TFT Serials User Manual

Version: 1.0
Date: Sep 2009

Introduction:

This document mainly introduces the windows and operations of TFT serials products.

About this manual

- Not all the devices have the function with ★. The real product prevails.
- The photograph in this manual may be different from that of the real product. The real product prevails.
- Key functions of various models are different. Please read the key board instruction in appendix first.

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1. Operating instruction

1.1 Abbreviated Operating Procedures

Step 1: Install the device and power it up.

Step 2: Enroll users by registering his/her fingerprints, passwords or card. Assign users' security previleges directly on the device.

Step 3: After enrolling users, verify that his/her enrolled fingerprint, passwords or card is recognized by the device.

Step 4: Configure the device communication settings. Then download the users' newly enrolled informations from the device onto the Attendance Management on the computer. Data can be transmitted via TCP/IP, RS232, RS485 and USB client or by using a USB flash drive.

Step 5: Modify users' information in the Attendance Management, and upload this newly informations to the device after connected. Then the users' newly information will be displayed on the screen upon attendance. (Some models allow to direct name edition and other operation on the device. Therefore, it is no necessary to connect device.)

Step 6: Verify the device displays the correct day and time. Then start to attendance.

Step 7: Download attendance records to the Attendance Management and stat them at the end of the month.

1.2 Introduction to Fingerprint Recognition technology

Enroll fingerprint by pressing index finger, middle finger or ring finger（thumb and little finger are clumsy）.

1)　　Proper press:
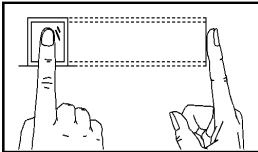
Make finger center pressed on the sensor window

2)　　Improper press:

Upright
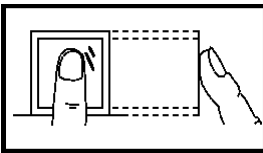
Too lean
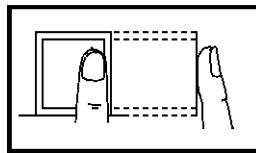
Slant
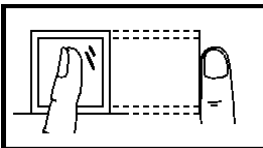
Too downward
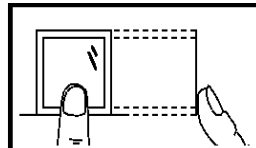
Please adopt the correct way to place the finger to avoid improper operation led to the identification performance degradation.

1.3 About attendance

When the device is in standby status, only after successful fingerprint or password verification, can user save attendance record on the device.

Standby status

As shown below:

The picture displayed in standby status can be picture uploaded by user (refer to upload user-defined picture). It can also be time display

（refer to 4.5 interface option）

Select attendance state

1） mode 1

When the device is in standby status, press state key on the device to modify attendance state, and the state information will be displayed on the screen. The current selected state is displayed in orange. Press "**ESC**", the prompt information will disappear. Refer to 4.4 keyboard definition for default state key definition.
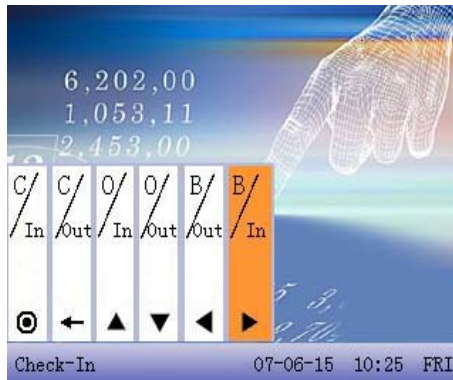
2）mode 2

Various states can be set by user. Therefore, not all state information is displayed upon key press. Corresponding states come out on the left bottom corner.

Identity Verification

After successful attendance record, the device will display the current time on the screen in clock mode.

● Fingerprint Matching

（1）1:N fingerprint matching

Verify the fingerprint pressed on the sensor at present with all fingerprint data in the fingerprint reader.

Step 1:Press fingerprint properly on the sensor.

Step 2:If the device says 'Thank you", the verification is complete.

If the device says "Please press again", return Step 1 for second operation.

（2）1:1 fingerprint match（User ID＋fingerprint）

　　Verify the fingerprint pressed on the sensor at present with the fingerprint related with user number. Use this method when it is difficult to identify user's fingerprint.

Step 1:Input User ID of employee to be verified on the initializing interface.

Step 2:Press fingerprint properly on the sensor.

Step 3:If the device says 'Thank you", the verification is complete.

If the device says "Please press again", return Step 2 for second operation.

Employee can try another 2 times by default. The repeated times can be set in 4.5 interface option. If it fails after 2 times, return Step 1 for second operation.

● Password Matching

Step 1:Input User ID of employee to be verified on the initializing interface. Then press **OK.**

Step 2: If it says that the enroll number is wrong, it means that there is no such number or the employee doesn't enroll password.

Step3: Input password when the interface appears.

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Step 4: If the device says 'Thank you", the verification is complete.

When the device says "password error", please input password again.

Employee can try another 2 times by default. The repeated times can be set in 4.5 interface option. If it fails after 2 times, return Step 1 for second operation.

● Card Matching★

Step 1: wave the card near the induction area, after the induction equipment find the card, remove the card again.

Step 2: When the equipment give us a tip, "Thank you", the certification completed.

Step 3: If the card has not registered yet, prompt that card is not registered

☺ Note: The card area in some devices is round the fingerprint sensor and others are round the keyboard.

1.4 Connection with PC

The device only records attendance time. The statement can be disposed by software on PC. Therefore, it is necessary for device to connect PC to download attendance record to attendance software.

The following are some connection method:

● Ethernet:

（1）Through hub:Use parallel net cable (to connect network card and hub) to connect device into the network.

（2）Direct connection :use cross net cable（connect two Ethernet terminals directly）to connect　device and PC.

Set　device:enter **menu－option－ communication option** to set the following items:

IP address: Default IP as 192.168.1.201. You can modify it if it is necessary.

Subnet mask: Default subnet mask as 255.255.255.0. You can modify it if it is necessary.

Gateway address: Default gateway address0.0.0.0. You can modify it if it is necessary.

Network speed:There are three options: ATUO, 10M, and 100M.

Connection password:It can be set or not set. If it is set, input corresponding numerical value on connection interface of PC software.

● RS232:Use RS232 serial port wire for connection.

Set　device:Enter **menu－option－ communication option** to set the following options:

baud rate:communication speed rate (with computer),if the communication speed is high, RS232 　（115200, 57600）is recommended.

RS232: Select "Yes" for RS232.

Communication password:It can be set or not set. If it is set, input corresponding

numerical value on connection interface of PC software.

● RS485

set device:Enter **menu－communication option** to set the following options:

Device ID: **1—254**

baud rate:communication speed rate (with computer),if the communication speed is

low and stable, RS 485 （9600, , 38400）is recommended.

RS485: Select "Yes" for RS485

Communication password:It can be set or not set. If it is set, input corresponding

numerical value on connection interface of PC software.

● USB

Set device: enter **menu—communication option** to set the following items:

Device ID: set it in "connection option". The number can be selected from 1—254.

USB: Select "Yes" for USB communication.

Communication password: set it in "connection option". It can be set or not set. If it

is set, input corresponding numerical value on connection interface of

PC software.

1.5Main menu

Start at the Check/Clock-In screen. Press the Menu key to open the Main Menu, as shown in the following figure:

User management: Browse the users' basic information like ID, name, fingerprint, card, password and privilege and so on; Increase, edit or delete operation the basic information; Set the work code for user and card management.

Connection: Set up communication parameters between the equipment and the PC, including IP address, gateway, subnet mask, baud rate, device number, communications password etc.

System: Manage the data and set the system parameters, including basic parameters, interface parameters, fingerprint and attendance parameters, to maximize meet user's needs in the functional, display and other areas.

Date/Time: Device time date should set accurate to ensure the accurate attendance time.

PenDrive: By USB, the user info and attendance data etc. can be imported to the accordingly software to deal or   import the user info. To other fingerprint devices to use.

Auto Test: automatically test the function of each module if it is workable,

including the screen, sensor, voice, keyboard and clock tests.

Attlog: For query the record saved in the device convenience, **query record** function is provided.

Sys Info: Use **system information** to check the current device's saving status, its version information and so on.

2 User management

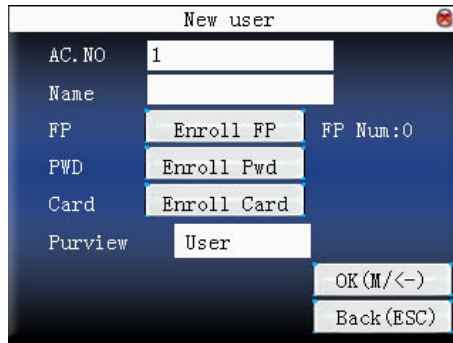The user's basic information on the device includes fingerprint, password and management access. In company's attendance management, for employee's change, the information on the device also needs modification. Therefore, operations including "add, delete, check, modify and so on" can be done on the device.

