H3 User Manual

Version: 1.2

Date: June, 2011

Contents

1. Before use

Read through this manual before operating this machine.

Must know

Firstly installing fingerprint machine well, then the fingerprint enrollment and identification will be taken.

Installation   Enrollment   Identification
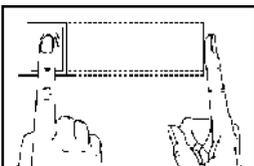

Enrollment   Installation   Identification

Enroll a finger

Use the index finger, middle finger or ring finger, but not the thumb and little finger (because they are usually clumsy when pushing on the sensor window). How to place the finger:
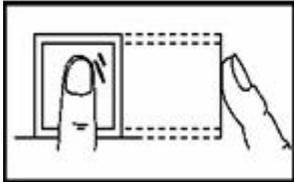
1) The correct way:

Place a finger flatware on the sensor surface
Place it to the center of the sensor surface

2) The wrong ways:

Vertical   Offset
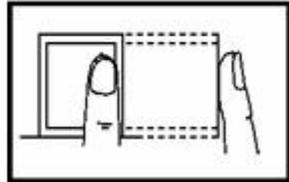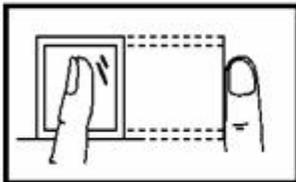
Inclined   Lower
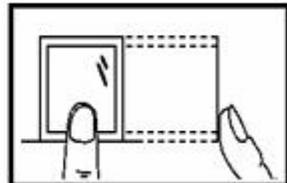
Components

Component name	USB cable	Switch power	Universal Adaptor plug	Backup battery
Quantity	1	1	1	1

About Use

The recommended steps:

Step 1: install the machine completely and power on.

Step 2: enroll the administrator and users. That is to enroll fingerprints, passwords, ID or Mifare cards.

Step 3: user identification. Confirm whether the enrolled fingerprints,

passwords, ID or Mifare cards are available.

Step 4: user attendance

Step 5: connect with PC and use the corresponding attendance software to download data, assign departments, and arrange shifts etc.

Step 6: set attendance rules, query attendances and print reports in attendance software.

Introduction

The product is developed for practical function and easy use. It uses the keypad to realize functions. Since its convenient operations, fashionable performance, desktop-seated design, lightweight and flexibility, it is really a good choice for user attendance.

Panel：

LED   LCD   Fingerprint Sensor

Keypad   Speaker
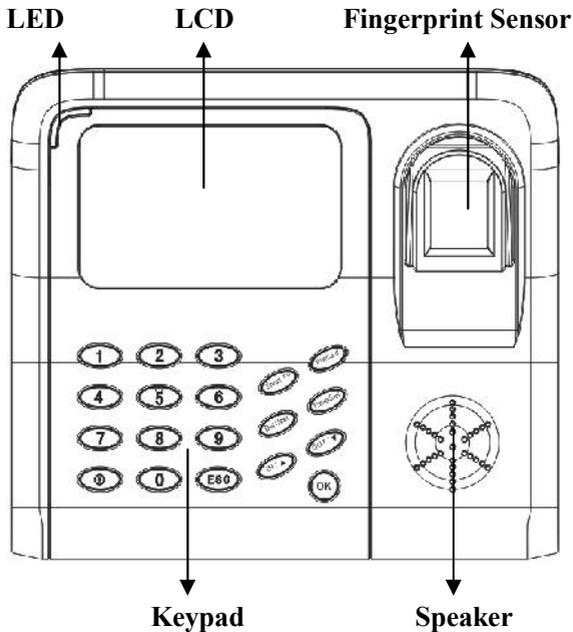
LED indicator: it displays green during normal work, and it displays red when the authentication is failed.

