type 2 [00:00 23:59] [00:00 23:...

holiday type 3 [00:00 23:59] [00:00 23:...

In the initial interface, press **[M/OK]** > **Access Control** > **Time Rule Setting** to enter the **Time Rule Setting** interface. The default **Time Rule** No. is 1 (whole-day valid), which can be edited.

- **Editing a Time Rule**

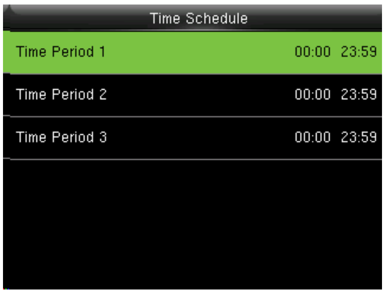
A super administrator may edit time rules as needed. The detailed operation is as follows:



Time Rule[2/50]

Sunday	[00:00 23:59] [00:00 23:...
Monday	[00:00 23:59] [00:00 23:...
Tuesday	[00:00 23:59] [00:00 23:...
Wednesday	[00:00 23:59] [00:00 23:...
Thursday	[00:00 23:59] [00:00 23:...

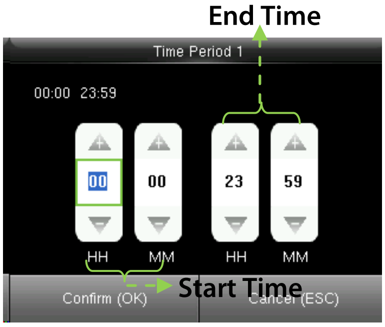
Input time rule number (such as "2"), the time rule (2) will be located automatically, select a time schedule (such as "Monday") and press **[M/OK]**



Time Schedule

Time Period 1	00:00 23:59
Time Period 2	00:00 23:59
Time Period 3	00:00 23:59

Select "Time Period 1/2/3" and press **[M/OK]** to enter time period setting interface



Set "Start Time" and "End Time" as required, after setting, press **[M/OK]** to save and exit

Prompt: You can set the "Start Time" and "End Time" by press ▲/▼ or input digital directly, press ◀/ ▶ to switch editing box.

You can set other time schedules as required after setting time schedule for Monday, and then press **[M/OK]** to exit.

Notes:

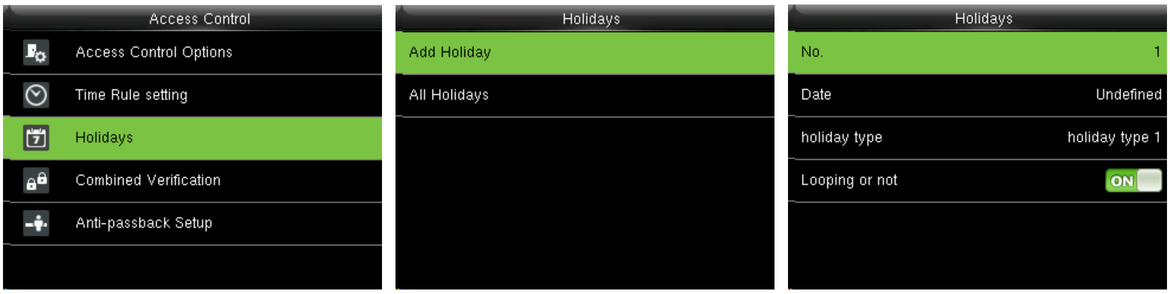
(1) When the end time is earlier than the start time (for example, 23:57-23:56), this means closing all day long. When the end time is later than the start time (for example, 00:00-23:59), this means that this time period is valid.

(2) **Valid Time Period:** 00:00-23:59 (Whole-day valid) or when the end time is later than the start time (for example, 08:00-23:59).

(3) By default, time rule 01 indicates full-day opening (00:00-23:59).

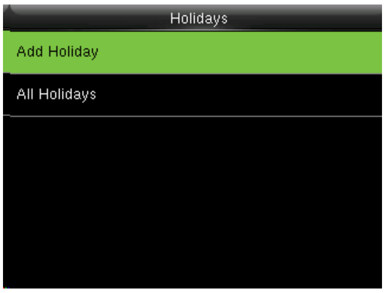
7.3 Holidays Settings

Add access control holidays for the device and set time periods on holidays as needed. The device controls the access control on holidays according to the holiday settings.

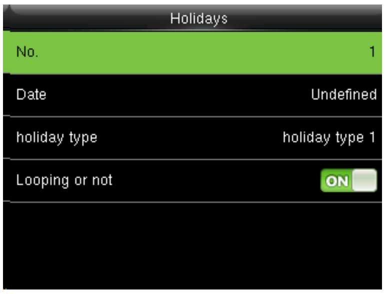


In the initial interface, press **[M/OK]** > **Access Control** > **Holidays** to enter **Holidays** setting interface.

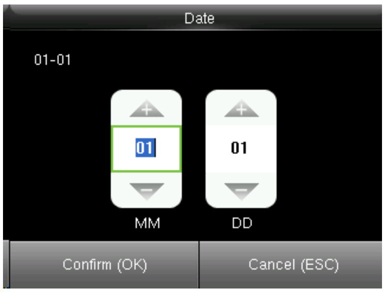
7.3.1 Adding Holiday



Select "Add Holiday" and press **[M/OK]** to enter



Select "Date" and press **[M/OK]** to enter



Set date for the added holiday, press **[M/OK]** to save and exit

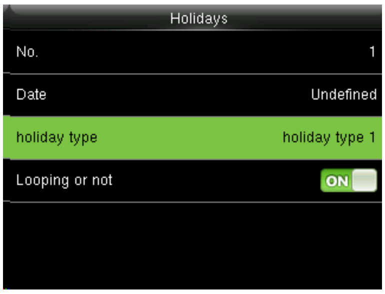
The holiday parameters are set as follows:

No.: The device automatically assigns a number to a holiday. You can also select **[No.]** and press **[M/OK]** to enter the **No.** interface. Enter a holiday No. as needed and press **[M/OK]** to save the settings and return to the **Holidays** interface.

Note: A holiday No. ranges from 1 to 24.

Date: Set the date of a holiday. Press ▲/▼ or input digital directly to set the date, press ◀/▶ to switch editing box. Then, press **[M/OK]** to save the settings and return to the **Holidays** interface.

Holiday Type: Select access time schedule for holiday. Time period for holiday type 1/2/3 can be edited in time rule. For details about editing methods, please refer to 7.2 Time Rule Settings.



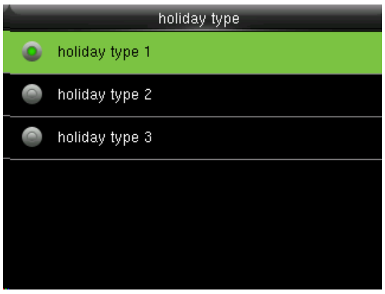
Holidays

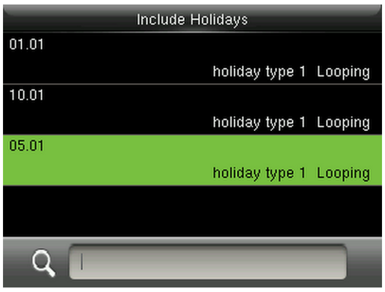
No. 1

Date Undefined

holiday type holiday type 1

Looping or not ON





Include Holidays

01.01 holiday type 1 Looping

10.01 holiday type 1 Looping

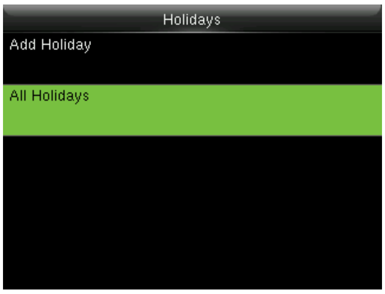
05.01 holiday type 1 Looping

Looping or not: The default value of Looping or not is **[ON]**. You can press **[M/OK]** to switch between **[ON]** and **[OFF]**.

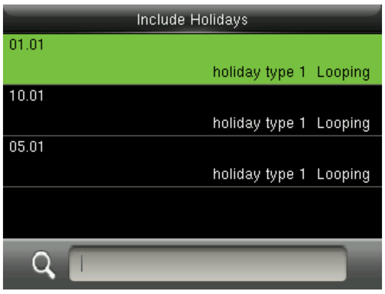
For fixed holidays every year, for example, the New Year's Day is January 1, Looping or not can be set to **[ON]** for them. For unfixed holidays every year, for example, the Mother's Day is the second Sunday of May, the specific dates are uncertain and Looping or not can be set to **[OFF]** for them.

For example, when the date of a holiday is set to January 1, 2010 and holiday type is set to holiday type 1, the access control on January 1 is conducted according to the time period settings of holiday type 1 rather than the time period settings of Friday.

7.3.2 All Holidays



Press ▼ to select "All Holidays" and press **[M/OK]**to enter



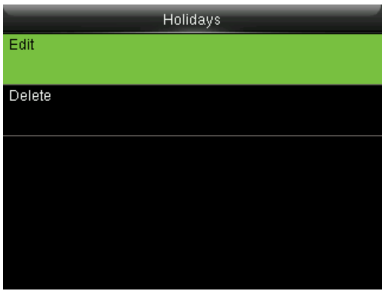
Include Holidays

01.01 holiday type 1 Looping

10.01 holiday type 1 Looping

05.01 holiday type 1 Looping

Select a holiday and press **[M/OK]**to enter



Edit or delete the holiday

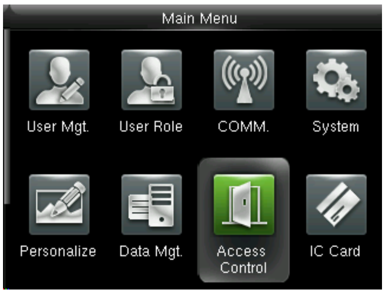
Remarks: The methods of editing or deleting a holiday are the same as those of editing or deleting a user and are not described here. For details, see 4.4 Editing User and 4.5 Deleting a User.

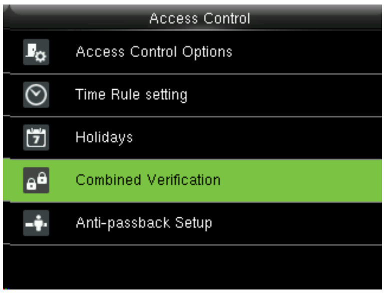
7.4 Combined Verification Settings

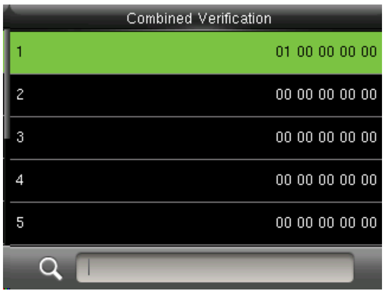
Combine two or more members to achieve multi-verification and improve security.