2.1 Add a new user

Firstly, enroll employee's fingerprint or password in the device.

Enter **New user** interface:

☺ Notice: Only some models have name and card options.

AC.NO: Staff's attendance number.

Name: keyin user's name with T 9 input method.

FP(Fingerprint): enroll employee's fingerprint. Ten fingerprints can be enrolled at most.

The employee with fingerprint enrolled can use fingerprint to record attendance.

PWD(Enroll password): enroll user's password. The effective digit is $1 \sim 8$. The employee with password enrolled can use password to record attendance.

Card: Registered staff's Card, only the registered card is possible to check attendance.

Privilege: Users are people whose identity must be authenticated before enter a menu. The ordinary consumer can track attendance by the card or the password only; the manager already may equally carry on the daily checking attendance with the ordinary consumer, but may enter the menu to operate each option.

☺ When there is no appointed the manager, any person all may entry the menu operation; after the manager is appoined, anyone is unable to entry the menu until the manager status is confirmed, after the success can entry the menu：

For example: the following is the flow for **add user**.

Input User ID

    1）Allocate User ID by default.

    2）Press "━" to delete the allocated User ID by default. Input User ID from keyboard. If the User ID is wrong, press "━" to input it again.

Input name★

    Use T9 input to input employee's name.

    Press OK or ▲/▼ to select "enroll fingerprint", then press OK to start fingerprint.

Enroll fingerprint
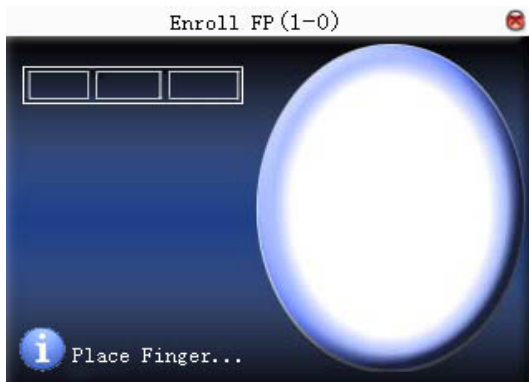
    Press finger according to device's prompt. Press the finger three times in the proper way.

    If one fingerprint is enrolled successfully, press **OK** to continue another finger, then press **menu** and **ESC** to return the last interface.

    Press ▲/▼ to select "enroll password" and press **OK** to enroll password.

Enroll password
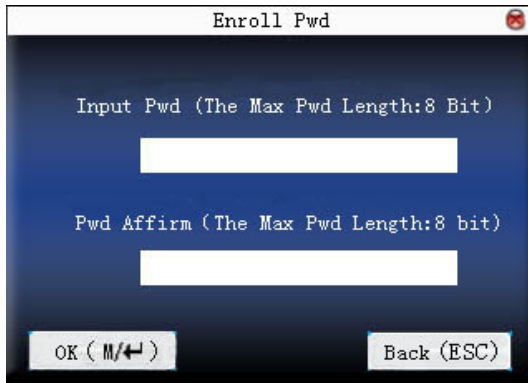
Input password (1～8) according to device's prompt, and press **OK** to verify it. Then press **OK** save it or press **ESC** to exit without saving it.

After saving, 🔑 display will be on the device, which means the password has been set.

Enroll cards

Scroll ▲ / ▼keys to locate the cursor on "enroll card" button, and press "OK" to enter the registration card

Slight ware the card near the induction area, after the equipment found the card number, press OK key to save, press to give up, then remove the card from the equipment, after the "Enroll successfully" the card number will display on the

register button.

Privilege setting

scroll the▲/▼ key, and local cursor on the "Privilege" option box, scroll ◄/► key to choose privilege.

Save/exit user registration

To confirm the registration information is correct, after getting confirmation, save it.

The way for saving:

1) scroll ▲/▼key to locate cursor on the "completes (◼◀┛)"button, please press "OK" key again, the prompt "the data has been changed, Are you sure to save it?"on the equipment, press "OK" the key to save it, if you do not want saving, press "ESC" to exit. If the prompt, "Save successfully! Continues to input?", appear on equipment, want continuing to press "OK", if you abandon this operation, press "ESC" key.

2) Press the ESC key or scroll ▲/▼key to locate the cursor on the " return (ESC)"button, please press "OK" key again, the prompt "the data has been changed, Are you sure to save it" appear on equipment , press "OK" key to save and return to the preceding of menus, does not serve and return to the preceding of menus, press "ESC" key.

2.2 Manage user

All users' information saved in the current device can be queried in **manage user,** including user name, fingerprint count, whether to enroll password or card, user attendance record and so on. Editing or deleting user can also be done here.

☺ **Notice**:1） 🔒 means this employee is the administrator. 🔑 means password has been enrolled. 🔴 means ID Card has been enrolled.

2）The picture may be different from your device. The real product prevails.

Press **menu** on the above interface, and the operating menu will pop out:

Press ▲/▼ to select the item.

2.2.1 Search user

If many users are enrolled, in order to find an employee quickly, the device has

provided "User ID" to search the employee.

Press **menu** on **manage user** interface to get operating menu. Select "Search user" or press any numeric key to enter the following page:
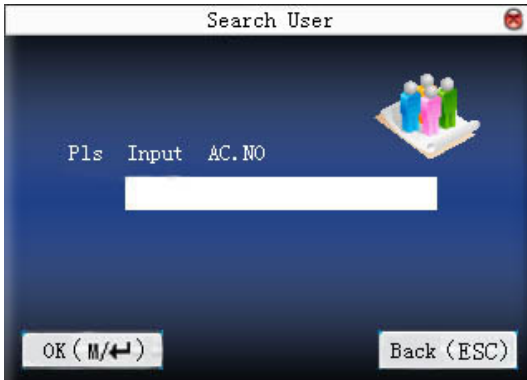
Input User ID of employee to be queried. Press **OK**, after successful query, the blue cursor will point to the employee. If there is no such employee, "no enrolled data" will appear.

2.2.2Query attendance record

When administrator is checking employee's fingerprint and other enrolled information, he can also check the employee's attendance record during that month.

Press **menu** on **manage user** interface to get the operating menu, select " record",and the employee's monthly attendance record can be checked:

☺ **Notice**: The picture may be different from your device. The real product prevails.

Press ▲/▼ to read attendance record.

Press **OK/menu** to query detailed information.

Then press "**ESC**" to return to **manage user** interface.

2.2.3 Edit user

Edit user information saved in the device. For example, the former enrolled fingerprints are unusable, enter "edit user" to re-enroll fingerprint, password or

card.

Use ▲/▼ or **query user** on **manage user** interface to select employee to be edited. Then press **menu** to select "edit" or press **shortcut** to verify it, and all enrolled information can be displayed on the device:
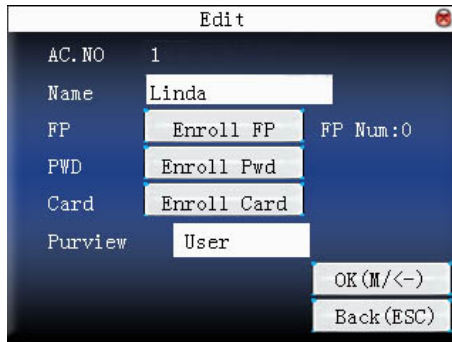
☺ Notice: Only some models have name and card options.

User ID cannot be modified. The operation is similar to that of **add user**. Fingerprint can be re-enrolled. Click "enroll password" directly to set password or modify password. The access can also be modified.

Save edition/exit edition

1）Press **menu** or ▲/▼ to select "**complete** ▼↵）", press **OK**,save edition and return to **manage user** interface.

2）Press "**ESC**" or ▲/▼ to select "**return**（**ESC**）" and then press **OK**,and the device will prompt "data has been changed. Are you sure to save?". If you want to save it, press **OK** and return to the last menu. Or press "**ESC**" to return the last menu.

2.2.4 Delete user

"Del user" is to delete employee's partial information or all information from

the device. It is used when the following states happen:

1）when employee's fingerprint or password is not needed any more.

2） when employee leaves the position.

Press ▲/▼ on **manage user** interface or use **query user** to select the employee to be edited. Click **menu** to get operating menu, and then select "delete user".

Delete user

☺ Notice: Only some models have Del ID Card Only options.

If the user has no fingerprint or password, the corresponding item is blue and cannot be operated. Press ▲/▼ to select the item to be operated. Press **OK** to pop out dialog box and verify whether to delete this item or not. Then the device will give corresponding prompt. Press "**ESC**" to return to **manage user** page.

2.2.5 Add user

In order to add user conveniently for operator, **add user** is configured here. The function is the same as that of 1.1add user.

2.3 Work code★

   Salary is based on attendance, There are many work types for employees. An employee may have different work type in different time period. Different work types have different pays. Therefor, in order to distinguish different attendance states when user is dealing with attendance data, the device has provided a parameter to mark which attendance record belongs to which work type.

Operation

☺**Notice**: The picture may be different from your device. The real product prevails.

Press ▲/▼ to read work code.