Keypad: It includes the digit keys, power key, ESC key, OK key, and six function keys of Enroll FP, PW/Card, Del User, Time Set, IN, OUT. As below shown:
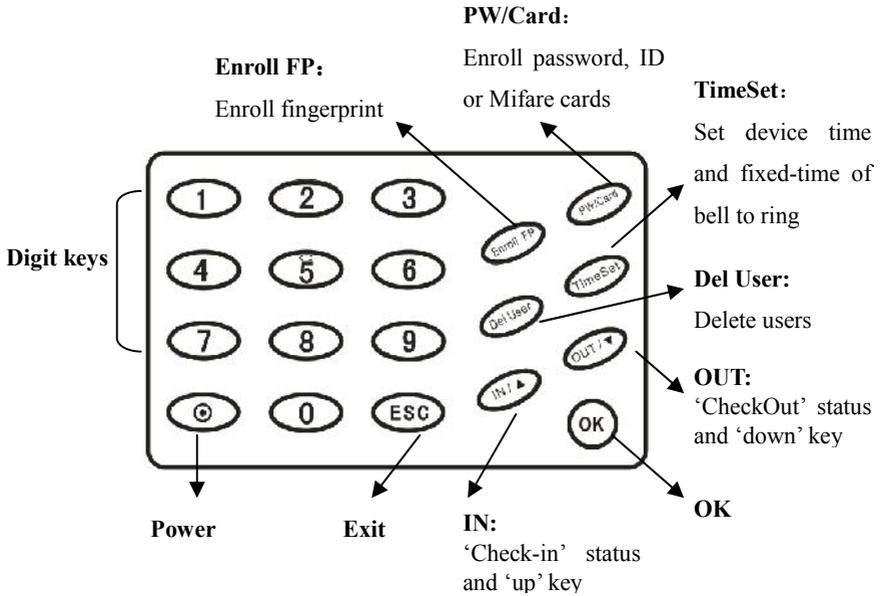
PW/Card：

Enroll password, ID or Mifare cards

Enroll FP：

Enroll fingerprint

TimeSet：

Set device time and fixed-time of bell to ring

Digit keys

Del User:

Delete users

OUT:

'CheckOut' status and 'down' key

OK

Power   **Exit**   **IN:**

'Check-in' status and 'up' key

Original window

After power on, the original window is as below shown:

```
Check-In        ⊏▮▮▮
        10：12
09-08-11      TUE
```

Or 'Check-Out'
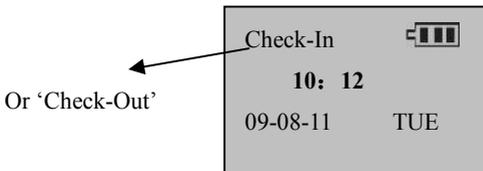
2. Enrollment and Identification

For the first time to use the device, no administrator at this moment, press the function key to enroll the administrator and users. Only one administrator can be enrolled in the system, the number is 8888. Firstly enrolling the administrator is recommended. If the administrator is enrolled in the device, only users can be enrolled.

If there is no administrator, users can be enrolled by anyone. If there is an enrolled administrator, users can't be enrolled until passing the administration identification.

Three enrollment modes of fingerprint, password, Mifare card are applied to three people groups with different fingerprint quality individually. Fingerprint enrollment is applied to the people group with good fingerprint quality, and most people are in this group. Fingerprint enrollment as well as password enrollment is applied to the people group who can enroll easily but authenticate difficultly, and a small part of people are in this group. Password enrollment is applied to the people group who can't enroll fingerprints successfully, and about 1% of people are in this group, maybe a little change in the actual use.

Before enrolling users, if there is an enrolled administrator, you must authenticate the administrator status, Firstly press 'Enroll' key, then the device displays 'Administrator affirm', at last press the fingerprint or password of administrator to authenticate.

Note: if no administrator is enrolled, you don't need the administrator authentication.