In a Combined Verification, the range of user number is: $0 \le N \le 5$; the users can all belong to a single group, or belong to 5 different groups at most.

Remark: Only group No. set in **Access Group** interface, can it be selected in the **Combined Verification** setting.



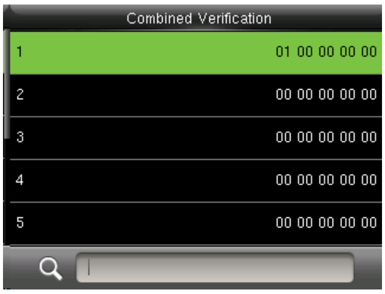



Combined Verification

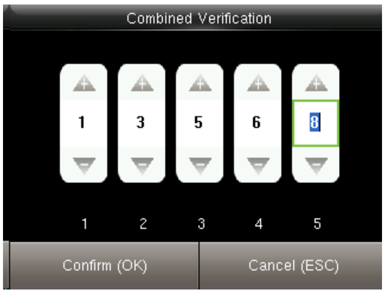
1	01 00 00 00 00
2	00 00 00 00 00
3	00 00 00 00 00
4	00 00 00 00 00
5	00 00 00 00 00

In the initial interface, press **[M/OK]** > **Access Control** > **Combined Verification** > **1** to enter the first **Combined Verification** setting interface.

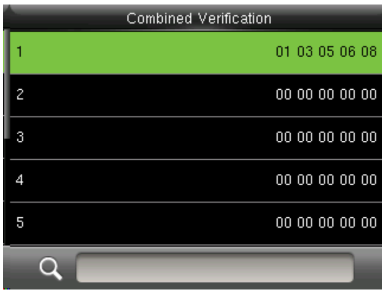
For Example (The following access groups have been set in **Access Group** interface**):**


Combined Verification

1	01 00 00 00 00
2	00 00 00 00 00
3	00 00 00 00 00
4	00 00 00 00 00
5	00 00 00 00 00

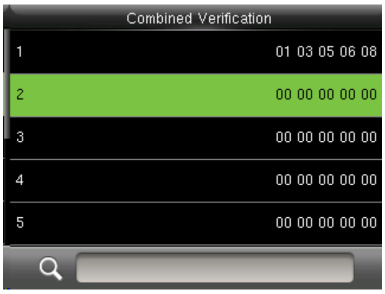

Combined Verification

1	2	3	4	5
1	3	5	6	8

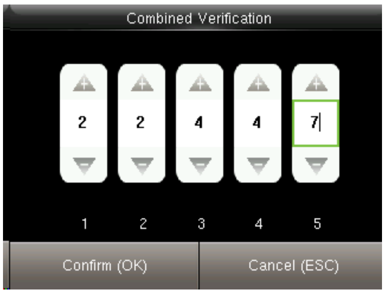

Combined Verification

1	01 03 05 06 08
2	00 00 00 00 00
3	00 00 00 00 00
4	00 00 00 00 00
5	00 00 00 00 00

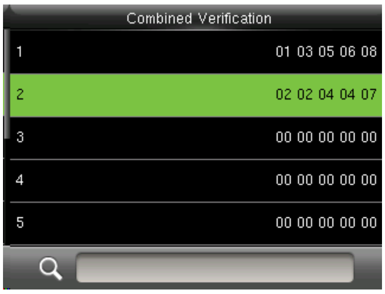
As the above figure, Combined Verification 1 is made up of five members coming from five different groups---access group 1 / 3 / 5 / 6 / 8 respectively.


Combined Verification

1	01 03 05 06 08
2	00 00 00 00 00
3	00 00 00 00 00
4	00 00 00 00 00
5	00 00 00 00 00

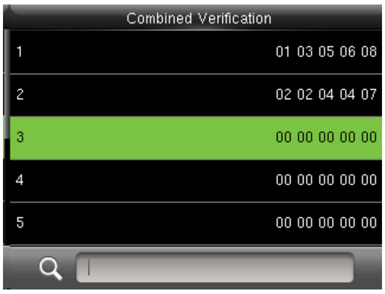

Combined Verification

1	2	3	4	5
2	2	4	4	7

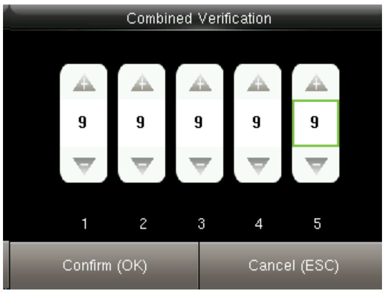

Combined Verification

1	01 03 05 06 08
2	02 02 04 04 07
3	00 00 00 00 00
4	00 00 00 00 00
5	00 00 00 00 00

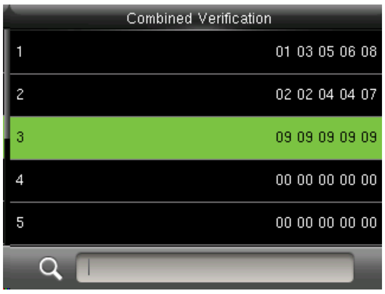
As the above figure, Combined Verification 2 is made up of five members coming from three different groups: two members from Access Group 2, two from Group 4, and one from group 7.



1	01 03 05 06 08
2	02 02 04 04 07
3	00 00 00 00 00
4	00 00 00 00 00
5	00 00 00 00 00

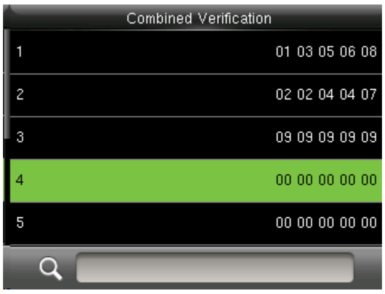


1	2	3	4	5
9	9	9	9	9

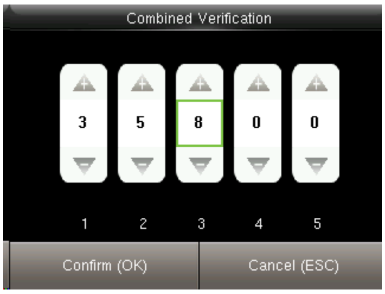


1	01 03 05 06 08
2	02 02 04 04 07
3	09 09 09 09 09
4	00 00 00 00 00
5	00 00 00 00 00

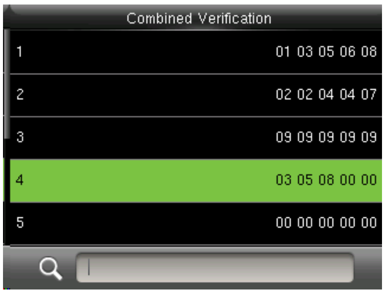
As the above figure, Combined Verification 3 is made up of five members, and all of them come from Access Group 9.



1	01 03 05 06 08
2	02 02 04 04 07
3	09 09 09 09 09
4	00 00 00 00 00
5	00 00 00 00 00



1	2	3	4	5
3	5	8	0	0



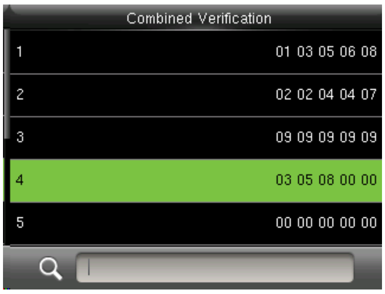
1	01 03 05 06 08
2	02 02 04 04 07
3	09 09 09 09 09
4	03 05 08 00 00
5	00 00 00 00 00

As the above figure, Combined Verification 4 is made up of three members coming from three different groups -- Access Group 3, 5, 8 respectively.

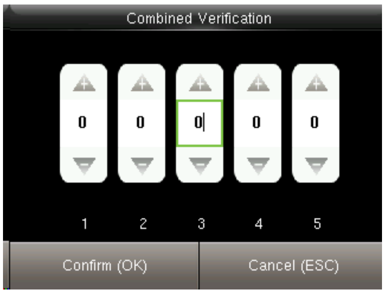
Deleting a Combined Verification

To delete a Combined Verification, set all access group numbers to 0.

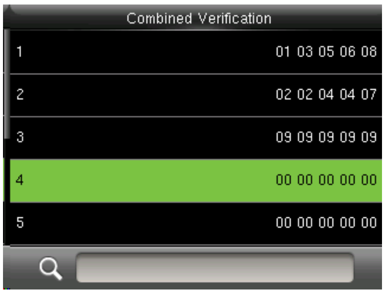
For example, to delete Combined Verification 4, please see the figures below:



1	01 03 05 06 08
2	02 02 04 04 07
3	09 09 09 09 09
4	03 05 08 00 00
5	00 00 00 00 00



1	2	3	4	5
0	0	0	0	0



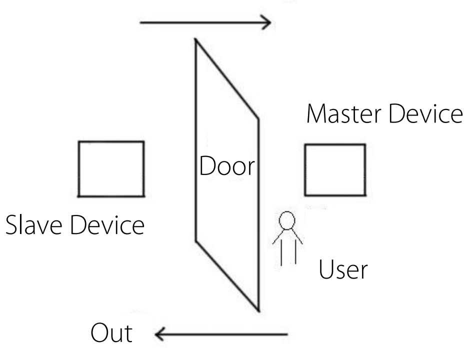
1	01 03 05 06 08
2	02 02 04 04 07
3	09 09 09 09 09
4	00 00 00 00 00
5	00 00 00 00 00

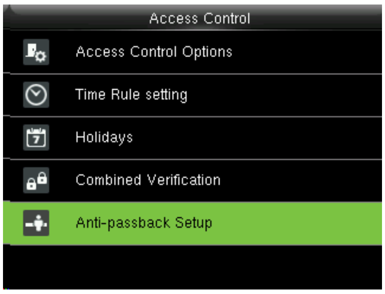
If all group numbers in Combined Verification 4 are set to 0, it will be deleted.

7.5 Anti-passback Settings

To avoid some persons following users to enter the door without verification, resulting in security problem, users can enable anti-passback function. The check-in record must match with check- out record so as to open the door.

This function requires two devices to work together: one is installed inside the door (master device), the other one is installed outside the door (slave device). The two devices communicate via Wiegand signal. The Wiegand format and Output type (User ID / Badge Number) adopted by the master device and slave device must be consistent.