Press **OK** to edit the selected work code.

Press **menu** to get work code setting menu.

2.3.1Set work code

1）add work code

Press ▲/▼ in pop-out menu to add a work code.

code: Work code

name: To indicate the work code
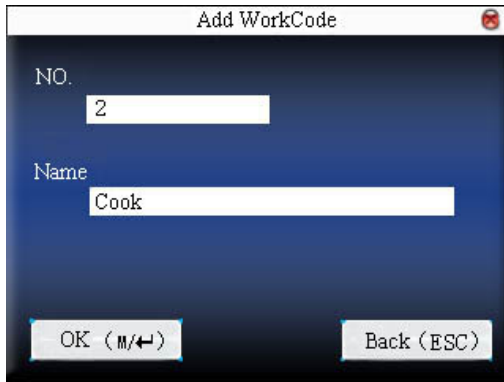
2）edit work code

Press ▲/▼ in pop-out menu to select "edit", and edit the name of selected work code. The operation is similar to that of **add work code.** 3）delete work code

Press ▲/▼ in pop-out menu to select "delete", and delete the selected work code.

2.3.2 User work code

Press **shortcut** on standby interface （can be set in keyboard definition）to enter **work code option** interface.

☺ **Notice**: The picture may be different from your device. The real product
   prevails.

User can input work code directly or press ▲/▼ to select work code from the
list and press **menu**, then press **OK** to save it and then return to the main interface.

2.4 Card management★

Support Mifare non-touch intelligent card with working frequency of 13.56MHZ. Integrate fingerprint attendance to other systems and support multi- verification mode to meet the demands of different people.

Operation
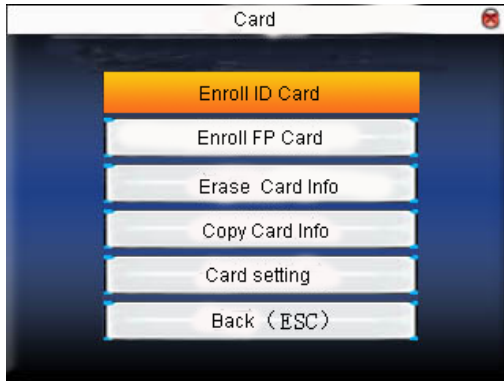
Press ▲/▼ to select your desired item, press **OK** to execute the current selected item.

2.4.1 Enroll card

Use Mifare card as ID card. Only card number is needed to enroll.

Operation

1. Enrollment

Step 1:Select **enroll card** and then press **OK.**
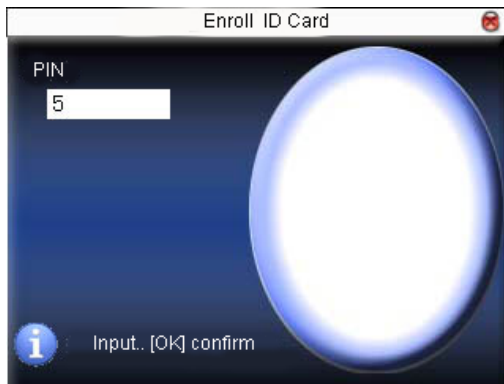
Step 2:press keyboard   to input the number to be enrolled（if the number has been there already, the device will prompt you to copy the information to the card.）,and then press **OK**.
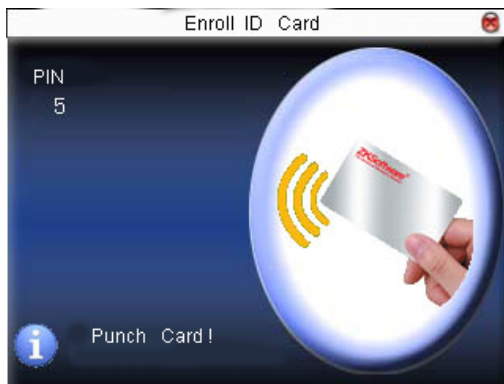
Step 3:The device prompts to show card.

Step 4: Put the card in the induction area until the operation is successful.

2.   verification:

Sway the card in the induction area. After the device inducts the card, move the card off. When the verification is successful, the device will give prompt.

☺ **Tips:** Please enter user **access control option** to modify the verification mode as RF, or verification won't be successful.

2.4.2 Enroll fingerprint card

Enroll fingerprint and write fingerprint into card.

Operation

1. Enrollment

Step 1:Select **enroll fingerprint card** and press **OK**.
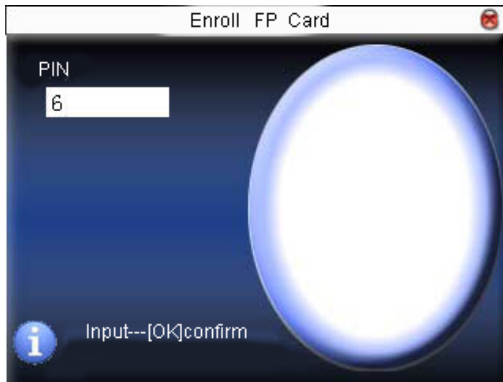
Step 2:Use keyboard to input the number to be enrolled（if the number has been there already, the device will prompt you to copy the information to the card.）,and then press **OK**. The device will prompt you to move off your finger.
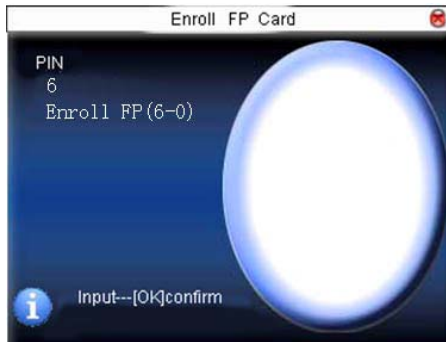
Step 3: Press finger properly three times.

Step 4: Device prompts "please show card".

Step 5:Put the card in the induction area, waiting for the device to read fingerprint data into card until the enrollment succeeds.

2. verification:

Sway the card in the induction area. After the device inducts the card, move the card off. When the verification is successful, the device will give prompt. If the pressed fingerprint is different from that stored in the card, the verification will fail.

2.4.3 Clear card information

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

Operation
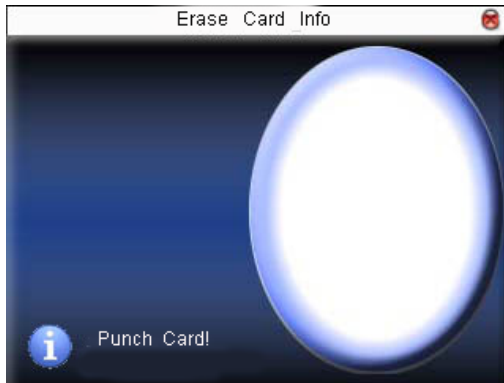
Put the card in the induction area, waiting for device to delete all the information in the card. If the card data has been stored in the device, the device will remind you whether to delete the information in the device or not. "Yes" is to delete the user's fingerprint and information in the device. "No" is to keep the information.

2.4.4 Copy card information

Copy card information to the device（after copy, the fingerprint is still in the card）,then press **fingerprint attendance** directly on the device, with no need of using Mifare card.

Operation
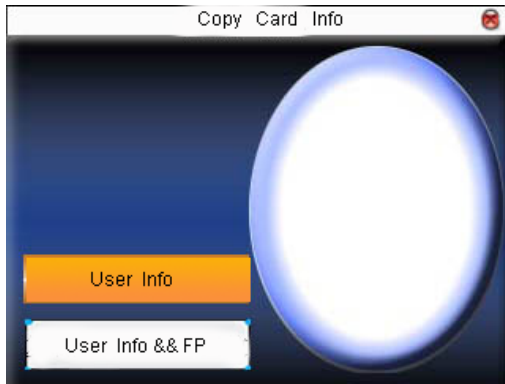
Press ▲/▼ to select "only copy user information" or "copy user information and fingerprint", and then press **OK.**
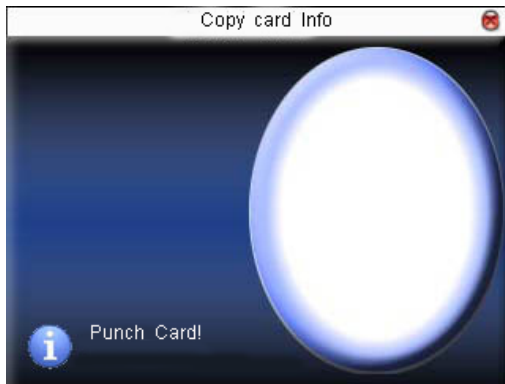
2.4.5 Set card parameter value

Set password of Mifare card and decide whether the information should be saved or not.

fingerprint card password :After the password is set, the device will write password into the enrolled fingerprint card. Then the fingerprint card can only

be used on this device.

Save the information: Decide whether to save the enrolled information to the device
when enrolling card or fingerprint card.   "No" means the
information is only saved in the card. "Yes" means the
information is saved in both card and device.

