

## Table of Content

I Using Environment .....	2
II Installation Reminder.....	2
III Button Explanation.....	4
IV Right way of pressing fingerprint.....	4
V Menu Operation.....	5
VI User Enrollment.....	6
VII Enrollment of Fingerprint.....	8
VIII Enrollment of password.....	10
VIII Enrollment of Card.....	11
X Fingerprint + Card.....	12
XI Fingerprint & Password.....	13
XII Enrollment of Administrator.....	14
XIII Enrollment of Super User.....	15
XIV U Disk Upload.....	15
XV Delete User.....	16
XVI Download Data.....	17
XVII Access Control.....	20
XVIII Advanced Setting.....	31
XVIII Record Setting.....	32
XX Time Setting.....	33
XXI Time Bell.....	34
XXII Info Inquiry.....	35
XXIII Record Detail.....	35
XXIV System Info.....	36
XXV Inquiry of in out record.....	36

## **I Using Environment**

1. It is better to avoid putting the fingerprint or card machine under shining of light. Shining of light will degrade seriously the performance of the fingerprint sensor. It will cause the failure of verification by fingerprint sensor.

2. The working temperature of the fingerprint/card machine should be in the range of 0°C–60°C. Try to avoid using it in outdoor for a long time or the normal operation will be affected. If it is really necessary to use it in outdoor, please try to use it in shaded area with radiating equipment. In winter, we can add some warm facilities in company with it.

## **II Installation Reminder**

1. Before installation, please make sure the power of the fingerprint/card device is off. Installing with power on or cable connection with power on may damage the machine.

2. In season of autumn or winter, human being has static electricity. Before installation, please connect the wire of ground before others. This is to prevent damage of machine by instant static electricity over voltage.

3. Please do not expose the socket. They must have cable plug inserted. Besides, please do not expose the contact of

## Fingerprint/Card Access Control Machine

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electric wire to the air to prevent short circuit between 2 wires. To help the identification of the electric wire, please use different color for different pin. For example, we always use green color wire for grounding.

4. Before connecting the power cable, please do all the connection of other cables first. At last, connecting the power cable. If some problem has been discovered, disconnect the power immediately.

5. If the distance between the power socket and the fingerprint/card machine is very far away, please do not use network cable for electric wire extension. The standard electric wire should be used instead. Be reminded that if the distance is far way, the voltage of the power adaptor will be degraded continuously.

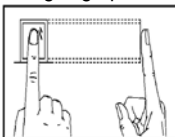
6. If user connects the cable wrongly causing the damage of the machine, the warranty will be voided.

7. It is better to install the fingerprint/card machine at around 1.4 to 1.5 meters high.

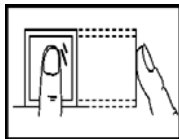
## IV Right way of pressing fingerprint

The following is the right way of doing fingerprint enrollment and verification. Fingerprint should be parallel to the fingerprint sensor and the heart of fingerprint should be pressing to the centre of the fingerprint sensor.

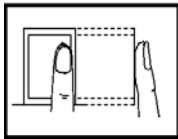
The right way of pressing fingerprint:



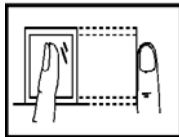
Correct



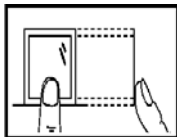
not parallel



Not in center



Tilt



Too low in position

## V Menu Operation

When the fingerprint/card machine is in idle mode, pressing the button "menu" will go into the main menu.(models without "menu"/ "M" can press function key) To select a menu item, press the item numeric key and it will be invoked.

The main menu consists of

1. User Enrollment
2. Delete User
3. Download Data
4. Access Control
5. Advance Setting
6. Info Inquiry

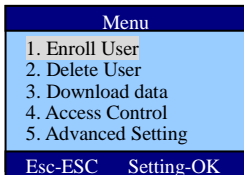
Each menu item may consists of lower level sub-menu.

1. User Enrollment: to enroll a fingerprint or password or card.
2. Delete User: delete resigned user information(fingerprint or password or card)
3. Download Data : to set the communication argument or using U disk to download in out records.
4. Access Control : to set the time zone, user vs time zone, unlock group, alarm and so on.
5. Advanced Setting: to set the machine number, time of the machine, time bell and so on

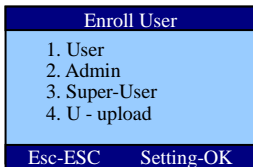
6. Info Inquiry: to view the enrollment capacity, record information and product parameter and so on.