Access Control

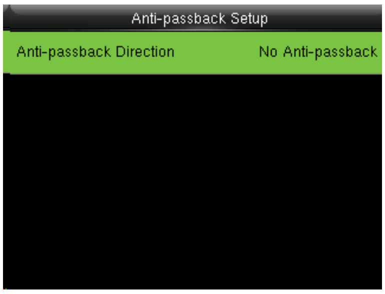
Access Control Options

Time Rule setting

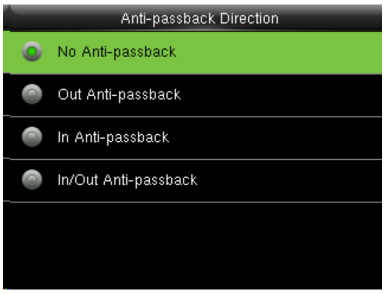
Holidays

Combined Verification

Anti-passback Setup


Anti-passback Setup

Anti-passback Direction No Anti-passback


Anti-passback Direction

● No Anti-passback

○ Out Anti-passback

○ In Anti-passback

○ In/Out Anti-passback

In the initial interface, press **[M/OK]** > **Access Control** > **Anti-passback Setup** to enter the **Anti-passback Setup** interface. Select Anti-passback Direction and Device Status.

- **Anti-Passback Direction**

No Anti-passback: Anti-Passback function is disabled, which means passing verification of either master device or slave device can unlock the door. Attendance state is not reserved.

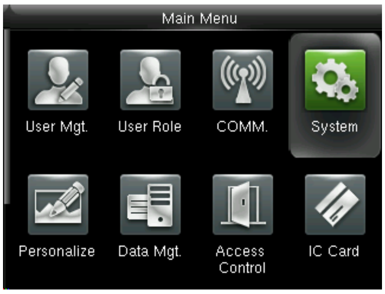
Out Anti-passback: After a user checks out, only if the last record is a check-in record can the user check out again; otherwise, the alarm will be triggered. However, the user can check in freely.

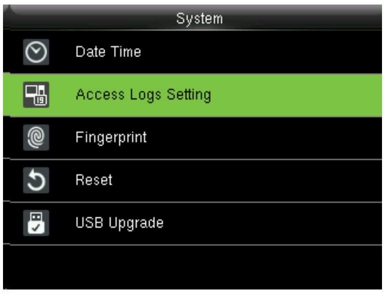
In Anti-passback: After a user checks in, only if the last record is a check-out record can the user check in again; otherwise, the alarm will be triggered. However, the user can check out freely.

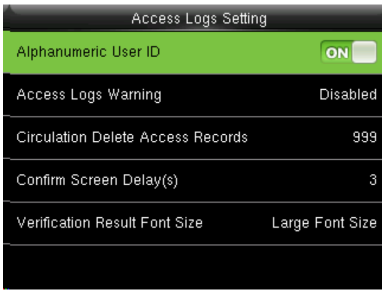
In/Out Anti-passsback: After a user checks in/out, only if the last record is a check-out record can the user check in again, or a check-in record can the user check out again; otherwise, the alarm will be triggered.

8 System Settings

8.1 Access Logs Settings






Access Logs Setting

Alphanumeric User ID ON

Access Logs Warning Disabled

Circulation Delete Access Records 999

Confirm Screen Delay(s) 3

Verification Result Font Size Large Font Size

In the initial interface, press **[M/OK]** > **System** > **Access Logs Setting** to enter **Access Logs Setting** interface.

Alphanumeric User ID: When the **[Alphanumeric User ID]** is enabled, you can use Alphanumeric User ID.

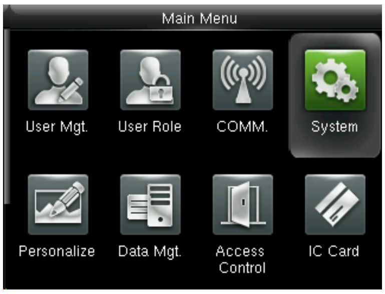
Access Logs Warning: When the residual access record capacity is smaller than the preset value, the device automatically generates a message indicating residual record capacity. You can set it to **Disabled** or set to a value ranging from 1 to 9999.

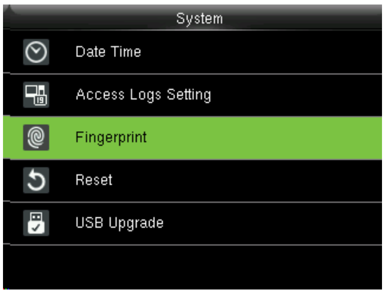
Circulation Delete Access Records: Set the number of log entries that can be deleted at a time when existing records reach the allowed maximum log capacity. The default value is **Disabled**. You can set it to a value ranging from 1 to 999.

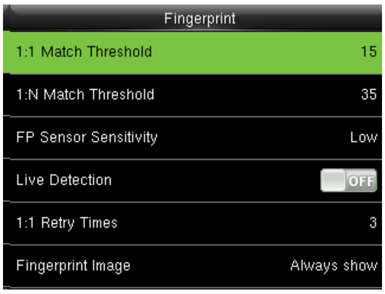
Confirm Screen Delay(s): Set the duration to display messages of verification results. The valid value range is 1-9 seconds.

Verification Result Font Size: You can choose normal font, large font or large font as verification result font size.

8.2 Fingerprint Parameters






Fingerprint

1:1 Match Threshold	15
1:N Match Threshold	35
FP Sensor Sensitivity	Low
Live Detection	OFF
1:1 Retry Times	3
Fingerprint Image	Always show

In the initial interface, press **[M/OK]** > **System** > **Fingerprint** to enter the **Fingerprint** setting interface.

1:1 Match Threshold: Under 1:1 Verification Method, only when the similarity between the verifying fingerprint and the user's registered fingerprint is greater than this value can the verification succeed.

1:N Match Threshold: Under 1:N Verification Method, only when the similarity between the verifying fingerprint and all registered fingerprints is greater than this value can the verification succeed.

Recommended Match Threshold:

		Match Threshold	
FRR	**FAR**	**1: N**	**1:1**
High	Low	45	25
Medium	Medium	35	15
Low	High	25	10

FP Sensor Sensitivity: To set the sensibility of fingerprint collection. It is recommended to use the default level "**Medium**". When the environment is dry, resulting in slow fingerprint detection, you can set the level to "**High**" to raise the sensibility; when the environment is humid, making it hard to identify the fingerprint, you can set the level to "**Low**".

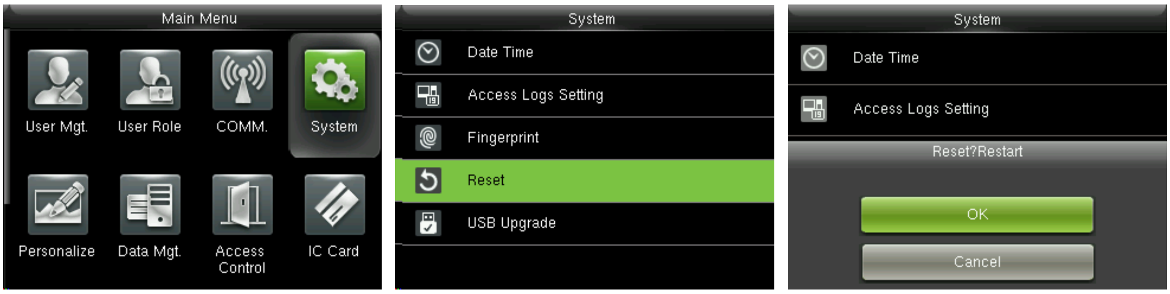
Live Detection: To set whether to detect the false fingerprint. Enable **[Live Detection]**, the device will detect the false fingerprint during registration and verification, so that it cannot be registered or verified successfully.

1:1 Retry Times: In 1:1 Verification or Password Verification, users might forget the registered fingerprint or password, or press the finger improperly. To reduce the process of re-entering user ID, retry is allowed; the number of retry can be within 1~9.

Fingerprint Image: To set whether to display the fingerprint image on the screen in registration or verification. Four choices are available: Show for enroll, Show for match, Always show, None.

8.3 Reset to Factory Settings

Reset data such as communication settings and system settings to factory settings.



In the initial interface, press **[M/OK]** > **System** > **Reset** > **OK** to finish the reset setting.

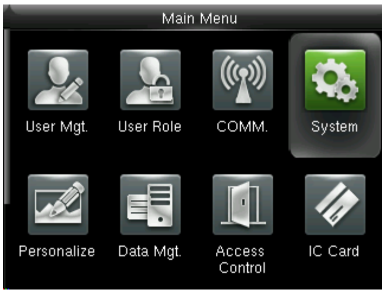
Reset parameters include Access Control Options, Duress Options, Anti-passback Setup, communication setting (namely, the setting of Ethernet, Serial Comm., PC Connection, Wireless Network, ADMS and Wiegand Setup), Personalize (such as Voice Prompt, Keyboard Prompt, Volume and Idle Time To Sleep), close punch state etc.

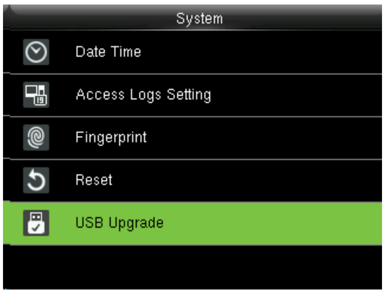
Parameters	Factory Defaults
Access Control Options	Door Lock Delay: 10 seconds Door Sensor Delay: 10 seconds Door Sensor Type: Normal Open (NO) Door Alarm Delay: 30 seconds Retry Times To Alarm: 3 times NC Time Period: None NO Time Period : None Valid holidays: OFF Speaker Alarm: OFF
Duress Options	Duress Function: OFF Alarm on 1:1 Match: OFF Alarm on 1: N Match: OFF Alarm on Password: OFF Alarm Delay: 10 seconds
Anti-passback Direction	No Anti-passback
Ethernet	IP Address: 192.168.1.201

	Subnet Mask: 255.255.255.0 DNS: 0.0.0.0
PC Connection	Comm Key: 0 Device ID: 1
ADMS	Enable Domain Name: OFF Server Address: 0.0.0.0 Server Port: 8081 Enable Proxy Server: OFF
Wiegand Setup	Wiegand Input / Output ID Type: Badge Number Pulse Width: 100 us Pulse interval: 1000 us
Idle Time To Slide Show	60 seconds
Idle Time To Sleep	30 minutes
Menu Screen Timeout	60 seconds
Keyboard Prompt	ON
Voice Prompt	ON
Volune	70

Remark: When resetting to factory settings, the date and time will not be affected. For example, if the device date and time are set to 18:30 on January 1, 2020, the date and time will remain unchanged after resetting to factory settings.