Operation
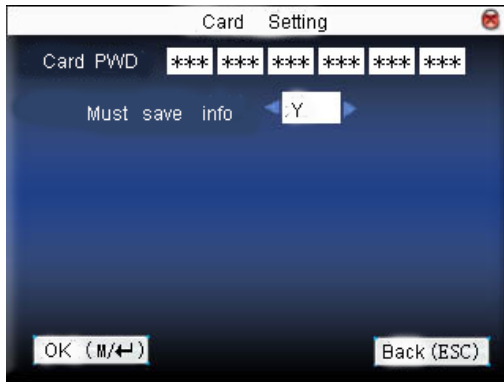
Press ▲/▼ to move cursor to the item to be set. If it is the input box, press
numeric keys on small keyboard to input the value. If it is the roll box, press ◄/►
to switch the values. After setting, press **menu** directly to return to the last interface.
Press "**ESC**" to cancel setting and return to the last interface.

☺ **Notice**: Card induction area is 3cm—5cm above fingerprint reader.

3 Communication option

When the device and PC are used to transmit data, it is necessary to use communication wire to set communication parameters in the device. When the device is in communication, "communicating…" appears. Don't operate the device then.

✎ N**otice**: When the device is communicating with computer, please check the setting here. The parameters here must be in accordance with that of software communication interface.

3.1 Network option

When Ethernet is used for communication of device and PC, the following settings need to be checked:

Device IP address: IP is 192.168.1.201 by default. You can modify it if it is necessary. But it cannot be the same with that of PC.

Subnet mask: It is 255.255.255.0 by default. You can modify it if it is necessary.

Gateway address: It is 0.0.0.0 by default. If the device and PC are in different net segment, it is necessary to set address.

Net speed: Set the speed according to the LAN where the device is.

Operation
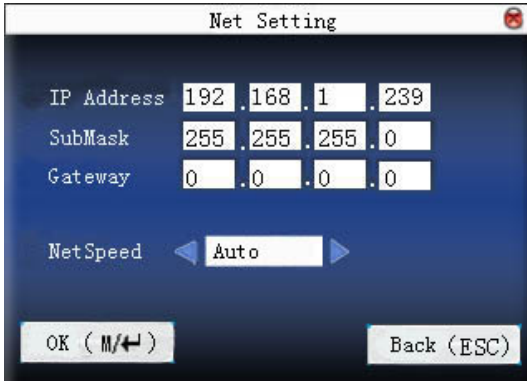
Press ▲/▼to move cursor to the item to be set. If it is the input box, press numeric keys on small keyboard to input the value. If it is the roll box, press ◀/▶ to switch the values. After setting, press **menu** directly to return to the last interface. Press "**ESC**" to cancel setting and return to the last interface.

3.2 Serial port option

When serial port（RS232/RS485）is used for communication of device and PC, the following settings need to be checked:

Baud rate: Used for communication with PC. There are five options: 9600, 19200, 38400, 57600 and 115200. If the communication speed is high, RS232 is recommended. If the communication speed is low, RS 485 is recommended.

RS232: Whether use RS232 to communicate. Select "Yes" if RS232 is to be used.

RS485: Whether use RS485 to communicate. Select "Yes" if RS485 is to be used.

USB: Whether use USB to communicate. Select "Yes" if USB is to be used.

RS232, RS485 and USB cannot be used at the same time.

☺ Notice: Only some models have USB communications.

Operation

Press ▲/▼ to move cursor to the item to be set. Press ◄/► to switch the values. After setting, press **menu** directly to return to the last interface. Press "**ESC**" to cancel setting and return to the last interface.

3.3 Connection option

When RS232/RS485 is used for communication of device and PC, it is necessary to set device ID.

Device ID: 1—254. If RS232/RS485 is used, this ID needs to be input on the software communication interface.

To improve the security of attendance data, connection password needs to be set here. Connection password must be input when PC software is to connect device to read data.

connection password :System password is **0** by default. (namely, there is no password.) it can be set as other value. After setting, the password must be input if software is to communicate with device. Or the connection will fail. The password length is 1~6 digits.

Print mode: Print mode includes None, Mode 1, Mode 2, Mode3, Mode 4, Mode 5, Mode 6 and Mode 7. When select None, it will shut down the print function. When select Mode 1 to 7, it will print the attlog after fingerprint or password or card verification. The print function refers to this manual appendix Print function.

Operation
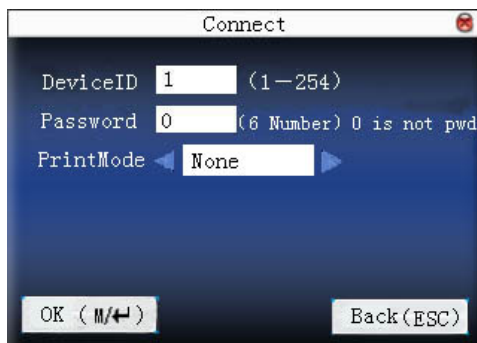
Press ▲/▼ to move cursor to the input box. Press numeric key on small keyboard to input the value. After setting, press **menu** directly to return to the last interface. Press "**ESC**" to cancel setting and return to the last interface.

☺ Print function is not a standard one. If needed, pls contact our Business Representative or technical support.

4 System option

Set system parameters to meet user's demand as many as possible.

4.1 System parameter

1:1 matching threshold value: The similarity of ID+fingerprint verification and the enrolled template

1:N matching threshold value: The similarity of verification and the enrolled template

Recommended matching threshold value:

		Matching threshold value	
FRR	FAR	1:N	1:1
high	low	45	25
middle	middle	35	15
low	high	25	10

Time format: Time format displayed on the initializing interface of fingerprint

sensor

Press ◀/▶ to select format. The fingerprint sensor supports ten date format: YY-MM-DD, YY/MM/DD, YY.MM.DD, MM-DD-YY, MM/DD/YY, MM.DD.YY, DD-MM-YY, DD/MM/YY, DD.MM.YY and YYYYMMDD. Select your desired date format.

keyboard voice: Press ◀/▶ to set whether the key has voice or not. "Yes" means having voice, and "No" means no voice.

Voice prompt: Press ◀/▶ to select whether to give voice prompt or not. The device will give corresponding voice prompt during operation.

volume: Press ◀/▶ to set it.

attendance record alarm: when the free space reaches the set value, the device will give alarm automatically (effective value is 0~99,0 means the space is all used and there is no alarm.)

repeat verification time: it is in the set time range（unit :minute）. If somebody's attendance record has been there, then the record of second attendance won't be saved. (effective value is 0~60 minutes. 0 means all the records after verification are saved.)

Operation
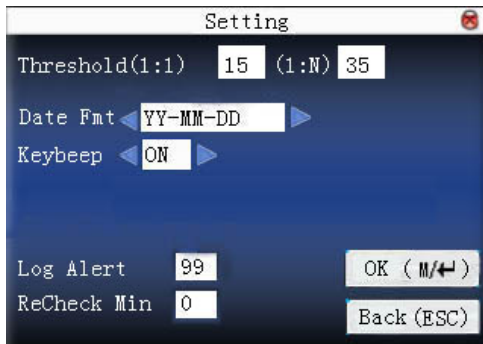
Press ▲/▼ to move cursor to the input box. Press numeric key on small

keyboard to input the value. If it is the input box, press numeric keys on small keyboard to input the value. If it is the roll box, press ◀▶ to switch the values. After setting, press **OK** or **menu** directly to   save the setting and return to the last interface. Press "**ESC**" to cancel setting and return to the last interface.

4.2 Data management

Delete attendance record:Delete all attendance records.

Delete all data:Delete all enrolled employees' information, fingerprint and attendance record.

Clear management access:Change all administrators into common users.

Operation

Press ▲/▼ to move cursor to the selected button. Press **OK** or **menu** to start operation. The device will remind you whether to continue the current operation or not. Then press **OK** or **menu** to delete all the data, which won't be recovered after deletion. Press "**ESC**" to return to the last interface.

Clear propaganda picture:Clear the propaganda pictures uploaded to the device from U disk.（refer to Upload User Defined Picture in <u>6.2 upload data</u>   for how to upload the propaganda pictures.）

Operation
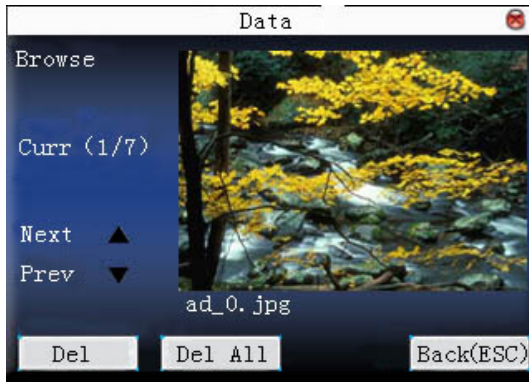
Press "▲/▼" to preview the propaganda pictures in the device. Click **OK** to delete all these pictures. After deletion, the next picture will appear. Click **"delete all"** to delete all the propaganda pictures in the device. Then press "**ESC**" to return to **data management** interface.