## VI User Enrollment

In the machine idle state, press "menu" to go into the main menu. (Models without "menu"/"M" can press function key to select menu item) If there is at least one administrator in the fingerprint device, press menu button will require the administrator fingerprint/card/password to access the menu.

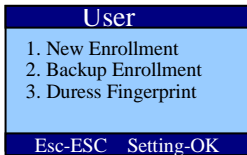


In "user enrollment", it includes "user", "admin", "super user" and "U disk upload".



In the menu item of "user", you can see 3 sub-items. They are

1. New enrollment
2. Backup enrollment
3. Duress fingerprint



### 【New Enrollment】

an user enroll the fingerprint the first time (or password or card)

### 【Backup Enrollment】

an user enroll the second fingerprint (password or card)

### 【Duress Fingerprint】

an user can only have 1 duress fingerprint

## VII Enrollment of Fingerprint

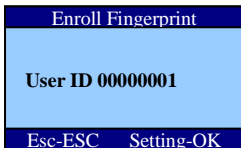
### ① New Enrollment

Select "new enrollment" and then "fingerprint"

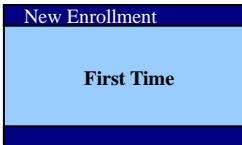
Input the new user ID and press "ok" button to confirm. The default value is the next unused user ID.

## Fingerprint/Card Access Control Machine

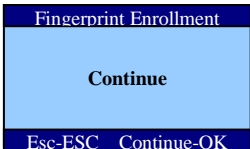
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In the fingerprint enrollment screen, press fingerprint 2 times. If both image are near, the enrollment succeed.



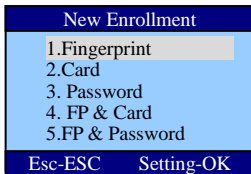
If the enrollment of fingerprint succeed, the machine will ask whether to continue to enroll another user.



Click "ok" button to continue another enrollment. Or, click "esc"



button to cause the menu to go back to the enrollment method.



### ② Backup Enrollment

A user can enroll the other fingerprint for backup purpose. In case the main fingerprint has problem in verification, it can change to use another fingerprint.

The operation of backup enrollment is similar to that of the new enrollment. Backup enrollment only could be done for existing user.

### ③ Enrollment of duress fingerprint (some fingerprint/card machine has this function)

To enroll duress fingerprint, select "user" -> "duress fingerprint". If the duress fingerprint function is on, the fingerprint/card machine could trigger the alarm when duress fingerprint is used in verification.

## VIII Enrollment of password (Models with “Menu”/ “M”)

In the menu of "enrollment", select "password"

Password Enrollment
User ID 00000001
Esc-ESC

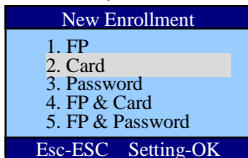
Input the user ID of the new user and click "ok" button to confirm.

Password Enrollment
User ID 00000001
Input Password*****
Input Password*****
Esc-ESC    Setting-OK

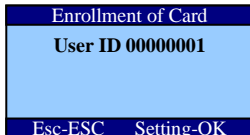
Input a new password of maximum 8 characters. After input, do the input again for verification. If both values are the same, the enrollment succeed.

## VIII Enrollment of Card

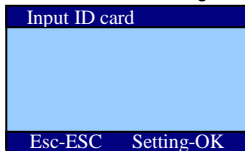
In the menu of "enrollment", select "card".



Input the "user ID" of the new user and click "ok" button to confirm.

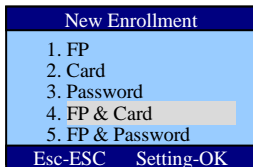


Swipe the new card in the card sensing area.

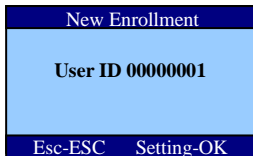


## X Fingerprint + Card

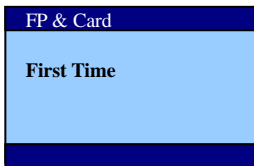
In the menu of “New Enrollment”, select “Fingerprint & Card”.



Input the user ID of the enrolled employee and then click “ok”.