8.4 USB Upgrade





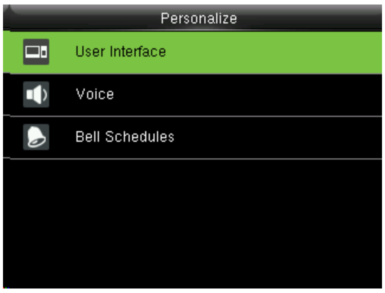
Insert the U disk with upgrade file into the device's USB port, and in the initial interface, press **[M/OK]** > **System** > **USB Upgrade** to complete firmware upgrade operation.

ℹ If upgrade file is needed, please contact out technical support.

Firmware upgrade is not recommenced under normal circumstances.

9 Personalize Settings

9.1 User Interface Settings

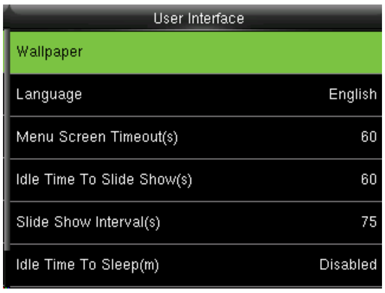


Personalize

User Interface

Voice

Bell Schedules



User Interface

Wallpaper

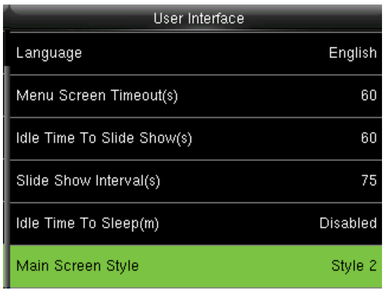
Language English

Menu Screen Timeout(s) 60

Idle Time To Slide Show(s) 60

Slide Show Interval(s) 75

Idle Time To Sleep(m) Disabled



User Interface

Language English

Menu Screen Timeout(s) 60

Idle Time To Slide Show(s) 60

Slide Show Interval(s) 75

Idle Time To Sleep(m) Disabled

Main Screen Style Style 2

In the initial interface, press **[M/OK]** > **Personalize** > **User Interface** to set **User Interface.**

Wallpaper: Select the wallpaper of main screen as required, you can find wallpapers of various styles in the device.

Language: Select the language of device as required.

Menu Screen Timeout (s): When there is no operation in the menu interface and the time exceeds the set value, the device will automatically exit to the initial interface. You can disable it or set the value to 60~99999 seconds.

Remark: If **[Disabled]** is chosen, the system will not exit the menu interface even when there is no operation. Disabling this function is not recommended due to great power used and insecurity.

Idle Time To Slide Show (s): When there is no operation in the initial interface and the time exceeds the set value, a slide show will be shown. It can be disabled (set to "**None**") or set to 3~999 seconds.

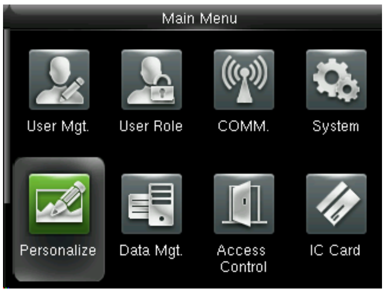
Slide Show Interval (s): This refers to the interval between displaying different slide show pictures. It can be disabled or set to 3~999 s.

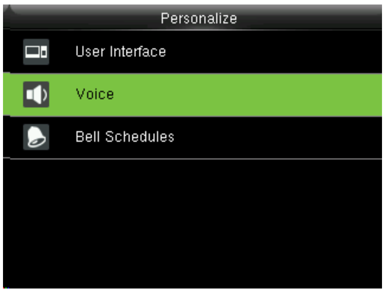
Idle Time To Sleep (m): When there is no operation in the device and the set Sleep Time is attained, the device will enter standby mode. Press any key or finger to cancel standby mode. You can disable this function, or set the value to 1~999 minutes. If this function is turned to **[Disabled]**, the device will not enter standby mode.

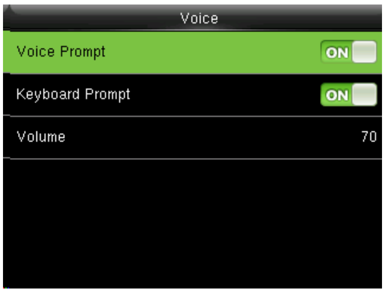
Remark: Disabling this function is not recommended due to great power used.

Main Screen Style: Choosing the position and ways of the clock and status key.

9.2 Voice Settings






Voice

Voice Prompt ON

Keyboard Prompt ON

Volume 70

In the initial interface, press **[M/OK]** > **Personalize** > **Voice** to enter the **Voice** settings interface.

Voice Prompt: Select whether to enable voice prompts during operating, press **[M/OK]** to enable it.

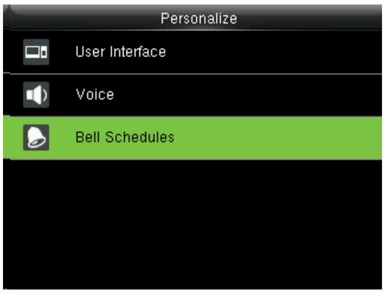
Keyboard Prompt: Select whether to enable keyboard voice while pressing keyboard, press **[M/OK]** to enable it.

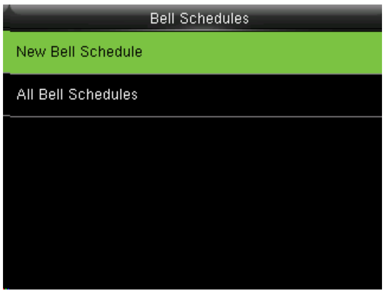
Volume: Set the volume of device. Press ▶ key to increase volume, press ◀ key to decrease volume.

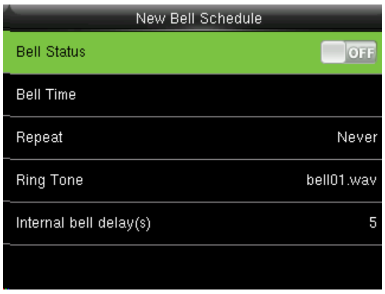
9.3 Bells Settings

Many companies choose to use bell to signify on-duty and off-duty time. When reaching the scheduled time for bell, the device will play the selected ringtone automatically until the ringing duration is passed.

9.3.1 Adding New Bell






New Bell Schedule

Bell Status OFF

Bell Time

Repeat Never

Ring Tone bell01.wav

Internal bell delay(s) 5

In the initial interface, press **[M/OK]** > **Personalize** > **Bell Schedules** > **New Bell Schedule** to enter the **New Bell Schedule** adding interface.

Bell Status: **[ON]** is to enable the bell, while **[OFF]** is to disable it.

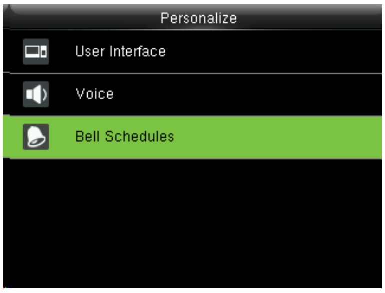
Bell Time: The bell rings automatically when reaching the specified time.

Repeat: To set whether to repeat the bell.

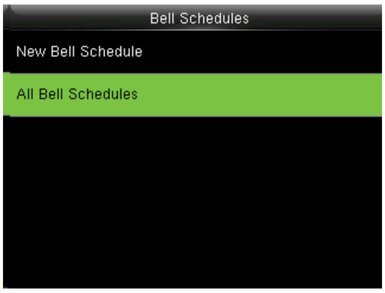
Ring Tone: Ringtone played for bell.

Interval bell delay (s): To set the ringing length. The value ranges from 1 to 999 seconds.

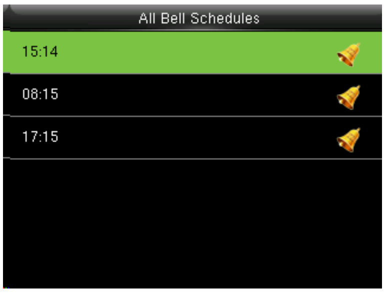
9.3.2 Editing a Bell



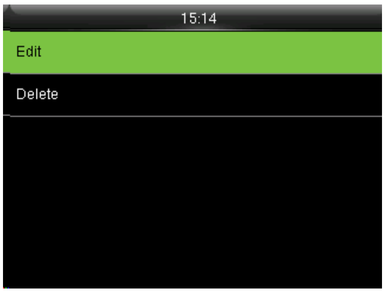
Press ▼ to select "Bell Schedules" and press **[M/OK]** to enter



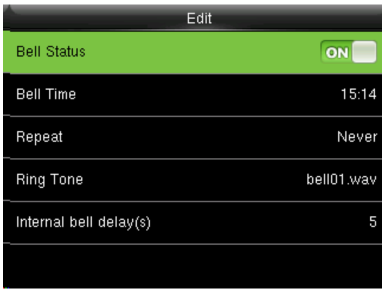
Press ▼ to select "All Bell Schedules" and press **[M/OK]** to enter



Select a bell to be edited and press **[M/OK]** to enter



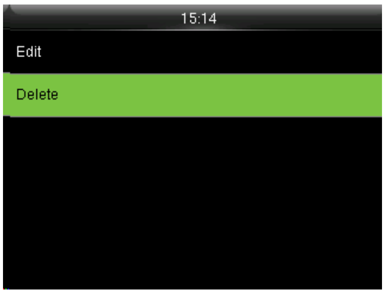
Select "Edit" and press **[M/OK]**



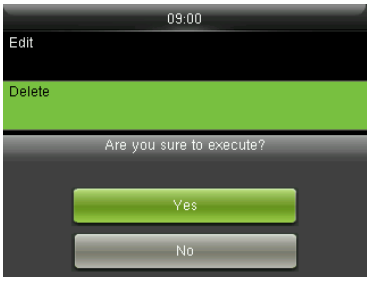
Bell Status ON
Bell Time 15:14
Repeat Never
Ring Tone bell01.wav
Internal bell delay(s) 5

Modify the bell parameter

9.3.3 Deleting a Bell



Press ▼ to select "Delete" and press**[M/OK]** to enter

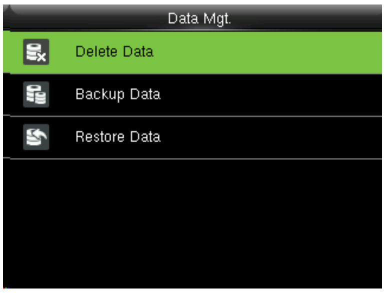


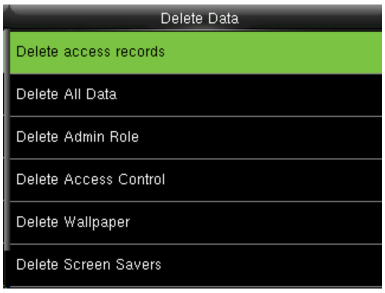
Press ▲ to select "**Yes**" and press **[M/OK]** to delete the bell

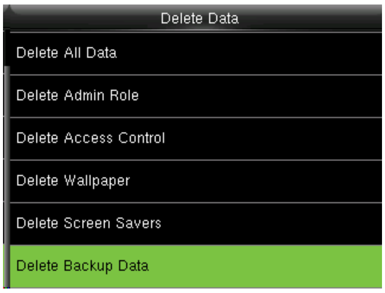
10 Data Mgt.