4.3 Upgrade firmware

Update the firmware by utilizing the USB Pen Drive(flash drive) .

✎ Notice:If you need such upgrade file, please contact technician. Usually, firmware upgrade is not recommended.

Operation

Insert U disk with upgrade file into the slot. The device will identify the file automatically. The device will give prompt whether it is successful or not.

4.4 Keyboard definition

4.4.1 Status key definition

User defined the device's attendance status key. Press corresponding status key to record attendance.

Press any status key on the standby interface, and the attendance status and status key will be displayed at the left bottom of the screen..

Operation

Shortcut	Function	Code	Name
F1	Status Key	1	Check-in
F2	Status Key	2	Check-out
F3	Status key	3	OT Check-in
F4	Status key	4	OT Check-out
F5	Status key	5	Out
F6	Status key	6	In
F7	Undefine		
F8	Undefine		
			Edit M/↵

Press ▲/▼ to read **shortcut definition.**

Press **OK** to edit the selected **shortcut.**

4.4.1.1 Set **shortcut**

Select a **shortcut** ,press **OK** to enter **edit** interface.

function:Set shortcut function for his key, including status key , work code and SMS check.

The following options will appear after the status key is selected:

code:Allocate a code for status key to provide convenience to check the record

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statistics.

name:The name of key status

auto switch:When it reaches the set time point, the device will switch the attendance status automatically.

1）set it as function key

Operation
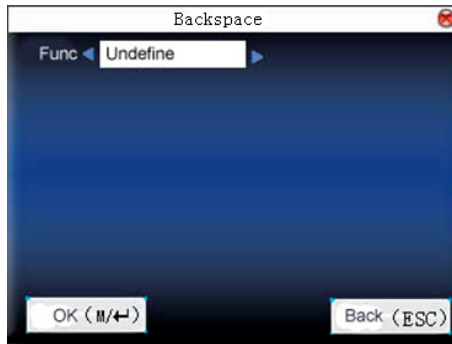
Press ◄/► to set " # " as **help**.

2）set it as status key
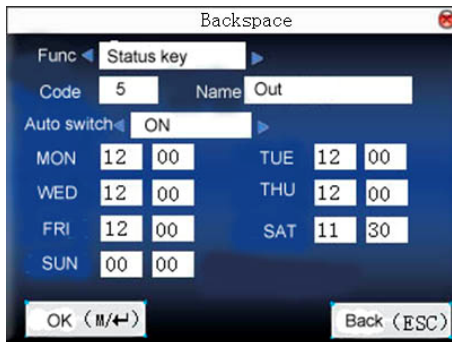
Press ▲/▼ to move cursor to the input box. Press numeric key on small keyboard to input the value. After setting, press **menu** directly to save the setting and return to the last interface. Press "**ESC**" to cancel setting and return to the last

interface.

4.4.1.2 Use **shortcut**

1） status key

Press "right cursor" key on standby interface and the corresponding status will appear at the left bottom.

2）shortcut key

Set " 0 " as work code in **setting**.

Press " 0 " on standby interface to enter the interface of work code.
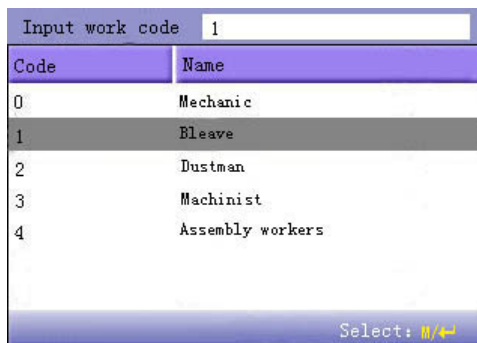
4.5 Interface option

When user is using 1:1 match or password   verification,he may forget to enroll fingerprint or does not press the finger in the proper way. For user's convenience and to reduce repeat key, the device allows retry. User can set initializing interface's display style.

Select clock:After verification, the selected clock mode will be displayed on the screen.

Display propaganda picture:User can display some propaganda pictures on the screen.

1）picture cycle interval means how soon will the picture be changed（effective value is 3～999 seconds.）

2）time display delay means the clock picture display time length after verification. After the display delay, the propaganda picture will be displayed on the initializing interface again (with effective value of 0～999 seconds, and 0 means displaying clock all along. ）

Operation
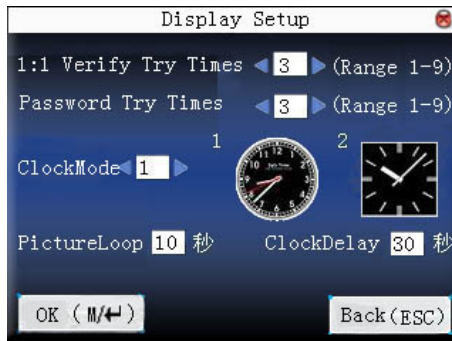
Press ▲/▼ to move cursor to the input box. Press numeric key on small keyboard to input the value. After setting, press **menu** directly to   save the setting and return to the last interface. Press "**ESC**" to cancel setting and return to the last

interface.

4.6 Reset

Make device's communication option,system option and so on reset to the state of factory.

Factory reset: Make all the parameters in the device reset to the state of factory.

Reset keyboard definition:Reset the corresponding setting of keyboard definition to that of factory.

Reset bell option:Only reset bell option to factory state.

Reset other parameters: only reset communication option,system parameter,interface option and so on to factory state.
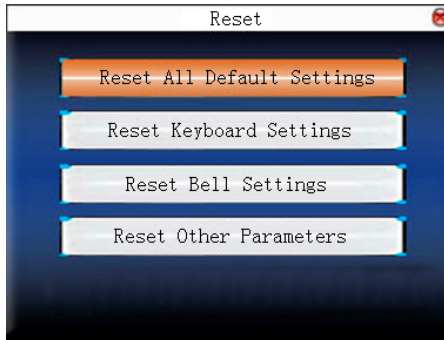
Press ▲/▼ to move cursor to the button to be operated. Press **OK** to start operation. The device will say "Are you sure to execute the current operation?". Press **OK** to reset it to factory state and press "**ESC**" to cancel operation.

✎ **Notice**:The employee's information and attendance data won't be deleted when this operation is being done.

4.7 Bell option★

Many companies need bell for on-duty and off-duty. Some use manual bell. Some use electronic bell. To save cost and provide convenience for management, we integrate bell functions to fingerprint sensor. You can set time for bell. When it is the scheduled time, the fingerprint sensor will play the selected ring automatically. And the ring will stop automatically when it is the end time.

Operation:

Bell	Bell Time	Ring	State
Bell 1	08: 00	Bell01. wav	⊙
Bell 2	00: 00	Bell01. wav	
Bell 3	00: 00	Bell01. wav	
Bell 4	00: 00	Bell01. wav	
Bell 5	00: 00	Bell01. wav	
Bell6	00: 00	Bell01. wav	
Bell7	00: 00	Bell01. wav	
Bell8	00: 00	Bell01. wav	
			Setting: ▮/◄┘

Press ▲/▼ to read bell option.

Press ◼◄┘ to set the selected bell and edit the bell.

Bell time:The bell rings automatically when it is the specified time.

Ring option:Bell ring

Adjust volume: ring volume

Ring counts:Ring times

Bell status:Whether to enable this bell
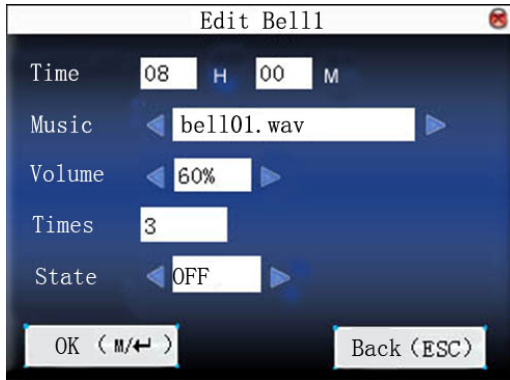
Press ▲/▼ to move cursor to the input box. Press numeric key on small keyboard to input the value. After setting, press **menu** directly to save the setting and return to the last interface. Press "**ESC**" to exit.

☺**Notice**:Ring time can be set with week as the period, namely, the bell rings automatically at some time of some day in a week. This function is not the must configuration. If you want it, please contact our businessman or technician.

4.8 Other options

Set sleep time, external bell and other parameters for the device.

Scheduled sleep:When it is the scheduled sleep time, the device not in operation will enter sleep status. Press any key or finger to awake it.

External bell:whether to enable external bell (It is the bell ring given off from external electronic bell, connected with the internal of the device, instead of the device speaker.

fingerprint image display:Select whether to display the fingerprint image on

the screen when it is enrolling or verifying There are 4 options:display upon both enrollment and verification, only display upon enrollment, only display upon verification, not display upon enrollment and verification.

lock power-off :To prevent hostile power-off, select whether to lock power-off or not.

"disable": the power is off 3 seconds after pressing   **power-off.**

" enable ",it is ineffective after pressing **power-off.**

☺**Notice**:1. External bell function needs support of device hardware. If you need it, please contact with our businessman or technician.