2.1 Fingerprint Enrollment

1) In the original window, press 'Enroll FP' key to pop up the window as follows:

```
Enroll FP
      New Enroll?

ESC                    OK
```
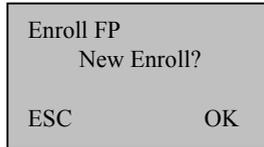
2）Press OK key to continue to display the window as follows:
Note: The ID number is 5 bits. If your ID number is less than 5 bits, system will add 0 at the front of the digit automatically. For example: the ID number is 1, the machine will display it as 00001.

```
        New Enroll

    User ID：  00001
ESC                    OK
```
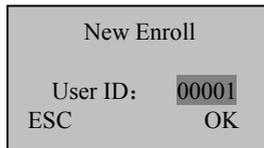
3) In 'User ID' column, input the number you want to enroll (the number is from 1-65534) and press 'OK' key to confirm, then the screen will inform 'Place finger …' as follows:
Note: If the User ID is 8888, you will enroll the only administrator.

```
        New Enroll
         00001-0
      Place Finger······
         ESC/Exit
```
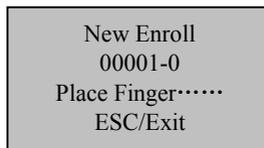
4) After pressing the fingerprint for three times, system will enter into the following window automatically. The fingerprint is enrolled successfully. In this window, press 'OK' key to enroll new users, or

press 'ESC' key to enroll backup fingerprints of just enrolled user.

```
New Enroll
    00001-0

ESC       OK (Save)
```
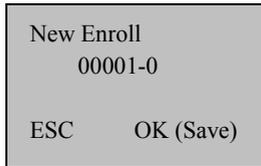
5) In step 4), if press 'OK' key, you can continue to enroll new users by referring to step 1)-4) in the windows as follows:

```
New Enroll
      Continue?

ESC            OK
```
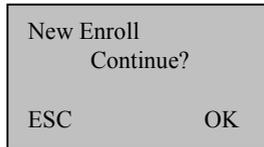
6) In step 4) 5), if press 'ESC' key, you will start to enroll the backup fingerprints by referring to step 1)-4) in the window as follows. You can enroll nine backup fingerprints of the same user at most.

```
Backup Enroll
      Continue?
   User ID 00001
ESC            OK
```
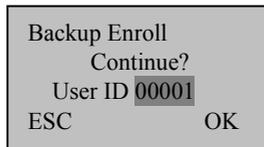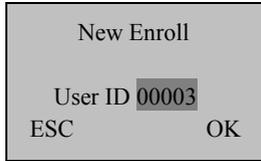
7) During the enrollment, you can press 'ESC' key one time or continually to exit and return to the original window.
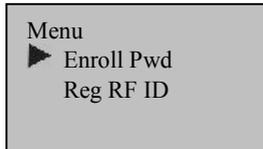
2.2 Password Enrollment

1) Press 'PW/Card' key to enter into the menu. There are three situations here. (No card, ID card, Mifare card).

   a. No card: enter into the enrollment window directly.

```
        New Enroll

     User ID 00003
ESC               OK
```

   b. ID card (optional): select Enroll Pwd and press OK key.

```
Menu
  ▶ Enroll Pwd
     Reg RF ID
```

   c. Mifare card (optional): select Enroll Pwd and press OK key.
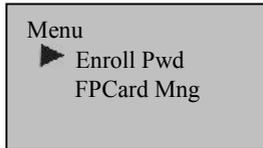
```
Menu
  ▶ Enroll Pwd
     FPCard Mng
```

2) In User ID column, input the number that you want to enroll (the number is from 1-65534), and press 'OK' key to confirm.

```
        New Enroll

     User ID 00003
ESC               OK
```
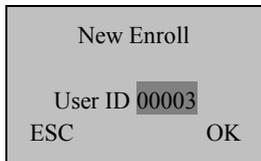
3) In Input Pwd column, input the password (5 bits) and press 'OK' key.
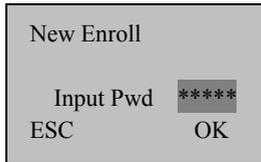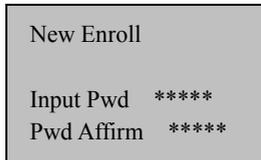
```
New Enroll

   Input Pwd    *****
ESC             OK
```

4) Input the password again, if two passwords are not in the same, system will inform you to input the password again.

```
New Enroll

Input Pwd    *****
Pwd Affirm   *****
```

5) If they are in the same, you will enter into the following window automatically. The password is enrolled successfully. Press 'OK' key to continue enrolling the password of new user, or press 'ESC' key to change the password of just enrolled user.