10.1 Deleting Data

To manage data in the device, which includes delete attendance data, delete all data, delete admin role and delete screen savers etc.







In the initial interface, press **[M/OK]** > **Data Mgt.** > **Delete Data** to enter the **Delete Data** settings interface.

Delete access records: To delete all access records saved in the device or delete access records in specified time range.

Delete All Data: To delete all user information, fingerprints and attendance logs etc.

Delete Admin Role: To make all Administrators become Normal Users.

Delete Access Control: To delete all access data.

Delete Wallpaper: To delete all wallpapers in the device.

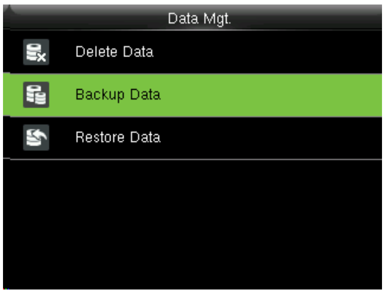
Delete Screen Savers: To delete all screen savers in the device. (For details of uploading screen savers, please refer to 17.4 Image Uploading Rule.)

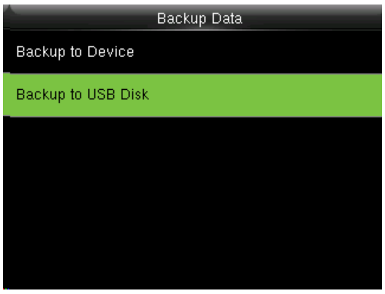
Delete Backup Data: To delete all backup data.

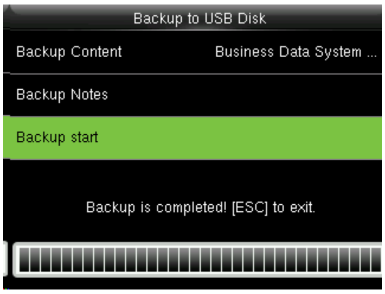
10.2 Data Backup

To backup the business data, or configuration data to the device or U disk.

Backup to USB Disk







Backup is completed! [ESC] to exit.

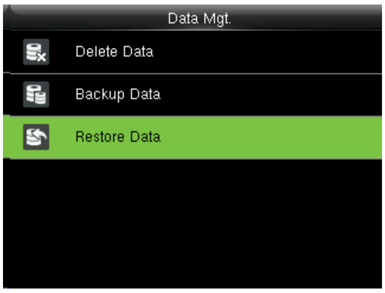
Insert the USB disk. In the initial interface, press **[M/OK]** > **Data Mgt.** > **Backup Data** > **Backup to USB Disk** > **Backup Content** > choose content to be backed up (**Business Data** / **System Data**) > **Backup Notes** (input backup notes with T9 Input methods, for details of T9 Input Methods, please refer to 17.1 Text Input Operation Instructions.) > **Backup Start** to start backup. Restarting the device is not needed after backup is completed.

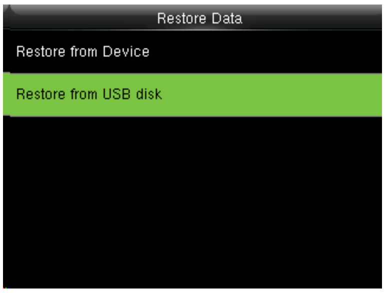
Remark: The operations of **Backup to Device** are the same as that of **Backup to USB Disk**.

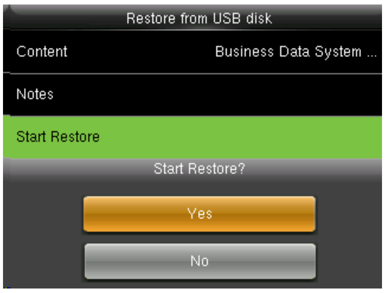
10.3 Data Restoration

To restore the data in the device or U disk to the device.

Restore from USB disk







Start Restore?

Insert the USB disk. In the initial interface, press **[M/OK]** > **Data Mgt.** > **Restore Data** > **Restore from USB Disk** > **Content** > choose content to be restored (**Business Data** / **System Data**) > **Notes** (input notes with T9 Input methods, for details of T9 Input Methods, please refer to 17.1 Text Input Operation Instructions.) > **Start Restore** > select **Yes** to start restoring. After restoration completes, click **[OK]** to automatically restart the device.

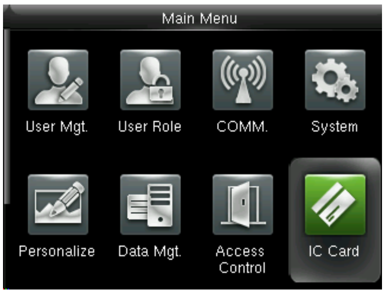
Remark: The operations of **Restore from Device** are the same as that of **Restore from USB Disk**.

11 IC Card★

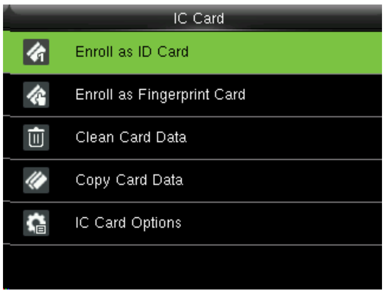
To enroll a Mifare card as ID card or fingerprint card. This menu supports integrate fingerprint and ID card attendance to other systems or devices by the enrolled Mifare card, and supports multi- verification mode to meet the demands of different people. It also supports clean, copy card data enrolled in the Mifare card.

11.1 Enroll as ID card

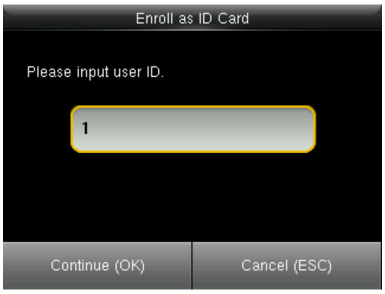
Enroll a Mifare card as ID card. Only ID card number (namely, user ID number) is needed to enroll. Punching enrolled Mifare card on the device is equal to punch ID card.



In the initial interface, press **[M/OK]** to enter the main menu, then press ▶ to select **IC Card** and press **[M/OK]** to enter



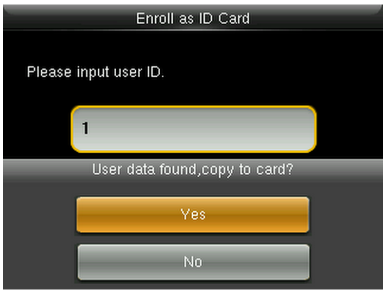
Select **Enroll as ID Card** and press **[M/OK]** to enter



Please input user ID.

1

Input user ID to be enrolled and press **[M/OK]**

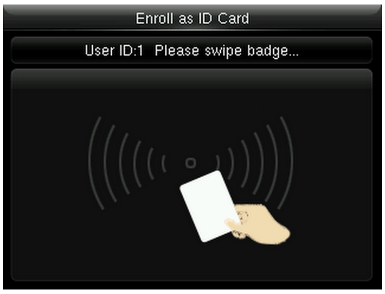


Please input user ID.

1

User data found,copy to card?

If the user ID has been enrolled already, the device will prompt you whether to copy the information to the card, and then press **[M/OK]**



User ID:1 Please swipe badge...

Put the card in the card area until the operation is successful

- **Verification**

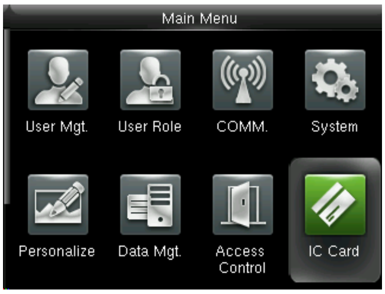
Swipe the enrolled Mifare card in the card area. After the device identifies the card, move the card off.

When the verification is successful, the device will prompt the card number.

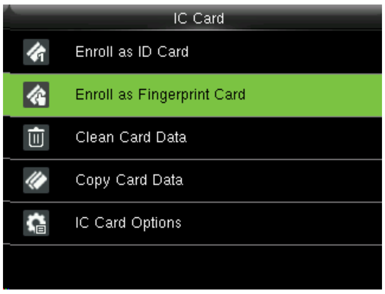
Remark: Please modify the verification mode as badge related modes in user access control role (In the initial interface, press **[M/OK]** > **User Mgt.** > **All Users** > select a user > press **[M/OK]** > **Edit** > **Access Control Role** > **Verification Mode**), or the verification won't be successful.

11.2 Enroll as Fingerprint Card

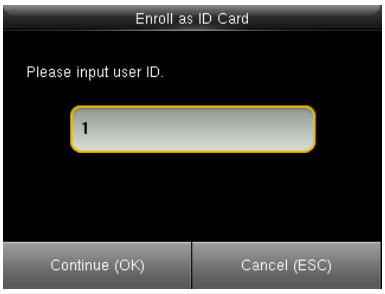
Enroll fingerprint and write fingerprint data into the enrolled Mifare card.



In the initial interface, press **[M/OK]** to enter the main menu, then press ▶ to select **IC Card** and press **[M/OK]** to enter



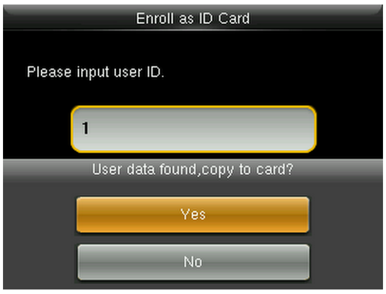
Press ▼ to select **Enroll as Fingerprint Card** and press **[M/OK]** to enter



Please input user ID.