2. Only device with **power-off** function has **lock power-off** option.

Operation
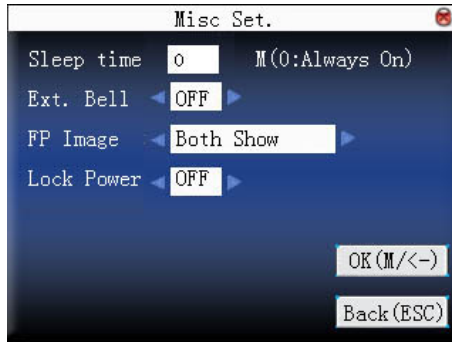
Press numeric key on small keyboard to input the value to be set. After setting, press ◼◹ directly to save the setting and return to the last interface. Press "**ESC**" to cancel the setting and return to the last interface.

5 Time date

5.1 Time date option

Accurate attendance time is based on accurate time date.

Enter **time date** to set options:

Operation
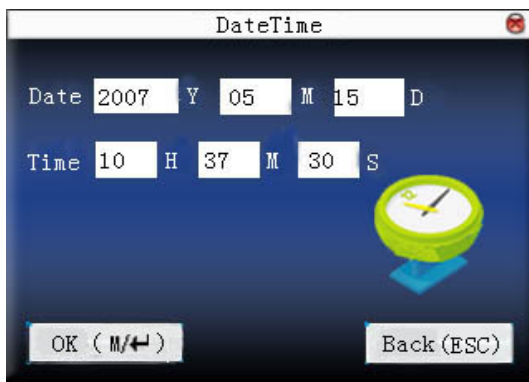
Press ▲/▼ to move cursor to the input box. Press numeric key on small keyboard to input the value. After setting, press **menu** directly to save the setting and return to the last interface. Press "**ESC**" to cancel setting and return to the last interface.

5.2 DLST★

DLST,also called Daylight Saving Time,is a system to prescribe local time in order to save energy. The unified time adopted during the system date is called

"DLST". Usually, the time will be one hour forward in summer. It can make people sleep early and get up early. It can also reduce lighting to save power. In autumn, the time will be recovered. The regulations are different in different countries. At present, nearly 110 countries adopt DLST.

To meet the demand of DLST, a special **option** can be customized on our RF Card Time & Attendance recorder. Make the time one hour forward at XX (minute) XX (hour) XX (day) XX (month), and make the time one hour backward at XX (minute) XX (hour) XX (day) XX (month) if necessary.

☺**Notice**:Only some models have DLST function. If you need it, please contact our business representative or technician.

Operation

When the device has DLST function, the option will be appeared on **time date** interface:
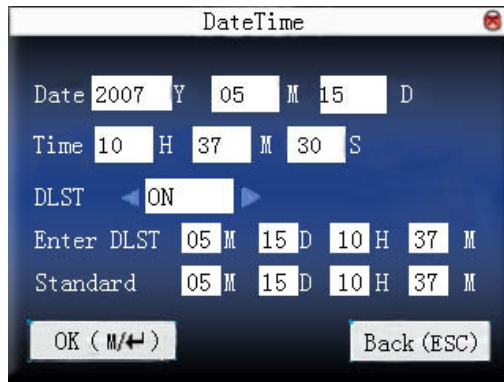
1）Set DLST as " enable "。

2）Input DLST start time and end time.

For example, if 08:00, April 1st is set, the device enter DLST,and the time will be one hour forward. If it is 08:00,August 1st, the device will reset normal time.
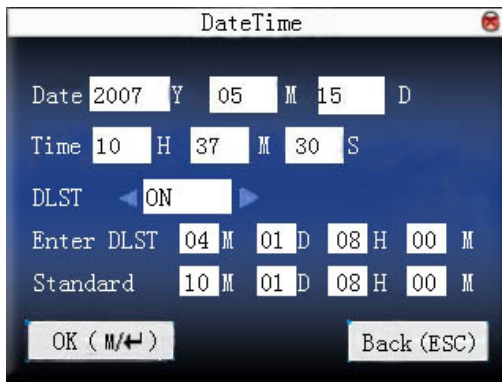
3）Press ◥◣/"OK" to save setting. Press "**ESC**" to exit without saving.

6 U disk management

Import user information, fingerprint template, attendance data and so on in the device to attendance software or import user information and fingerprint to other devices through U disk.
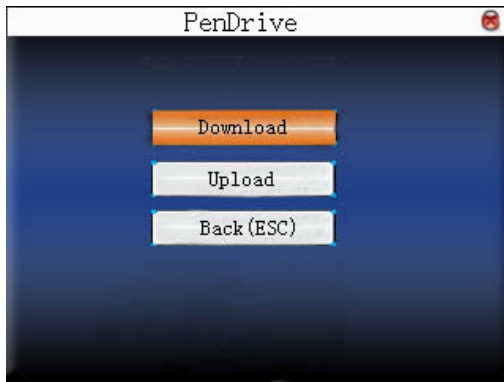
6.1 Download data

1. Down load attendance data

Save all attendance data in the device to U disk.

Operation

1） Insert U disk into USB slot of the device through mini USB.

2） Press "▲/▼" to Download Attlog.

Press OK for verifiaction. "downloading data, please wait…" will appear on the display when the device is downloading attendance data until it is successfully downloaded.

3） Press "ESC" to return to initializing interface. Pull out U disk.. X_attlog.dat

(attendance log) will be saved in U disk.(X stands for device ID).

2. Downdload user data

Save all users' information and fingerprint in the device to U disk.

Operation

Insert USB flash disk into USB slot of the device, press "▲/▼" to **download user**, then user.data (user information) and template.dat (fingerprint template) will be saved in U disk.

3. Download SMS★

Save SMS added to the device to U disk.

Operation

Insert U disk into USB slot of the device. Press "▲/▼" to select **download SMS.** After successful download, udata.dat and sms.dat   can be seen in U disk.

6.2 Upload data

1. Upload user data

Upload user information and fingerprint saved in U disk to device.

Operation

Insert U disk into USB slot of fingerprint sensor. Press "▲/▼" to select **upload user data**,then press **OK**,and user.dat（user information） and template.dat（fingerprint template）in U disk will be   uploaded to the device. If there are no such files, "data copy error" will appear.

2. Upload SMS★

Upload SMS in U disk to the device.

Operation

Insert U disk into USB slot of the device. Press "▲/▼" to select **upload SMS** and then press OK. Udata.dat and sms.dat   will be uploaded to the device.

3. Upload user defined picture

Upload JPG picture started with "ad_" in U disk to the device. Then theis pictures will be displayed on the initializing interface. (refer to appendix)

Operation

Insert U disk into USB slot of device. Press "▲/▼" to preview the pictures of U disk. If you want to upload the picture, click **OK**. Then the next picture will appear automatically. After upload, press ESC to exit.

7 Auto test

The device can test various modules automatically to help operator to judge the module with fault quickly. Auto test includs TFT display Test, Audio Test, Keyboard Test, Sensor Test and RTC Test.
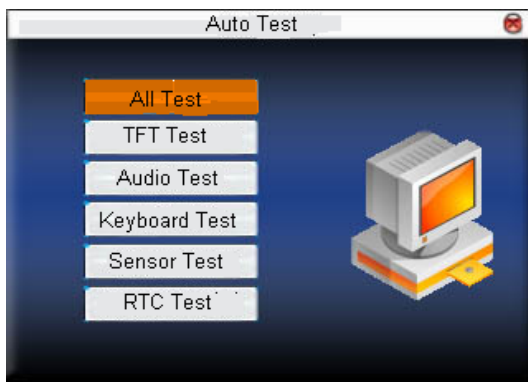
Press"▲/▼" to select the item to be selected. Press OK to start it.

7.1 TFT display test

The device can automatically test TFT color display effect through color display, white display and black display) to see whether the screen works nomally.

Press OK to continue and press ESC to exit.

7.2 Audio test

The device can automatically test voice prompt effect through playing voice files in the device to see whether the files are complete and the voice effect are good

or not.

Press OK to continue and press ESC to exit.

7.3 Keyboard test

The device can automatically test various keyboards to see whether the keys work nomally or not.

Press any keyboard on the test interface (**except for OK and ESC**) to check whether the pressed keyboard is in accordance with that displayed on the screen.

■ will appear whether it is the right key, and ▬ will appear whether is is not the right key.

Press ESC to exit.

7.4 Sensor test

The device will automatically test the sensor to see whether it works normally. Press fingerprint to see whether the image is clear and useable.

Press fingerprint on the sensor window and the fingerprint image will appear on the screen.

Press ESC to exit.

7.5 Real-time clock

The device can automatically test the clock to see whether it works nomally.

Press OK to start time and then press OK to stop time.

Press ESC to exit.

8 Query record

Employee's attendance records will be saved in the device. For convenience, query record function is provided.

According to user's input query condition, the record will be displayed on the screen for user to check.

Enter **query attendance**, input corresponding information in the **query condition** input box.

1） When the User ID is blank, all employedds are quried.
2） When input an User ID, only this employee's attendance record can be queried.