Note: the letter 'P' in 00003-P indicates the password.
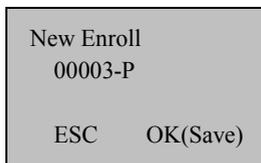
```
New Enroll
   00003-P

   ESC     OK(Save)
```

6) In step 5), if press 'OK' key, you will start to enroll a new user by referring to step 2)-5) in the window as follows:

```
New Enroll
   Continue?

   ESC     OK(Save)
```

7) In step 5), if press 'ESC' key, you will start to change the password by referring to step 2)-5) in the window as follows:
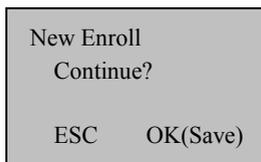
```
Chg Password
   Continue?

ESC      OK(Save)
```
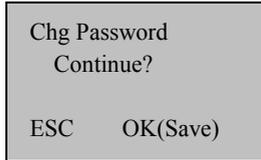
8) During the enrollment, you can press 'ESC' key one time or continually to exit and return to the original window.

2.3 ID card enrollment

1) Press 'PW/Card' to enter into the window as follows:

```
Menu
   Enroll Pwd
▶Reg RF ID
```
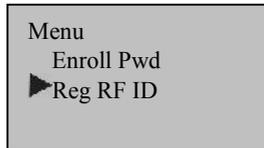
2) Press 'IN▲' or 'OUT▼' to select Reg RF ID and press 'OK' key to enter into the window as follows:

```
Reg RF ID
     New Enroll?

 ESC            OK
```
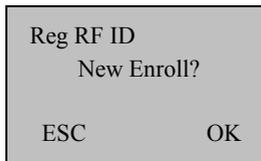
3) Press 'OK' key to continue.
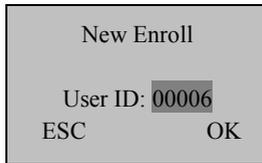
```
        New Enroll

    User ID: 00006
ESC              OK
```

4) In User ID column, input the number that you want to enroll (the number is from 1-65534) and press 'OK' key.
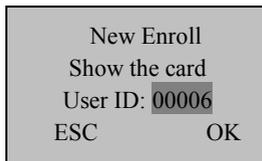
```
        New Enroll
     Show the card
     User ID: 00006
ESC              OK
```

5) Show the card according to the prompt. After reading the card number, the displayed information is as follows:
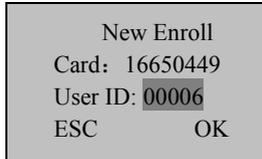
```
        New Enroll
Card：16650449
User ID: 00006
ESC              OK
```

6) Press 'OK' key to enter into the following window. The card is enrolled successfully. In this window, press 'OK' key to continue enrolling new cards, or press 'ESC' key to enter into the change ID card window.

Note: the letter 'C' in 00006-C indicates the ID card.

```
New Enroll
    00006-C


ESC      OK(Save)
```

7) In step 5), if press 'OK' key, you can continue to enroll new cards by referring to step 2)-6) in the window as follows.

```
New Enroll
     Continue?

ESC          OK
```
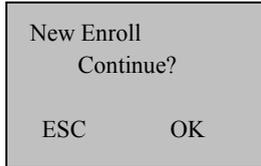
8) In step 5), if press 'ESC' key, you can change the just enrolled card by referring to step 4)-6) in the window as follows.

```
Chge ID Card
     Continue?

ESC          OK
```
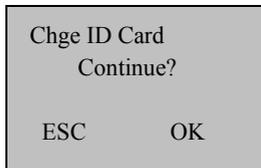
9) During the enrollment, you can press 'ESC' key once or continually to exit and return to the original window.

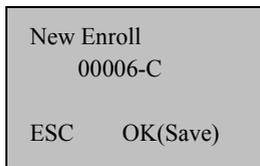**Note:** ID card is the optional function. If the ID card function is wanted, please consult our commercial representatives or pre-sale technicians. If more information is wanted, please refer to <<User Guide of ID card>>.

2.4 Mifare card enrollment

1. In the original window, press 'PW/Card' key to enter into the following window.

```
Menu
   Enroll Pwd
▶ FPCard Mng
```

2. Press 'OUT ▼ ' key to select 'FPCard Mng' and press 'OK' key to enter into the following window. Press 'IN ▲ ' or 'OUT ▼ ' key to move the cursor up or down.