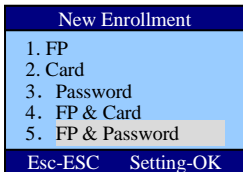
Swipe a card in the card sensing area. In the fingerprint enrollment screen, use a finger to press 2 times. If both pressing are ok, the enrollment is succeeded.



Note: After the enrollment of fingerprint & card, you can try the verification. Either pressing fingerprint or swipe your card and then press fingerprint.

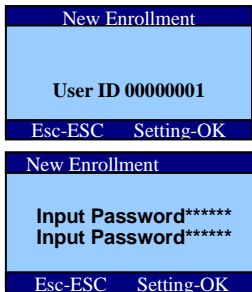
### XI Fingerprint & Password (Models with "Menu"/ "M")

In the "New Enrollment", select "Fingerprint and Password".



Input a user ID and click "ok". Press a finger 2 times. If both pressing are ok, input the same password 2 times. Now the

enrollment is succeeded.



Note: In the verification, press fingerprint and you will be prompted to input the password. If password is correct, the verification is ok.

## XII Enrollment of Administrator

Enrollment of administrator is to prevent normal user from changing the fingerprint machine parameter. The method is the same as that of user. The enrolled administrator has no difference in normal operation. The operation of administrator will be logged in the fingerprint machine.

### **XIII Enrollment of Super User**

Super user is equal to lower level administrator. It only has partial administration rights. The enrollment of it is the same as normal user.

Difference : Super user only has rights of user enrollment, “download data” (u disk download in out records, modification of IP and so on).

To enroll super user, we need to have at least one administrator. In the normal operation, super user has no difference. The operation of super user in the fingerprint/card machine has been logged in the machine.

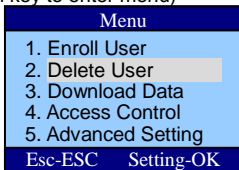
### **XIV U Disk Upload**

We can use U disk to upload enrollment information. The enrollment information is downloaded from one machine. Please be noted that the device number of the enrollment information must be the same as that of the target machine.

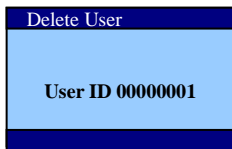
For example, the downloaded enrollment is in file `afp_001.dat`. 001 is the machine id. The target machine must also have the same machine id of 001.

## XV Delete User

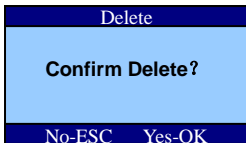
In the main menu, select “delete user”. (Models without “Menu”/ “M” press function key to enter menu)



Input the user ID for deletion.

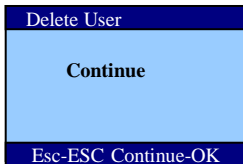


The machine will ask for confirmation.



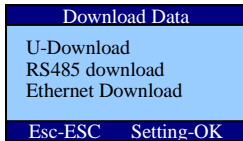


Press "ok" to confirm deletion or "esc" to abort the action.



## XVI Download Data

Select menu -> download data and you will see the following screen.



### U Disk Download

This item is to download in out records and enrollment information to U disk.

### RS485 Download

This is to set the RS485 communication speed in bits per second.

### TCP/IP Download

This is to set the parameter for TCP/IP connection. It has IP

## Fingerprint/Card Access Control Machine

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address, subnet mask, and gateway. Set it according to the actual requirement.

U Disk Download (Models without “Menu”/ “M” press function key to enter menu)

Select “U Disk Management” in the main menu.



Download enrollment information

- A) Insert U disk into the U disk socket of the fingerprint machine.
- B) Select menu -> U disk download. (Models without “Menu”/ “M” press function key to enter menu, Select “U Disk Management)
- C) Select “download enrollment” to download all enrolment information(fingerprint info,name and so on) into the U disk as a file of `afp_001.dat`.
- D) Take out the U disk and insert it into the computer. In the attendance software, select “get u disk enrollment” to get the enrollment information into software.

Note: The above operation needs to be done again after new user enrolled into the fingerprint/card machine.

## Fingerprint/Card Access Control Machine

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### ② Download data

- A) Insert U disk into the U disk socket of the fingerprint machine.
- B) Select menu -> U disk download.
- C) Select "download data" to download in out record into the U disk as a text file. The file name will look like "glg\_001.txt".
  
- D) Take out the U disk and insert it into the computer. In the attendance software, select "get u disk enrollment" to get the enrollment information into software.