1

Input user ID and press **[M/OK]**

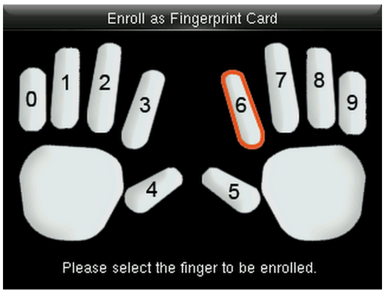


Please input user ID.

1

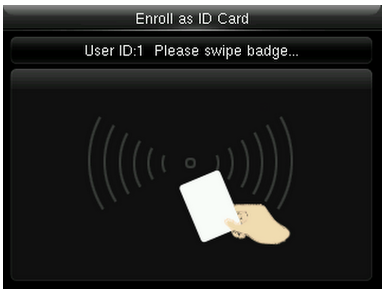
User data found,copy to card?

If the user ID has been enrolled already, the device will prompt you whether to copy the information to the card, and then press **[M/OK]**



Please select the finger to be enrolled.

Select a finger and press **[M/OK]**, then press finger properly three times on the fingerprint reader



User ID:1 Please swipe badge...

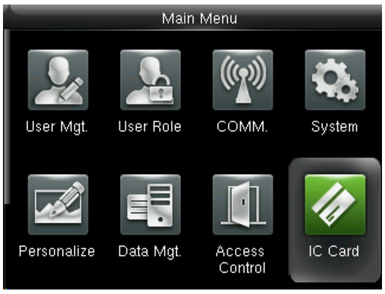
Put a Mifare card in the card area, waiting for the device to read fingerprint data into the card until the enrollment succeeds

- **Verification**

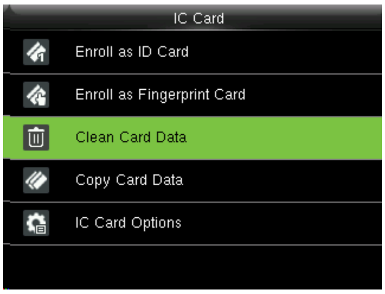
Swipe the enrolled Mifare card in the card area. After the device identifies the card, move the card off. Then please press finger prompt box will display, press fingerprint enrolled in the Mifare card to finish verification. If the pressed fingerprint is different from that stored in the Mifare card, verification will fail.

11.3 Clean Card Data

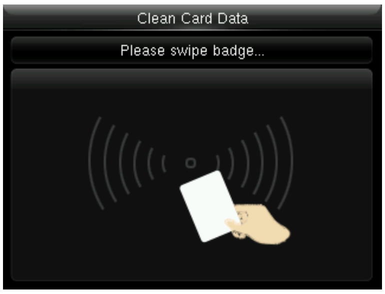
Delete all the information saved in the Mifare card being operated at present.



In the initial interface, press **[M/OK]** to enter the main menu, then press ▶ to select **IC Card** and press **[M/OK]** to enter



Press ▼ to select **Clean Card Data** and press **[M/OK]** to enter



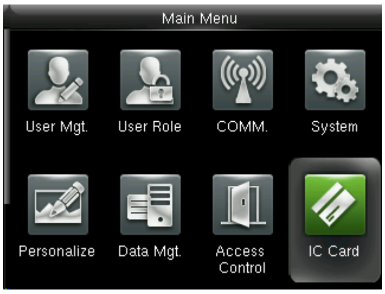
Please swipe badge...

Swipe the Mifare card in the card area, waiting for device to delete all the information in the card

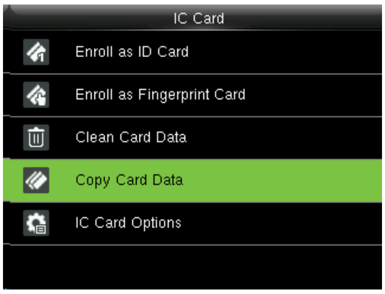
☺**Note:** If the card data has been stored in the device (In the initial interface, press **[M/OK]** > **IC Card** > **All Users** > **IC Card Options** > **Card Data Storage Mode** > select mode of **"Save user data in device"** or **"Save user and fingerprint in device"**), the device will remind you whether to delete the information saved in the device or not. **[Yes]** is to delete the user's information saved in the device. **[No]** is to keep the information in the device.

11.4 Copy Card Data

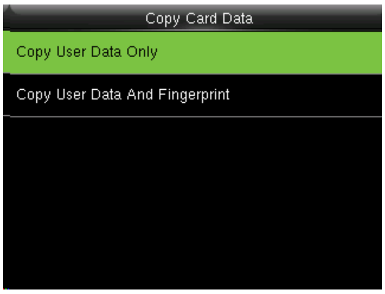
Copy Mifare card information to the device（after copying, the user data and fingerprint is still saved in the Mifare card）, then press fingerprint for attendance directly on the device without swiping Mifare card.



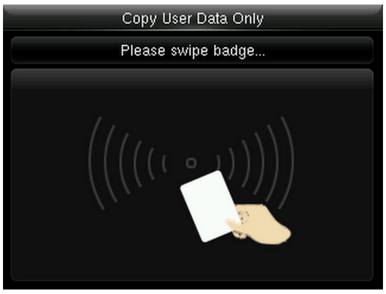
In the initial interface, press **[M/OK]** to enter the main menu, then press ▶ to select **IC Card** and press **[M/OK]** to enter



Press ▼ to select **Copy Card Data** and press **[M/OK]**



Select **Copy User Data Only** or **Copy User Data And Fingerprint**, and press **[M/OK]**



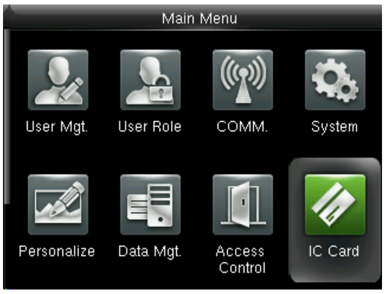
Copy User Data Only

Please swipe badge...

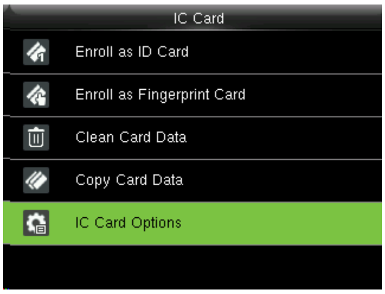
Put Mifare card in the card area, waiting for the device to copy user information (user data only or user data and fingerprint) to the device

11.5 IC Card Options

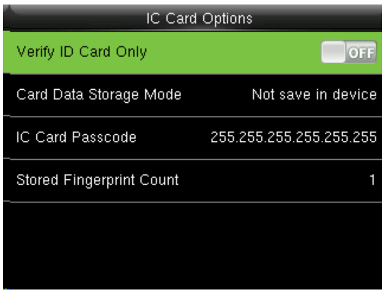
Set IC card options as required, such as whether to verify ID Card Only, Card Data Storage Mode, IC Card Passcode and Stored Fingerprint Count.



In the initial interface, press **[M/OK]** to enter the main menu, then press ▶ to select **IC Card** and press **[M/OK]** to enter



Press ▼ to select **IC Card Options** and press **[M/OK]**



IC Card Options

Verify ID Card Only	OFF
Card Data Storage Mode	Not save in device
IC Card Passcode	255.255.255.255.255.255
Stored Fingerprint Count	1

Set IC card options as required

Verify ID Card Only: To set whether to verify ID Card only, press **[M/OK]** to enable the function. After enabled, all enrolled fingerprint cards cannot be verified on this device, only enrolled ID card number can be verified successfully. About how to enroll a Mifare card as ID card or fingerprint card, please refer to 11.1 Enroll as ID card or 11.2 Enroll as Fingerprint Card for detail.

Card Data Storage Mode: To set storage mode of data enrolled in the Mifare card, which includes the following modes:

1. **Not save in device:** All enrolled data will be saved in Mifare card only, they won't be saved in device.
2. **Save user data in device:** Except user data, other enrolled data (such as fingerprint) won't be saved in device.
3. **Save user and fingerprint in device:** All enrolled user data and fingerprint will be saved in device

and Mifare card synchronously.

IC Card Pascode: Set IC card passcode as required, which ranges from 0 to 255. After passcode is set, the device will write passcode into the enrolled Mifare card. The Mifare card can only be used on this device.

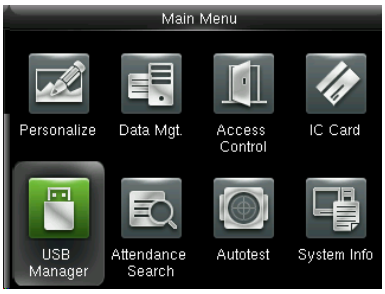
Stored Fingerprint Count: Indicate the numbier of fingerprint stored in the card.

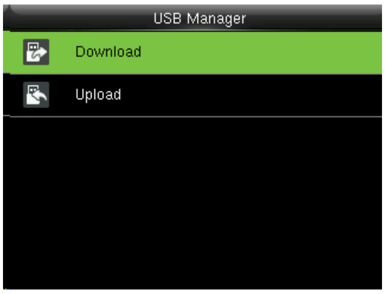
12 USB Manager

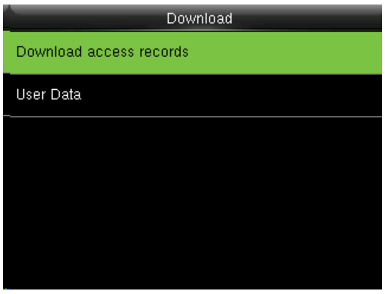
Upload or download data between device and the corresponding software by USB disk.

Before uploading/downloading data from/to the USB disk, insert the USB disk into the USB slot first.

12.1 USB Download





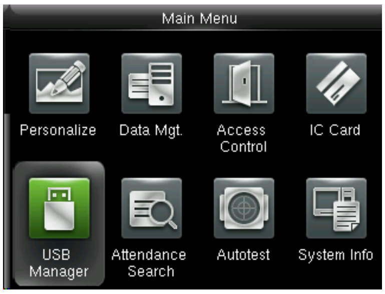


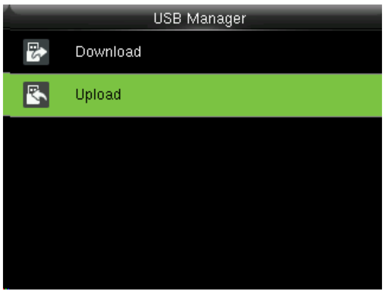
In the initial interface, press **[M/OK]** > **USB Manager** > **Download** to enter the USB **Download** interface.

