

# White LCD T&A Installation Instruction

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## **About This Manual**

This document describes the White LCD T&A installation guide and wiring instruction.



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# 1. Before Installing

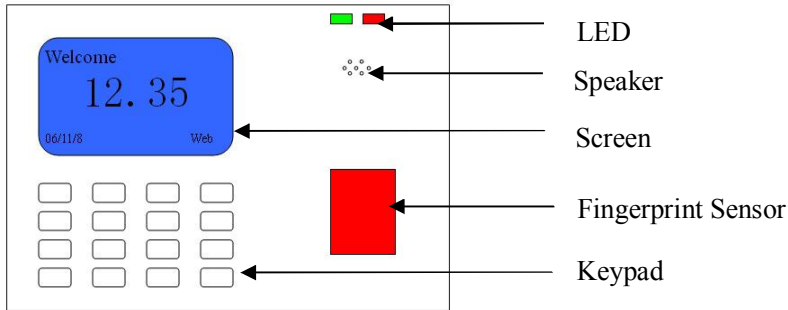
## 1.1 Notice

Our product is a mass-produced product. It always follows to the criteria of manufacture and inspection of China, U.S.A, and EU closely. This file contains important information. It is better for you to read it carefully prior to use. If you ignore it, the incorrect installation may cause the unit damage. Although we could do our best to offer you service, the neglect to the file could cause unwanted cost for you.

- ◆ Before installation, please make sure the power is cut off, because it is very dangerous if the power is on. The short-circuit of power cable may cause the core parts damage.
- ◆ Connect power supply with device in the last for the wiring connection. If you find any unusual thing occur, please firstly cut off the power, then go to examine. Keep in mind: wiring operation under power on will lead to machine sudden damage; we are not liable for damages and trouble due to such operation.
- ◆ The height to mount device is about 1.4-1.5 meter
- ◆ After installation finish, be sure to tear the dustproof film off on the sensor window, in order to get the best identification effect.
- ◆ Our equipment offer an automatically function, please after the installing finish. Run the auto-test function to confirm the installation finish.

- ◆ In order to guarantee machine run for long time, we set an auto-sleep and wake up function in the exit factory, please carefully examine this function normally setting before using.
- ◆ If your fingerprint machine is powered by AC adapter, use only the original factory –provided AC adapter approved for use with this fingerprint machine. Use of another AC adapter may cause damage; the warranty policy will be invalid.
- ◆ Before device to be connected please read and always follow “Quick connect Guide” closely. Because the wrong wiring will cause the core block and sensor to burn out, insult in device to break down, at this cause our company is not liable for any damages and trouble.
- ◆ If the space between power adapters and device is too long, please do not use the twisted-pair or other type ferrules for the power wire. When the power wire is choused, you should consider attenuation of voltage which has passed long distance transfer.
- ◆ Please use specialized RS485 cable and the RS232/485 converter with power to hookup the network, the bus structure apply to connect with each device. When a long cable is used to transfer signal, it is need to connect a matching resistance to receiver, and its value is  $120\Omega$ .
- ◆ Other not details items; please see also the user handbook, the operating instructions and the appendix and so on.

## 1.2 View of Operation Panel



**LED light:** On normally ready work state the green light glitters once per second; the green light is on for 3 seconds when a user verify successfully. At the same time if the user fails to verify, the red light will be on for 3 seconds.

**Speaker:** Give sound with operations.

**LCD screen:** It displays time, character and operation information.

**Fingerprint Sensor:** To enroll or verify fingerprint.

**Keypad:** It is used to input user ID or make menu operation.

## 1.3 View of Power and Comm. Port

**Electrical outlet:** Using for connecting the power.

**Ethernet port:** Using for network connection with the computer through Ethernet

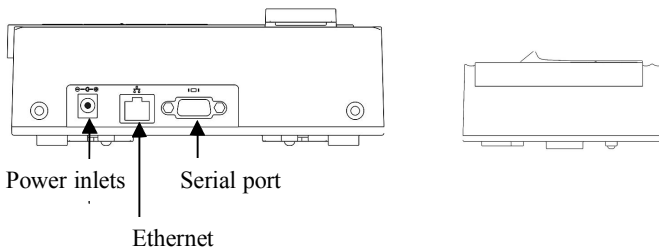
**Serial port jack:** Using for network connection with the computer through RS232