After query, the records in accordance with the conditions will be displayed on the screen:

Press "▲/▼" to move the cursor to the line to be queried. And press OK to check attendance record.

For example, the detailed attendance information of employee 10001 on May8th as follows:

At the botton of the screen, there are some remark, and the captial letters with their meanings:

Verification:

F: means Fingerprint verification

P: means Password verification

C: means ID Card verification

Status:

It is the attendance status. The code displayed in the list is the status code. And status name will be displayed in the information column.

9 System information

Use **system information** to check the current device's saving status, its version information and so on.

9.1 Record capacity

Display the count of enrolled users, administrator , password enrollment, the current enrolled fingerprint and the current saved attendance record. Also display the capacity of the fingerprint and attendance record, as show below:
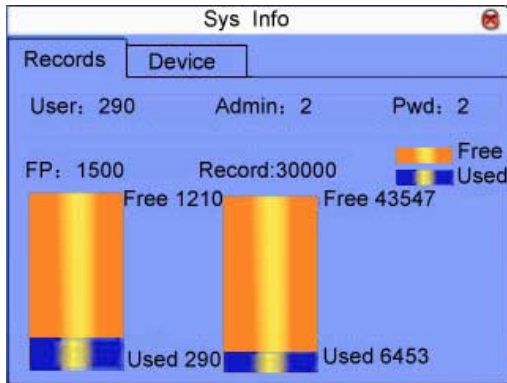
9.2 Device information

Display device name, serial number, version information, vendor and manufacture date in device information for check.
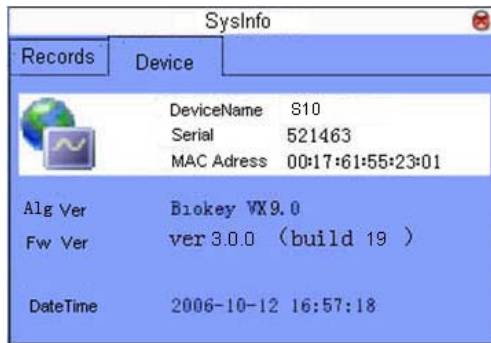
Appendix

Keyboard

Different device has different kinds of keyboard, and the function of the keyboard is different. Please check the fallows:

Keyboard type 1:

key	function
Numeric key	1. 0～9 , used to input employee number, password and so on. 2. 0 on **manage user** interface is **shorcut** of "query user".
▲	1. upward. 2. status key.
▼	1. downward. 2. status key.
►	1. modify current item value. 2. status key.
◉/◄	1. power-off. Press it on the initializing interface for 3 seconds to enter power-off count down state. 2. space back. Press it when User ID, password and systemvalue are input incorrectly to delete the wrong value and input the value again. 3. status key.
M/OK	Menu, OK
ESC	1. Cancel the operation and return to the superior menu 2. Press ESC on the initializing iterface to display the keyboar definition of the present device.

Keyboard type 2:

key	function
Numeric key	1. 0～9,used to input employee number, password and so on.
	2. 0 on **manage user** interface is **shortcut** of "query user".
▲	1. upward.
	2. shortcut.
▼	1. downward.
	2. shortcut.
*/▶	1. modify current item value.
	2. shortcut.
	3. enable T9 input.
	4. Switch input method in T9 input.
◀/←	1. modify current item value.
	2. Space back. Press it when User ID, password, and system value are input incorrectly to delete the wrong value and input the value again.
	3. shortcut.
0/◉	1. **power-off.** Press it on the initializing interface for 3 seconds to enter power-off count down state.
	2. shortcut.
M/OK	**menu**,**OK**
ESC	1. Cancel the operation and return to the superior menu.
	2. close T9 input.

USB

1. USB Host

The device will may be used as USB Host to exchange data with extrnal U disk.

The data transmission speed is quick, the traditional fingerprint machine only supports the RS232, RS485 or Ethernet way data transmission, when as a result of physical condition limit, data quantity big, and the data transmission cost quite long time. But the USB data transmission is more quick than the former any transmission mode, may complete downloading data by U disk in a short period of time, like this greatly enhances the efficiency.

The operational steps of the device as USB Host, please refer to the manual "6. U disk management" detailed briefing.

2. USB Client★

The device will be as removable storage devices and the data in the device willtransfer to a PC via conntectaly USB calbe.

When the device as an USB Client, the Communication Option will have USB communication options. Please refer to the manual "3 Communication Option" detailed brefing.

Time Ring★

In many factories, ringing apply to broadcast maessage to inform employee their duty are on or off, and the traditional way is to ring bell by manual or special electron machine. We have already embedded the time ring module into the fingerprint T&A system, you may benefit from the low cost and conveniece management. There are more two options that is Bell schedule and Bell duration in the device bell ring provide with. The system total has eight Bell schedule to set, according to actual need you may set time bell, when the time arrive at the appointed

time, the device will automatically ring bell, the duration of ringing achieve assighed hour, the ringing will stop automatically.

There are two to ring bell:

1). Send sound from the speaker of device.

2). Connect the electrical bell to the device, when arrive the appoint time, the fingerprint machine will send sigal to trigger relay.

T9 input method★

The name of T9 input method is the smart input maethod; it is famous for highly effective and quickly inputting the character, this equipment fully supports the T9 Chinese, the T9 English, and the symbol input. There are three or four English letters on 0 ~ 9 numeric keyboards of the machine, for example the numeric keyboard 1 has the A, B, the C three letters, only input key where this letter locate for the T9 Chinese , Press the algorithm of the program will automatically combine the legitimate Pinyin. Then press the numeric key to choose Pinyin for inputting the Chinese character. The T9 English also comply with the letter arrangement of English word to input, only press key which inputs this letter, the program automatically display this key expressed all letters, press the numeric key to select letter. The T9 input method also may input some marks. May input the name, the short message content through the T9 input method user is able to input the name, the short message content.

T9 Chinese character input (take "Angel" for example) :

Press ▶ to enter T9 input. And press ▶ to shift input method of Pinyin, English and Synbol, then select English.

Input "2" to get the first letter and press "3" to 'A'.

Use the same method to input the other letters "ngel".

Press ESC to exit

Quick query of attendance record

It is used for common user to query his intraday attendance record to see whether there is something wrong for attendance time and notify administrator the abnomal recorder in time.

Operation

Press �o▌← to display the employee's intraday records after successful fingerprint or password verfication in 10 minutes.

For example:the employee with User ID of 1 can check his intraday attendance record by pressing ▮ꞁ← after fingerprint verification.

☺**Notice**: The picture may be different from your device. The real product prevails.

Press ▲/▼ to read attendance record.

Press ▮ꞁ← to query detailed information.

Press **ESC** to return to initial interface.
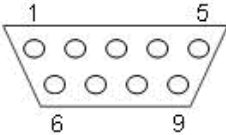
propaganda picture upload rules

1．The picture format must be JPG. Other formats are not accepted here.
2．The file name of propaganda picture must be ad_0～ad_9, for example ad_1.jpg.
3．The file name won't be changed after it is uploaded to the device. If it is necessary to change this picture, upload another picture with the same file name to cover it.
4．Every picture cannot be over 20K,or it cannot be uploaded.
5．The picture's resolution is 400 wide and 240 high. It is better not to be more or less than it.
6．The propaganda pictures' count should be 10 at most.

Print function★

【**Explain**】

This function is designed for a serial port printer only, the parallel printer is unavailable. the content that attempt to print output via RS232 , after each user is verified the result will be sended out through serial port. If device connect with the printer the result can be printed directly, can also use the Super Terminal to wiew the output content.

Device connect with printer	Device printer
	2 TXD <-----> 3 RXD 3 RXD <-----> 2 TXD 5 GND <-----> 7 FG
RS232 Pin-line order	

【**Connection**】
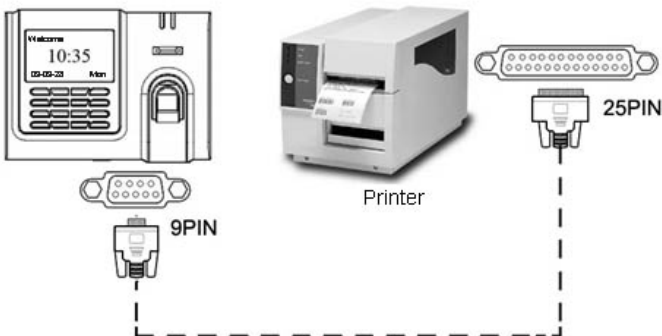
【**Instructions**】

1．In the device menu, enter **Menu**-->**Comm.**-->**RS232/485** and select baud rate as 19200.

2．In the device menu, enter **Menu**-->**Comm.**-->**Security** and select the print mode. There are 7 print modes to choose.

☺ Note: 1. It will print garbled informations or can't print when baud is selected not 119200.