.

```
FPCard Mng        ↓
   Create PINCard
 ►Enroll FPCard
   Create FPCard
```

```
 Reg FPCard
 Unreg FPcard
 Empty FPCard
 Dup FPCard
 Move To FPCard
 Card Only        Y
```

Create PINCard: Create the number card of enrolled user in the fingerprint machine. User can use 'card' to check attendance and doesn't need to press the fingerprint.
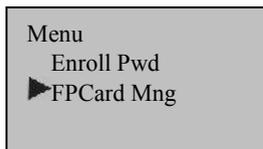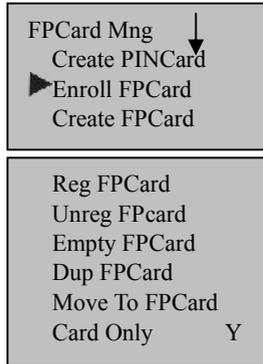
Enroll FPCard: Store the enrolled fingerprint into the card, at this time the fingerprint is saved into the card directly but not saved in the device. Users can use 'Card+Fingerprint' to authenticate the status, that is, firstly show the card and then press the fingerprint.

Create FPCard: Copy the enrolled fingerprint (fingerprint in device) to the card. User can use the fingerprint to authenticate the status and can also use 'Card+Fingerprint' to authenticate the status.

Reg FPCard: Before using the fingerprint card of one fingerprint machine in another fingerprint machine, you must register the fingerprint card in this machine.

Unreg FPCard: In order to forbid the card to be used in some machine, you should un-register the fingerprint card in this machine.

Empty FPCard: Empty all information (fingerprint, number) in the

fingerprint card.

Dup FPCard: Copy the fingerprint in card into fingerprint machine. After copying, you can use the fingerprint to authenticate.

Move To FPCard: Move the fingerprint in fingerprint machine into the fingerprint card, then the fingerprint is only saved in card and not in fingerprint machine any more.

Card only: If select 'Yes' here, you can pass the authentication by only authenticating the number card. If select 'No' here, you still need to authenticate the fingerprint after authenticating the card.

Note: Mifare card is the optional function. If the Mifare card function is wanted, please consult our commercial representatives or pre-sale technicians. If more information is wanted, please refer to <<User Guide of Mifare card>>.

2.5 Delete a user

Delete the enrolled users in system.

In the original window, press 'Del User' key to pop up the following window. In User ID column, input the number that you want to delete, then press 'OK' key to delete it from the device.

```
          Del User

         User ID 00001
       ESC          OK
```
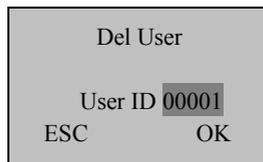
After deleting, the next user ID is displayed in the window. You can press 'OK' key to continue deleting, or press 'ESC' key to exit.

2.6 Authentications of fingerprint, password and card.

Users can save attendance records in machine through fingerprint or password authentications.

➢ **Fingerprint attendance**

(1)   1:1 fingerprint verification (ID + fingerprint)

Verify the current fingerprint pressed on sensor with the corresponding ID number of user inputted by keypad

Step 1: input the user ID that you want to verify in original window.

Step 2: press the fingerprint on the sensor correctly.

Step 3: if device informs 'thanks', it means a successful enrollment. If device informs 'please try again', return to step 1 to re-operate.

(2) 1: N fingerprint identification

Identify the pressed fingerprint with all fingerprints in device.

Step 1: press the fingerprint on the sensor correctly.

Step 2: if device informs 'Thanks', it means a successful identification. If device informs 'please try again', return to step 1 to re-operate.

➢ **Password attendance**

Step 1: input the ID number of user you want to verify in original window and press 'OK' key.

Step 2: input the password.

Step 3: if device informs 'thanks', it means a successful verification. If device informs 'error password', return to step 1 to re-operate.

➢ **Mifare card attendance**

If use 'Create PINCard' to enroll the Mifare card, firstly press 'PW/Card' key to enter into Menu, secondly select FPCard Mng and press 'OK' key, thirdly select the Card Only item. There are two situations here.