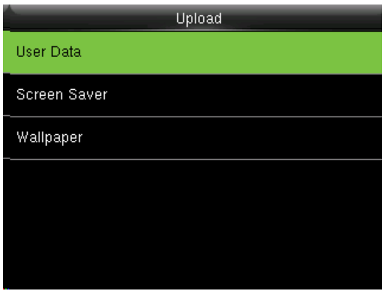
Download access records: To download access records in specified time period into USB disk.

User Data: To download all user information and fingerprints from the device into USB disk.

12.2 USB Upload







In the initial interface, press **[M/OK]** > **USB Manager** > **Upload** to enter the USB **Upload** interface.

User Data: To upload all the user information and fingerprints from USB disk into the device.

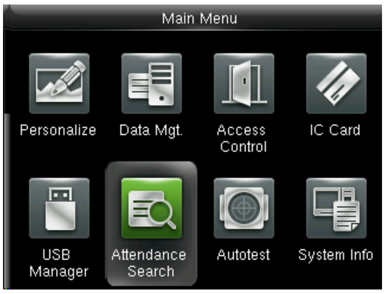
Screen Saver: To upload all screen savers from USB disk into the device. You can choose **[Upload selected picture]** or **[Upload all pictures]**. The images will be displayed on the device's main interface after upload (for the specifications of screen savers, please refer to 17.4 Image Uploading Rule).

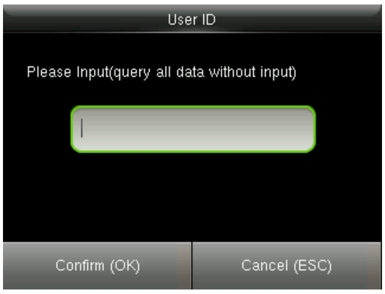
Wallpaper: To upload all wallpapers from USB disk into the device. You can choose **[Upload selected**

picture] or **[Upload all pictures]**. The images will be displayed on the screen after upload (for the specifications of wallpapers, please refer to 17.4 Image Uploading Rule).

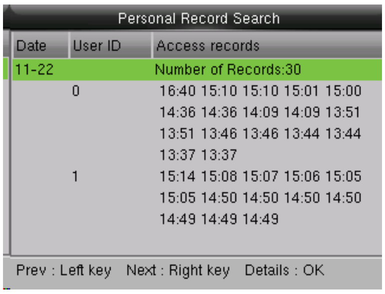
13 Attendance Search

When users verify successfully, attendance records are saved in the device. This function enables users to check attendance logs.




User ID

Please Input(query all data without input)


Personal Record Search

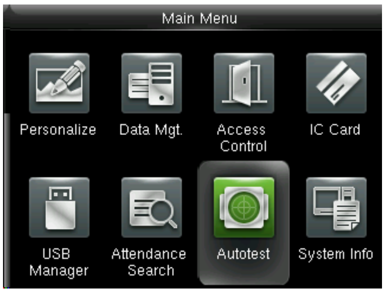
Date	User ID	Access records
11-22		Number of Records:30
	0	16:40 15:10 15:10 15:01 15:00 14:36 14:36 14:09 14:09 13:51 13:51 13:46 13:46 13:44 13:44 13:37 13:37
	1	15:14 15:08 15:07 15:06 15:05 15:05 14:50 14:50 14:50 14:50 14:49 14:49 14:49

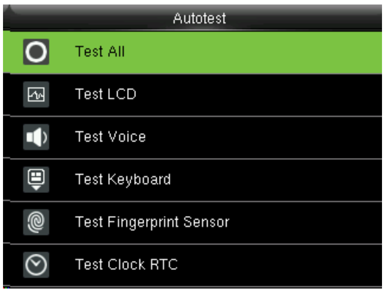
Prev : Left key Next : Right key Details : OK

In the initial interface, press **[M/OK]** > **Attendance Search** > enter **User ID** (if no ID is entered, all user records will be searched) > select **Time Range** > press **[M/OK]**, the corresponding attendance logs will then be shown.

14 Autotest

To automatically test whether all modules in the device function properly, which include the LCD, voice, keyboard, fingerprint sensor and RTC (Real-Time Clock).





In the initial interface, press **[M/OK]** > **Autotest** to enter the **Autotest** interface.

Test All: To test LCD, voice, keyboard, fingerprint sensor and RTC. During the test, press **[M/OK]** to continue to the next test, while press **[ESC]** to exit the test.

Test LCD: To test the display effect of LCD screen by displaying full color, pure white, and pure black to check whether the screen displays colors properly. During the test, press **[M/OK]** to continue to the next test, while press **[ESC]** to exit the test.

Test Voice: The device automatically tests whether the voice files stored in the device are complete and the voice quality is good. During the test, press **[M/OK]** to continue to the next test, while press **[ESC]** to exit the test.

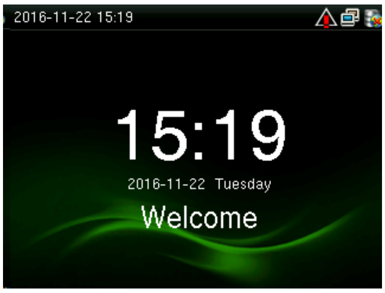
Test Keyboard: To test all keys to see if every key functions properly. Press any key in the **Keyboard** testing interface; if the pressed key is consistent with the key sign shown on the screen, then the key functions properly. Press **[M/OK]** or [ESC] to exit the test.

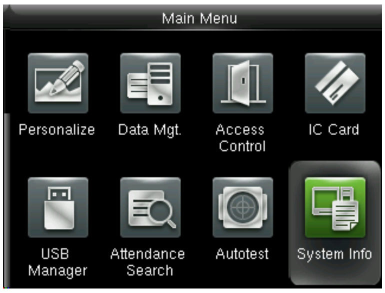
Test Fingerprint Sensor: To test the fingerprint sensor by pressing fingerprint to check if the collected fingerprint image is clear. When pressing fingerprint on the sensor, the image will be displayed on the screen. Press **[M/OK]** or **[ESC]** to exit the test.

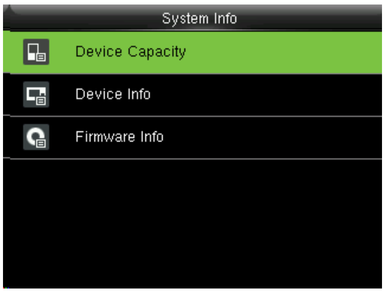
Test Clock RTC: To test the Real-Time Clock. The device tests whether the clock works properly and accurately by checking the stopwatch. Press **[M/OK]** to start counting time, and press it again to stop counting, to see if the stopwatch counts time accurately. Press **[ESC]** to exit the test.

15 System Information

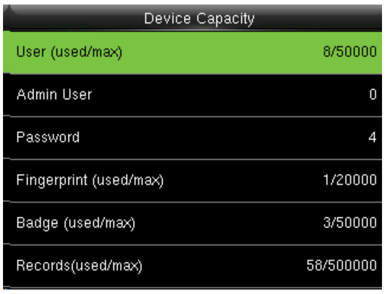
Check data capacity, device and firmware information.







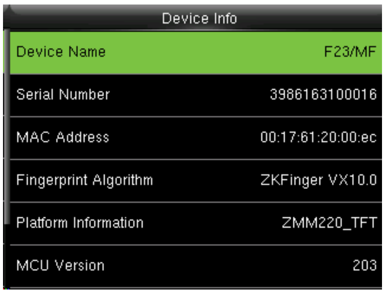
In the initial interface, press **[M/OK]** > **System Info** to enter the **System Info** interface.



Device Capacity

User (used/max)	8/50000
Admin User	0
Password	4
Fingerprint (used/max)	1/20000
Badge (used/max)	3/50000
Records(used/max)	58/500000

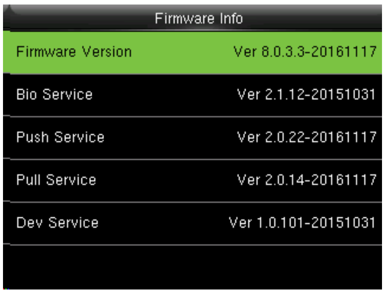
Device Capacity



Device Info

Device Name	F23/MF
Serial Number	3986163100016
MAC Address	00:17:61:20:00:ec
Fingerprint Algorithm	ZKFinger VX10.0
Platform Information	ZMM220_TFT
MCU Version	203

Device Info



Firmware Info

Firmware Version	Ver 8.0.3.3-20161117
Bio Service	Ver 2.1.12-20151031
Push Service	Ver 2.0.22-20161117
Pull Service	Ver 2.0.14-20161117
Dev Service	Ver 1.0.101-20151031

Firmware Info

Device Capacity: To display the number of registered users, administrators, passwords, fingerprints, badges★ and attendance logs, also to check the total storage of users, fingerprints, badges★ and attendance records.

Device Info: To display the device name, serial number, MAC address, fingerprint algorithm, platform information, MCU version, manufacturer and manufacturer date.

Firmware Info: To display the firmware version, Bio service, push service★, pull service and Dev service.

Remark: The display of Device Capacity, Device Info and Firmware Info on the system information interface of different products may vary; the actual product shall prevail.

16 Troubleshooting

- Fingerprint sensor is not able to read and verify the fingerprint effectively.
  - Check whether the finger is wet, or the fingerprint sensor is wet or dusty.
  - Clean the finger and the fingerprint sensor and try again.
  - If the finger is too dry, blow air onto it and try again.

- “Invalid time zone” is displayed after verification.
  - Contact Administrator to check if the user has the privilege to gain access within that time Schedule.

- Verification succeeds but the user cannot gain access.
  - Check whether the user privilege is set correctly.
  - Check whether the lock wiring is correct.

- The Tamper Alarm rings.
  - Check whether the device and the back plate is fixed together; if not, the tamper switch on the back of the device will be triggered and raises an alarm, ⚠ will be shown on the top right corner on the interface. Only when **[Speaker Alarm]** (**Access Control** > **Access Control Options** > **Speaker Alarm**) is **[ON]** will the speaker raise an alarm.