2. When print mode is mode 5, it will prompt as the follows after attendance verification.
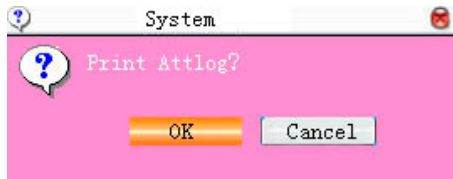
Press OK to print attlog in mode 5. press Cancel to not print attlog.

For example: San punched the card at 13:24:55 on September 1, 2009, there are different print formats to select, shown as below:

Version 1

00001　San　09/09/01　13：24：55　I

Version 2

User No：00001
Date Time　　Check-In
09/09/01　　13：24：55

Version 3

San　00001　09/09/01　13：24：55

Version 4

Break-In

15：24：55　01/09/2009

00001

Version 5

00001　09.09.01　13：24：55　Check-In

Version 6

00001

Date　　　Check-In

09.09.01　13：24：55

Version 7

User ID:00001

Check-In

09.09.01　13：24：55

Note: 1. Be sure that the fingerprint machine and printer (Super Terminal) have
the same baud rate.

2. If the default print format can not meet your needs, you contact our
business deputy our company is able to present other customized format

Short message management★

Our some product provide a function which can send a message to assigned
person through public to person way, We only need use the back-end software
to set it, then upload it to the fingerprint machine, , as long as the attendance
dive start the for public short message will be seen on machine screen, and it

will show for ever, for a person short message will not display until the user's fingerprint verification is positive, Thus reduces the work load to manager the human power , greatly enhances the working efficiency.

Send a message to a assigned personal，if a staff's birthday is on October 20 , we may set back-end software to send out a short message to him " wish your Happy Birthday" on 20 October , upload it in the machine, after this staff the fingerprint verify successfully on that day, this message will display on the screen

Send a message to public, if entire company needs to have a meet on June 19, after we set back-end software to upload the machine, upon this day, the message "holds XX meet in XX room" will continuously display on the screen, asks everybody (certainly such information you are allowed to revise according to your need) to XX participation"

Short message function setting：after setting Short message in the Time& Attendance software, then upload it to fingerprint machine, the fingerprint machine support two kind of way to import the short message, which the software connect with fingerprint machine to import it directly, other way by U flash disk.

Operation Step as follow：

1. Through Time & Attendance software "external program"-> "short message management" complete to set short message, then connect with the fingerprint machine and upload it, 2. through Time & Attendance software " external program"-> " short message management" complete to set short message, choose " external program"->"U flash disk manage"-> " export short message"-> "export to U disk", after exporting successfully, plug the U disk into the fingerprint machine, press "Menu" key of the fingerprint machine"->

"Pendri Mng"-> " Upload short message".

Short message function effect：For public short message will be seen and it will show for ever after this staff the fingerprint verify successfully , this message will display on the screen.

Note: there is total 1024 items of public for personal short message.

Card support (EM and Mifare Card)★

In order to meet security market need, our fingerprint biometric verification reader can be embedded EM and Mifare reader module**.**

Using 125MHZ, 13.56 MHz contactless smart card technology, these fingerprint products provide users with new options for supporting multi-authentication of identity. Combine a contactless card presentation with a fingerprint biometric. Or, use a personal identification number (PIN) number along with a contactless card presentation. (See multi-authentication).

The fingerprint products provide three levels of fingerprint verification. During the enrollment process, the LCD prompt will guide the user to place their finger on the sensor. The fingerprint template is collected at the unit and immediately transferred to the card. During this enrollment process, the fingerprint template is stored on the card or the fingerprint machine.

During verification at the door, the LCD graphical display will assist the user with instructions about finger placement on the biometric sensor.

For more detail see EM, Mifare Card user Guide

Web time & attendance★

Summary

The T & A system is based on Web Server technical, use Page Request technical to process and manage data, it integrate many feature ,such local data collection， intellectualized port (RS232/RS485), communication protocol conversion, image collection, alarm data stored up , and WEB server etc. basing on this equipment to create an unifying monitoring platform that supply one solution for equipment management, Time &Attendance, as well as monitor, in addition the Web Time & Attendance solution is independent on regional limit, and do not need to install other software. utilize IE or Netscape browser, downloading and remote on-line management, handle time sheet corrections and create report table on the fingerprint terminal is available , it supply easy way for manager of enterprise know the employ in post or attendance state at any moment, in time search for information, statistic data, deal with operation at same time, provide a solution of staff attendance , check in or out management, pay roll management, in word and deed realize that at everywhere any moment the information is synchronization, its go far beyond traditional Time & Attendance solution

Why does embedded Web Server into the device?

1. a few or nobody keep watch

Thought TCP/IP and Ethernet, WEB Server is able to reliable apply to local network, the data fingerprint machine store up can be watch and deal via long distance network，with browser it is not need to administrator or person specially assigned go to local for to achieve task collect data, upload and download data, as well as upgrade system, , not have other software and tools

2. Fully compatible with our company Inc program

WEB Server platform may be fully compatible with current program each other entirely is mutually beneficial, ability to much more flexible to meet customer need.

3. More reliable, fast through long distance transfer data

Through WEBSERVER，the data is able to reliable and fast be download local system, utilize browse ability to down all data in short time, do not worry about the data's reliability

4. More flexible, easy for data management and source share

Via the platform created by Web server, the application program, data management becomes more easy and flexible.

5. May easy integrate OA, CRM system, reliable base on network human force management.

9 digit code★

When go on enrolling user in the fingerprint machine, along with the standard enrolling code is five digit（its range is 1-65534）, if you need that the enrolling code is longer in the actual application, we can provide a customized design that the fingerprint machine own nine digit code.

Daylight Saveing Time★

Some device provides correct and current time in any world time period, country or major city. Accurate adjustments for Daylight Saving Time (or Summer Time) are made according to each location's rules and laws. No matter what time period a country or city is located in, this is your top choice for a clock resource site.

This function can be set in the fingerprint machine option, Press Manu key, enter the **option->date time**.   In the XX Month XX Date XX minute move forward

an hour, and that in the XX Month XX Date, XX Minute move Back an hour.

The operation refers to this manual 5.2 DLST.

About the human rights privacy statement

Dear customer：

First thank you for using Multi-biometric identification product we design and produce. As one of the global famous fingerprint identification core technology provider, we are nceasingly carrying on the development and research, also we believe such action is necessary to: (a) comply with the law or legal process served on Our company; (b) protect and defend the rights or property of Our company (including the enforcement of our agreements); or (c) be governed by related law or legal that involve to the human rights and the privacy in each country.

We are committed to protecting your privacy.

We state as follows:

1. Our civil fingerprints identification equipment merely captures fingerprint features point, but not the fingerprint image, does not involve and retain privacy.

2. The fingerprint features points are not to be recovered the primitive fingerprint image, will not involve the privacy.

3. We took an equipment provider, in no event shall we are liable for any direct or the indirect against legal behavior arising out of use or inability use our equipment.

4. If you have the different dispute for close the human rights or the privacy arising out of using our equipment, please directly contacts with your employer. Our other the police fingerprint equipment or the development kit provide with the function that ability to capture citizen's fingerprint primitive image, as for whether will constitute the right infringement to you, please contact with the local government or the equipment final

provider as the equipment original producer, we have not any legal liability for any damage it cause.

Note: There are limited rights to privacy and human rights in the Chinese Constitution.

The personal dignity of citizens of the People's Republic of China is inviolable and

further, that insult, libel, false accusation or false incrimination directed against citizens by any means is prohibited, the protection of freedom of the person and the residence .The Constitution provides for the freedom and privacy of correspondence of the citizen.

Finally we hereby stressed that once again, as one kind of advanced identification technology the fingerprint identification will apply to electronic commerce, bank, insurance, law service industry in the future,every year, all world cause from the lack of security password , the humanity are suffering the heavy loss. In under high safe and secure

environment the fingerprint identification protect your status from damage in fact.

Environmental protection

The environmental protection use period marked on our products is the safety period of our products used under the conditions specified by this manual without toxic and harmful substances leaking happened

The environmental protection use period marked on our products does not include the easy wear and tear components required to be replaced regularly such as the battery etc. The battery's environmental protection use period is 5 years.

The toxic and harmful substances or element names and the content table

Part name	The toxic and harmful substances or elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr6 +)	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
SMD resistor	×	○	○	○	○	○
SMD capacitor	×	○	○	○	○	○
SMD inductance	×	○	○	○	○	○
SMD diode	×	○	○	○	○	○
ESD components	×	○	○	○	○	○
Buzzer	×	○	○	○	○	○
Adapter	×	○	○	○	○	○
Screw	○	○	○	×	○	○

○：Indicate that the content of the toxic and harmful substance contained in all homogeneous materials of this part is in the limitation requirement stipulated in SJ / T 11363-2006.

×：Indicate the content of the toxic and harmful substance contained in at least one homogeneous material of this part is beyond the limitation requirement stipulated in SJ / T 11363-2006.

Note: The 80% product has adopted the manufacture with non-toxic and harmless environmental protection materials, the non-toxic and harmless substances or elements instead of the toxic and harmful substances or elements contained can not be achieved because of the current technology and economic constraints.