### 2) USB Connection

This is for USB cable communication between computer and the fingerprint machine.

### 3) RS485 Connection

By using RS485 to 232 connector, the communication distance could be extended into 800 meters or more.

It is suggested to use baud rate of 9600 bps for rs485 communication which will give a stable data transfer.

### 4) Ethernet Communication

the default IP address of ethernet communication is

## Fingerprint/Card Access Control Machine

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192.168.1.224. This is the legal IP address in a lot of LAN. Please set the corresponding subnet mask and gateway.

Note: If fingerprint/card machine is connected with computer directly, we need to use ethernet 10/100 base-t cross over cable.

## XVII Access Control

### 1 Definition of Time zone

#### 1.1 Daily Time set

We can set the daily time set according to the actual requirement. For example, we may set only 6:00 to 8:00 can open the door or 17:00 to 19:00 can open the door. The following table is an example of opening door time zone per day.

1	06:00	08:00
2	17:00	19:00
3	00:00	00:00
4	00:00	00:00
5	00:00	00:00

The following example shows that user can open door all the time per day.

1	00:00	23:59
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## Fingerprint/Card Access Control Machine

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2	00:00	00:00
3	00:00	00:00
4	00:00	00:00
5	00:00	00:00

### 1.2 Weekly Time set

According to the user requirement, we can set each day of week to use different time set. For example, Monday to Friday will use time set 1. And, Saturday to Sunday will use time set 2 (can open door all the time).

MON	1
TUE	1
WED	1
THU	1
FRI	1
SAT	2
SUN	2

#### Note:

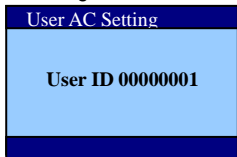
In the fingerprint/card machine, weekly time set 0 represent opening door all the time. Other weely time sets has default of not allowing door opened. the default for daily time set is allowing door opened all the time.

## Fingerprint/Card Access Control Machine

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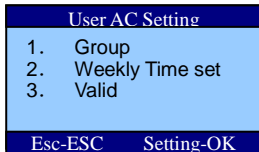
### 2 User Access Control

Input the user ID for setting.



The fingerprint/card device can divide users into 10 user groups. Weekly time set for setting the using of which daily time set per day of week.

For example, a user with user ID of 00000001. It's group is 1 and the daily time set is 1.



If the user do verification, the fingerprint/card machine will determine the group of the user and see whether it has rights of opening door. If the verification time is within the allowed time zone of the group, the door will be opened. Otherwise, the door

will not be opened.

### 3 Definition of Unlock Group

Group1	0
Group 2	0
Group 3	0
Group 4	0
Group 5	0

It is to set the unlock group of users. For example, if we set a group of 12, it means user of group 1 needs to be present with user of group 2 for opening door.

#### Example 1, Single unlock group

For example, we have group one of only time set 1.

Group1	1
Group2	0
...	
Group5	0

In this case, any user of group 1 can open door solely.

#### Example 2, An unlock group with multi-user groups.

Group1	111
Group2	No
...	
Group10	No

In the above setting, we can see the first unlock group has 111. It means any 3 members of user group 1 need to pass the verification for the door to be opened within the time zone.

### **Example 3: Unlock group with single user from different users.**

Group1	12
Group2	No
...	
Group10	No

In the above setting, unlock group 1 has 12. It means a member of user group 1 and 2 must pass verification before door can be opened. Any one of them could not open door solely.

Note : If the unlock group definition default does not have any setting, all users could not open door. In the fingerprint/card machine, the default setting of unlock group 1 is user group 1. So, any users of user group 1 can open door.

## **4 Lock opening delay**

It is the time between the lock relay effective and the state of resume normal. The range of value is 1-255 in second. The default is 5 seconds.

## **5 Door sensor setting**



### A. Type of door sensor

The default of door sensor will be no (no door sensor alert)

### B. Door sensor delay

When the lock control relay resume to normal state, the time become effective. How long for the door to keep opened for triggering the alarm. The range of value is 1-255 in minutes. For example, when the door sensor type is set to NC(normal close), door sensor delay is set to 1 second. In normal state, the door sensor is in closed state (the pair of sensor is closed together). When the door is opened, the pair of door sensor are separated. If the separation (door opened) last more than 1 minute, the machine will trigger the alarm.

Note: Alarm by illegal door opening. When someone open the door without passing the verification, it is treated as illegal door opening. It will then trigger the alarm.