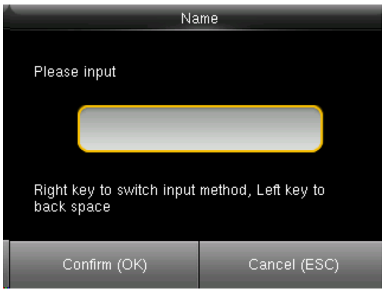
17 Appendices

17.1 Text Input Operation Instructions

☺**Note: Not all devices support T9 Input Method.**

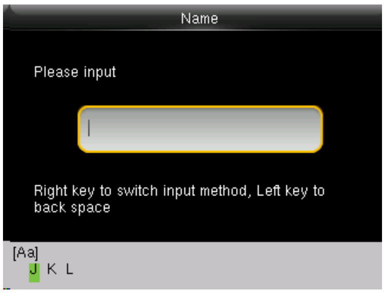
Press ▶key to open input method and press ▶ key to switch input methods among English, symbol and digit. Press **ESC** to exit input method.

Take input name (Jack) as an example:



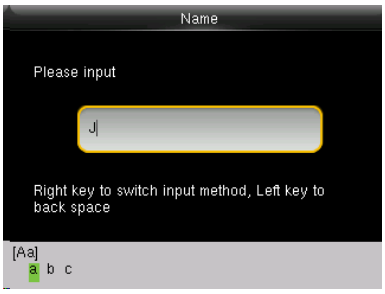
Right key to switch input method, Left key to back space

Press ▶key to open input method and press ▶ key to switch to the **[Aa]**



Right key to switch input method, Left key to back space

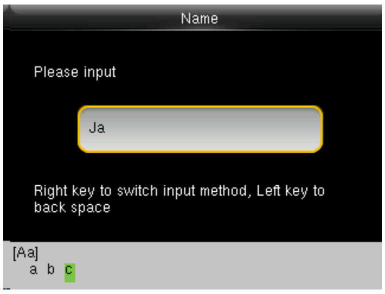
Press numeric **5** once on device keyboard to get **J** automatically



J

Right key to switch input method, Left key to back space

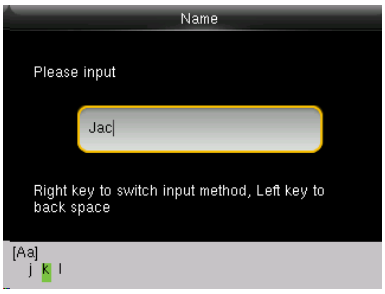
Press numeric **2** once on device keyboard to get **a** automatically



Ja

Right key to switch input method, Left key to back space

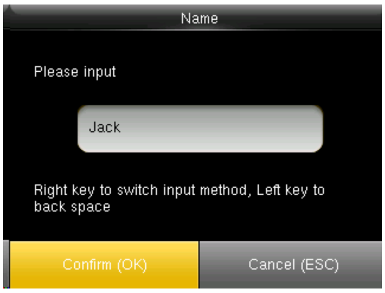
Press numeric **2** three times on device keyboard to get **c** automatically



Jac

Right key to switch input method, Left key to back space

Press numeric **5** twice on device keyboard to get **k** automatically

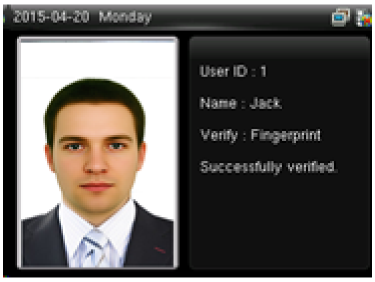


Jack

Right key to switch input method, Left key to back space

After inputting, press [**ESC]** to exit the input method. And press [**M/OK]** to save.

17.2 Photo ID Function★



2015-04-20 Monday

User ID : 1

Name : Jack

Verify : Fingerprint

Successfully verified.

Remark: Some models support Photo ID function.

When the Photo ID function is enabled, and the user passes verification, not only the information of user ID and name will be displayed, but also the photo registered by the user or saved in the USB disk will be shown.

[Operating Procedure]

If the user photo taken by the device is used, the photo will be displayed right after user verification.

If the user photo in a USB disk is used, the operating procedure is as below:

(1) Create a file named as "**photo**" in the USB disk, and save the user photo in the file.

(2) The photo format must be JPG, and the file must be named as the user ID. For example: the photo corresponding to the user with the ID of 154 should be named as 154.jpg.

(3) Insert the USB disk into the USB port of the device, and enter **USB Manage**r > **Upload** > **User Portrait** to upload users' photos. The photo will then be shown after user verification.

Notes:

(1) The photo name must be within 14 digits.

(2) The photo size should be less than 15k.

(3) The newly uploaded photo will replace the original photo of the user.

(4) When downloading user photo, enter **USB Manager** > **Download** > **User Portrait**, a file named as "photo" will be created in the USB disk automatically, in which all downloaded user photos will be saved.

17.3 Wiegand Introduction

Wiegand26 Protocol is a standard protocol on access control developed by the Access Control Standard Subcommittee affiliated to the Security Industry Association (SIA). It is a protocol used for contactless IC card reader port and output.

The protocol defines the port between the card reader and controller which are widely used in access control, security and other related industries. This has standardized the work of card reader designers and controller manufacturers. The access control devices produced by our company also apply this protocol.

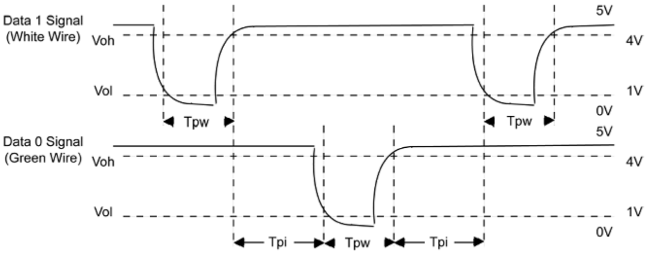
Digital Signal

Figure 1 shows the sequence diagram of the card reader sending digital signal in bits to the access controller. The Wiegand in this diagram follows the SIA access control standard protocol, which targets at 26-bit Wiegand card reader (with a pulse time within 20us to 100us and pulse hopping time within 200us and 20ms). Data1 and Data0 signals are high level (greater than Voh) until the card reader is ready to send a data stream. The card reader send out asynchronous low level pulse (less than vol), transmitting data stream via Data1 or Data0 wire to access control box (as the sawtooth wave in figure 1). Data1 and Data0 pulses do not overlap or synchronize. Figure 1 shows the maximum and minimum pulse width (successive pulses) and pulse hopping time (the time between two pulses) allowed by the F series fingerprint access control terminals.

Table1: Pulse Time

Sign	Definition	Card Reader Typical Value
Tpw	Pulse Width	100 μs
Tpi	Pulse Interval	1 ms

Figure1: Sequence Diagram



17.4 Image Uploading Rule

1. **User photo★:** It is required to create a file named as "**photo**" under the USB disk file, and put user photos into the file. The capacity is 3000 images at most, with each of them not exceeding 15k. The

image name is x.jpg (x is the actual user ID, max. 14 digits). The photo format must be JPG.

2. **Advertising image:** It is required to create a file named as "**advertise**" under the USB disk file, and put advertising images into the file. The capacity is 20 images with each of them not exceeding 30k. Image name and format are not restricted.
3. **Wallpaper:** It is required to create a file named as "**wallpaper**" under the USB disk file, and put wallpapers into the file. The capacity is 20 images with each of them not exceeding 30k. Image name and format are not restricted.

17.5 Statement on Human Rights and Privacy

Dear Customers:

Thank you for choosing the hybrid biometric products designed and manufactured by us. As a world-renowned provider of biometric technologies and services, we pay much attention to the compliance with the laws related to human rights and privacy in every country while constantly performing research and development.

We hereby make the following statements:

1. All of our fingerprint recognition devices for civil use only collect the characteristic points of fingerprints instead of the fingerprint images, and therefore no privacy issues are involved.
2. The characteristic points of fingerprints collected by our products cannot be used to restore the original fingerprint images, and therefore no privacy issues are involved.
3. We, as the equipment provider, shall not be held legally accountable, directly or indirectly, for any consequences arising due to the use of our products.
4. For any dispute involving the human rights or privacy when using our products, please contact your employer directly.

Our fingerprint products for police use, or development tools support the collection of the original fingerprint images. As for whether such a type of fingerprint collection constitutes an infringement of your privacy, please contact the government or the final equipment provider. We, as the original equipment manufacturer, shall not be held legally accountable for any infringement arising thereof.

The law of the People’s Republic of China has the following regulations regarding the personal freedom:

1. Unlawful arrest, detention or search of citizens of the People's Republic of China is prohibited; infringement of individual privacy is prohibited.
2. The personal dignity of citizens of the People's Republic of China is inviolable.
3. The home of citizens of the People's Republic of China is inviolable.
4. The freedom and privacy of correspondence of citizens of the People's Republic of China are protected by law.

At last we stress once again that biometrics, as an advanced recognition technology, will be applied in a lot of sectors including e-commerce, banking, insurance and legal affairs. Every year people around the globe suffer from great loss due to the insecurity of passwords. The biometric products actually provide adequate protection for your identity under a high security environment.

17.6 Environment-Friendly Use Description

10

- The Environment Friendly Use Period (EFUP) marked on this product refers to the safety period of time in which the product is used under the conditions specified in the product instructions without leakage of noxious and harmful substances.
- The EFUP of this product does not cover the consumable parts that need to be replaced on a regular basis such as batteries and so on. The EFUP of batteries is 5 years.

Names and Concentration of Toxic and Hazardous Substances or Elements

Parts Name	**Toxic and Hazardous Substances or Elements**					
	Pb	**Hg**	**Cd**	**Cr6+**	**PBB**	**PBDE**
Chip resistor	×	○	○	○	○	○
Chip capacitor	×	○	○	○	○	○
Chip inductor	×	○	○	○	○	○
Chip diode	×	○	○	○	○	○
ESD components	×	○	○	○	○	○
Buzzer	×	○	○	○	○	○
Adapter	×	○	○	○	○	○
Screws	○	○	○	×	○	○

○: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.

×: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials for this part is above the limit requirement in SJ/T11363-2006.

Note: 80% of the parts in this product are manufactured with non-hazardous environment-friendly materials. The hazardous substances or elements contained cannot be replaced with environment-friendly materials at present due to technical or economical constraints.

Green Label

ZK Building, Wuhe Road, Gangtou, Bantian, Buji Town,
Longgang District, Shenzhen China 518129

Tel: +86 755-89602345

Fax: +86 755-89602394

www.zkteco.com