(1) If select 'Y' in Card Only item:

In the original window, place the number card over the sensor area (the distance should be short, otherwise system can't sense the card). Display the window as follows:

```
Verify

  User ID 00001
     Verified
```
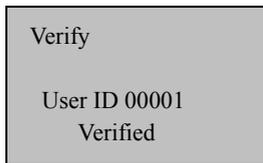
Note: If use the other method to enroll the Mifare card (For example: Enroll fingerprint card) and select 'Y' in card only item, you will find that the authentication is as same as the above.

(2) If select 'N' in Card Only item:

In the original window, place the number card over the sense area (the distance should be short, otherwise system can't sense the card). Display the widow as follows:
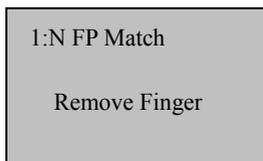
```
FP Verify

  User ID: 00002
  Place finger…
```
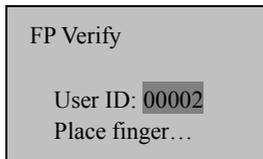
After pressing the fingerprint, display the window as follows:

```
1:N FP Match

  Remove Finger
```

About 0.5 second later, if a successful authentication, the device will issue a voice of 'Thanks' and display the window as follows:

```
Verify

  User ID: 00002
      Verified
```

If a failed authentication, system will inform you to place finger again. If no operation in 0.5 second, system will return to the original window.
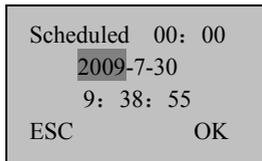
➢ **ID card attendance**

If the ID card is enrolled in the device already, you can pass the authentication by punching the card in the sense area.

3. Other functions

3.1 Time Setting

In the original window, press 'TimeSet' key to enter into the time setting window.

```
Scheduled   00：00
        2009-7-30
         9：38：55
ESC              OK
```

Press up or down key (IN or OUT key) to move the cursor to the different position, and then change the corresponding time.

When the cursor is located in Scheduled, you can set the time for the bell to ring. Then the bell will ring at the fixed-time 00.00. If the cursor in located in Scheduled, you can press 'Del User' to change the time as '--: --', that is to close the fixed-time bell.

After setting, press 'OK' key to save the time and exit from the time setting window with prompt voice 'Thanks'

3.2 **Language Setting**

In the original window, press '5' digital key for four times, and then press 'TimeSet' key to display as follows:

```
Language      Eng
```
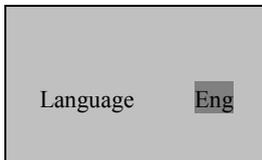
Press the **IN** and **OUT** keys to switch the language, click **OK** to complete the settings. Be sure to restart you device so the setting will

take effect

Note: The device default support for Russian, Spanish, Arabic, French, English, German, Portuguese.If you need other languages, please contact our market supporter or salesman.

3.3 Power Management

The device is equipped with power with USB connector and backup battery. When use power adapter with USB connector to supply power, the backup battery is charged at the same time and the charging time shouldn't be less than 8 hours. When the power is off or unable to be powered by power with USB connector, the device will be powered by backup battery automatically and the saturated backup battery can supply power to device for 3 hours.

There is an electricity icon at the up-right corner of LCD, which is convenient for users to view the status and the electricity of backup battery. When the device is only powered by the backup battery, the icon indicates the battery electricity; when the device uses the power adapter and the backup battery at the same time, the icon indicates the charging status and electricity of backup battery; when the device is powered by the power adapter, no icon is displayed.

When the battery electricity is displayed as 0 grid, the battery icon flashes and the buzzer will buzz to alarm per a second for five minutes.

3.4 Attendance Status

During checking attendance, if you want to check in, firstly press 'IN' key to display 'Check-IN' on the screen, then press fingerprint or

password to authenticate. If you want to check out, firstly press 'OUT' key to display 'CheckOut' on the screen, then press fingerprint or password to authenticate.

### 3.5 Built-in EM card reader (Optional)

Built-in a contactless EM card reader module, the distance of flashing card is 5-10 cm. it completely supports the thick card (1.88mm), middle card (1.05mm), and thin card (0.88mm), whose operating frequency is at 125 KHZ, the card area as following illustration. The card area is as following illustration.