## 6 Duress Alarm

It is to set one of the fingerprint for triggering the alarm during verification. This function is used when someone hijack the user to open the door. The action could be door opening + alarm, alarm only or door opening only.

The duress alarm is on only when the duress action is set to "yes".

## Fingerprint/Card Access Control Machine

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Duress Alarm	
Duress Alarm	No
1. Open door +Alarm	
2. Alarm	
3. Open door	
Esc-ESC	Set-OK

Setting	Description
No	Turn off the duress fingerprint alarm
Open door	When duress action happens, the fingerprint/card machine will send a door opening signal to the electric lock controller. The door will be opened then.
Alarm	When duress action happens, the fingerprint/card machine will send a hidden alarm signal to the alarm. The alarm will call the police. Electric lock controller. The door will be opened then.
Open door + Alarm	When duress happens, machine will send alarm signal to electric lock controller and alarm device. The door will be opened simultaneously.

Factory setting	No
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## 7 Alarm Input

This function is used for connecting alarm sensor to the fingerprint/card machine for triggering the alarm by its internal relay.

AC Setting	
7. Input Alarm	No
8. Anti-passback	No
9. Double Door Exc Lock	No
10. Verify Count	No
11. Fail Alarm	No
Esc-ESC	Setting-OK

Setting	Description
No	Even alarm action happens, the fingerprint/card machine does not send alarm signal
1	When alarm action happens, the fingerprint/card machine send prominent alarm signal to alarm device and they will be fired.

## Fingerprint/Card Access Control Machine

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2	When alarm action happens, the fingerprint/card machine send hidden alarm signal to alarm device and they will be fired.
Factory setting	No

### 8 Anti-passback

When anti-passback is set to 1 or 2, the function will be on as follows:

AC setting	
7. Input Alarm	No
8. Anti-passback	No
9. Db Door excl lock	No
10. Verify Count	No
11. Fail Alarm	No
Esc-ESC	Setting-OK

Setting	Description
No	Anti-passback is off
Main controller inside	External reader as "in" fingerprint/card machine as "out"

## Fingerprint/Card Access Control Machine

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Main controller outside	External reader as "out" fingerprint/card machine as "in"
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When anti-passback is turned on in the fingerprint/card machine, the transaction record will have the mark of in/out according to the setting in the anti-passback.

After the anti-passback is on, the verification must be in pair between main controller and reader.

### 9 Exclusive lock of double doors

This is to turn on the function of double door exclusive locking.

### 10 Verify Count

This is to set the number of different users verification for opening door. For example, if it is set to 2, 2 different users' succeeded verification can only open the door.

### 11 Alarm for failure verification

This is to set the number of times of failure in verification for triggering the alarm. For example, it is set to 5. It means the alarm will be fired after 5 times failure of verification by fingerprint or password or card.

## 12 Wiegand Format

AC Setting	
8. Anti-passback	No
9. Db Door excl lock	No
10. Verify count	No
11. Fail Alarm	No
12. Wiegand format	26

Esc-ESC      Setting-OK

This is to set the format of wiegand (number of bits). The default is 26 bits. You can set it to 34 **bits**.

## XVIII Advanced Setting

Advanced setting has 4 modules. They are terminal setting, record setting, time setting and time bell.

Advanced setting	
1. Terminal setting	
2. Record setting	
3. Time setting	
4. Time bell	

Esc-ESC      Setting-OK

In the main menu, select 5. Advanced Setting -> 1. Terminal

## Fingerprint/Card Access Control Machine

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setting

Terminal setting

It is to set the fingerprint/card machine internal parameters.

<b>Setting</b>	<b>Description</b>	<b>Range</b>	<b>Default</b>
Device ID	the unique identifier of the fingerprint/card machine	1-255	1
Admin No.	number of admin that can be present in the machine	1-10	5
Language	the displayed language in the machine	Multi	English
Voice	to set the loudness of the voice of the machine	1-10	6
Screen saver	the idle time for displaying the screen saver	No/1-255	No
Verification	verification method	Multi	F/P/C
Upload screen	modify the screen of the machine	n/a	No
Restore factory default	restore machine parameter to factory default	n/a	n/a

## Fingerprint/Card Access Control Machine

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Clear admin	downgrade all machine admin to normal user	n/a	n/a
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Verification Method : The fingerprint/card machine allow different verification method for attendance. For example, we set the verification method to card+fp. Then user need to swipe card and then punch fingerprint for passing the verification.

Fp/card/pin	any method (fingerprint or card or password) to pass
Card + fp	swipe card and then punch fingerprint
Fp + pin	punch fingerprint and then input password
Card +fp +pin	swipe a card, punch fingerprint and then input password

## XVIII Record Setting

### 7.2.1 Management record alert

The fingerprint/card machine will record all the operation by administrator(e.g. enrolling a new fingerprint, delete a fingerprint). The maximum record to store is 1000 pieces. When the number of stored record will reach 1000 after a threshold, the machine will alert "exceed management record" in the screen. Management Threshold is the number of records remaining for reaching the maximum 1000 pieces.

For example, the management threshold record is set to 100.



When the storage of management record reaches 900, the machine will display the alert "exceed management records".

### 7.2.2 In out record alert

The operation of this is similar to that of the management record. The only difference is that it is for in out record, not management record. For example, the in out threshold is set to 1500. When the in out records reach 98501, the machine will display the alert of "exceed in out records". When the in/out storage record reaches 100000, you will both see the alert and not allow to do verification ag

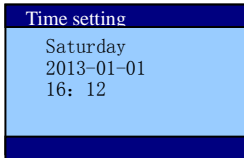
### 7.2.3 Reverify Time

It is to check whether user will do verification continuously within a period. It is suggested to set this value to 5 minutes. If a user do verification other than the first time within the setting period, the fingerprint/card machine will voice out (reverify). The record will not be stored in the machine.

## **XX Time Setting**

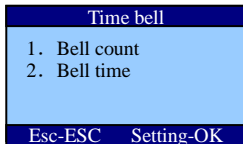
In the adanced menu, select "time setting" to connect the clock of the fingerprint/card machine. When the machine is released from factory, the time of the machine is already set to Beijing area. If it

is not correct to the user region time, you can use this item to correct it.



## XXI Time Bell

In "advanced setting", select "time bell".



Bell Count : Number of times for the bell to ring.

Bell Time : This is to set the time for the bell to ring. The maximum allowed time is 8.

## XXII Info Inquiry

This is to inquire the storage information of the fingerprint/card machine. It includes "storage information", "record detail", "system information". Storage Info is to view the enrolled information. Use up or down arrow to move the highlight bar into different items for pinpointing.

Info Inquiry	
1. User Enroll	0
2. Admin Enroll	0
3. FP Enroll	0
4. Password Enroll	0
5. ID Card Enroll	0
Esc-ESC	Setting-OK

## XXIII Record Detail

This is to view the number of records stored or to delete all records.

Record Detail	
1. Attendance Record	100
2. Management Record	1
3. Attendance Inquiry	
4. Delete All Records	
Esc-ESC	Setting-OK

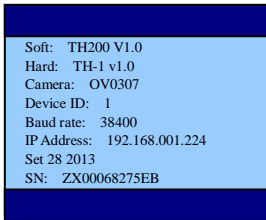
## Fingerprint/Card Access Control Machine

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User can either use the “up” or “down” arrow to move the current menu item or use numeric key to go into exactly the menu item for inquiry of in out record or management record.

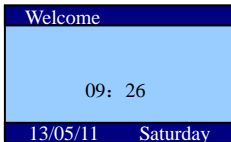
### XXIV System Info

It is to show the machine information.



### XXV Inquiry of in out record

1. Idle screen of fingerprint/card machine

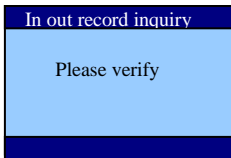


## Fingerprint/Card Access Control Machine

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(models without “menu”/ “M” button) press “ok” again after verification, to check the user in & out records in the current month.

2. Press “ok” button to go into the screen of “In out record inquiry”.  
(Models with “menu”/ “M” button)



3. After user do the verification, the user in out records in the current month will be displayed.

00001 2013-05 1/1 ▼		
1	12: 10	
2	08: 23	16: 30
3	09: 10	

In the above screen, you can see that user id (00001) has in out records in 3 days. In 01 May 2013, it has 1 in record. In 02 May 2013, it has 2 in out records. In 03 May

## Fingerprint/Card Access Control Machine

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2013, it again has 1 in record. In the upper right corner, you can see 1/1. It means the current page is 1 while the total pages is also 1.

Use “▲”、“▼” to change the current page.

\*\*\* The End \*\*\*