RF area
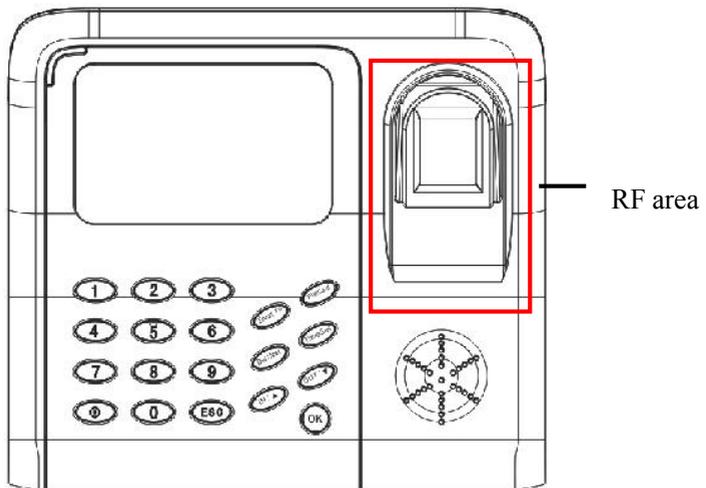
3.6 Built-in MIFARE card reader (Optional)

Contain a contact-less MIFARE card reader module , the distance to detect card is 5-10cm, it completely supports MIFARE cards that provide   operating   frequency   13.56MHZ,   communication   speed

106KBPS, the card area is as following illustration.

RF area
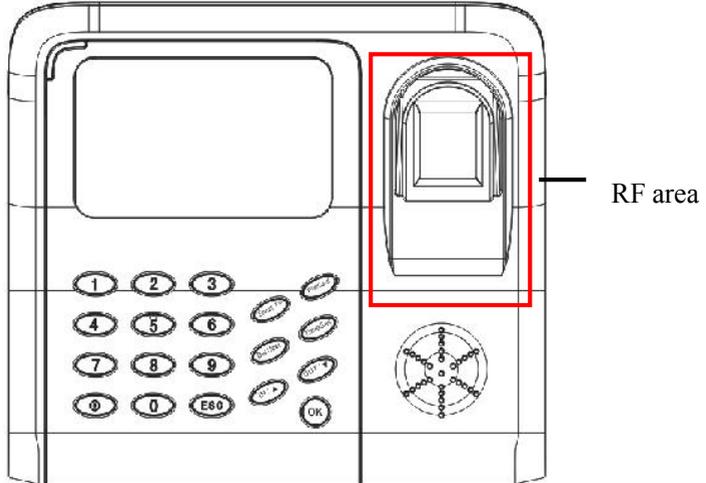
3.7 Test Automatically

In the original window, press '6' digital key for four times, and then press 'TimeSet' key to display as follows:

```
Flash Test
   Pls Keep Pwr ON
       Continue?
ESC          OK
```
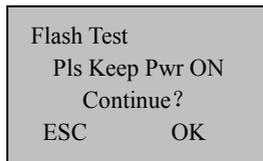
Press OK key to start testing. The testing order is Flash, LCD, Voice, fingerprint reader, Key, RTC. During testing especially flash testing, please guarantee the stability of power, otherwise the hardware of system maybe be damaged.

3.8 Switching of Algorithm Version

The default fingerprint algorithm version used by the device is 10.0. You can select the 9.0 version or 10.0 version. The fingerprint templates in the two algorithm versions are not compatible with each other. Select an appropriate FP version.

On the initial interface, press **2** for four times and then press the **Time Setup** key. The following prompt information is displayed.

Algorithm version 10.0
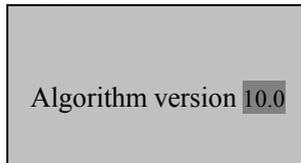
Press the **IN** and **OUT** keys to switch between the 9.0 version and 10.0 version. After the setup, click **OK** to complete the settings.

✎Note: After you switch the current algorithm version, you need to restart the device so that the new version can take effect.

4. Attendance Management

This device is to record attendance time, and the attendance software is to deal with report statistics. The device can be connected with PC directly through USB cable. The way to operation the attendance

software, please refer to <<Management System Explanation>>.