**USB slot:** Connect USB peripheral device (for example the U flash disk, fingerprint sensor and so on)

**Audio-jack:** Connect with extension sound box

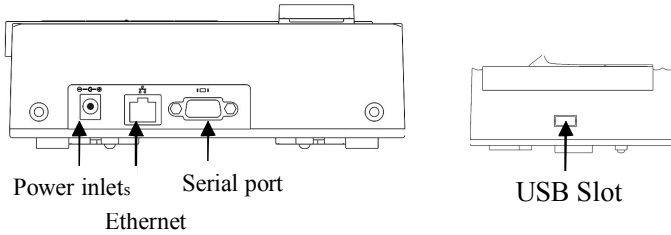
According to different the fingerprint machine model, the layout of fingerprint machine power and communication outlet is different, there are three type of layout.

A. There are electrical inlets, Ethernet port, and Serial port

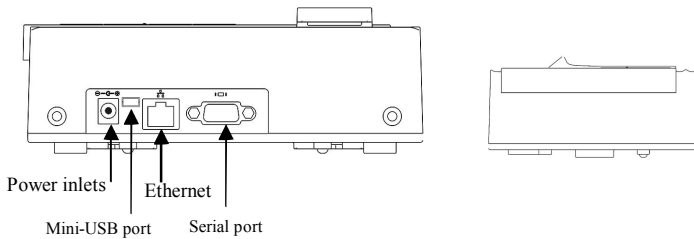




B1. There are electrical inlets, Ethernet port, and Serial port and USB slot



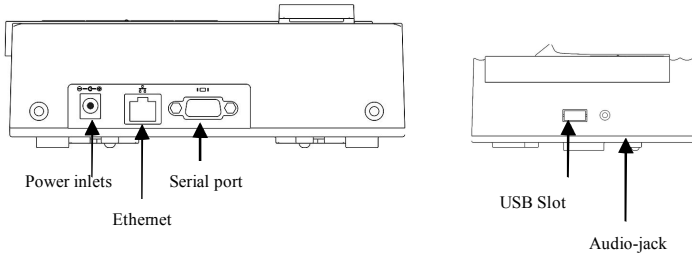
B2. There are electrical inlets, Ethernet port, and Serial port and USB slot.



C. There is electrical inlets, Ethernet port, Serial port and USB slot as well as audio-jack

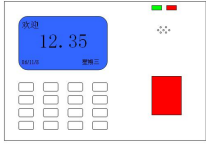
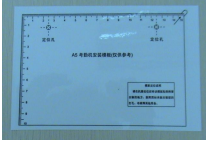


## Before Installing

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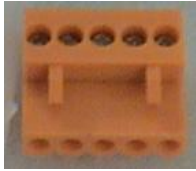







## 1.4 Package List

**Following list Component, which is not prerequisite, maybe there are not some unit in your fingerprint machine package, please to refer 《Package check list》 .**

Unit	Picture	Amount	Purpose
Fingerprint machine		1	
Mounting Template		1	Determine the positions which are prepared for drilling hole and wiring.
RS232 Cable		1	
Power Supply		1	Supply power for fingerprint machine.

Before Installing

Communication controller		1	Supply power for fingerprint machine and connect with communication controller
Power cable		1	
Data cable		1	
Connector terminal		2	Apply to connect electrical-lock
Installing bolt		2	Fix fingerprint machine on the wall
Wireless doorbell		1	Accept the signal from the fingerprint machine

Battery		3	
U flash disk		1	
USB converter		1	
Manual			

Before Installing

Illustration

Installation

After Installation







Others

Getting Start

Appendix

## 1.5 Other required equipment

**The following equipments are referred in this manual, but do not include the standard package.**

Name	Picture	Name	Picture
Computer		Door lock	
Release door button		Sound Box	
Network cable		RS485 Converter	

## 2. The sketch map of communication

- 1) Fingerprint machine directly connects with PC through RS232 or TCP/IP :

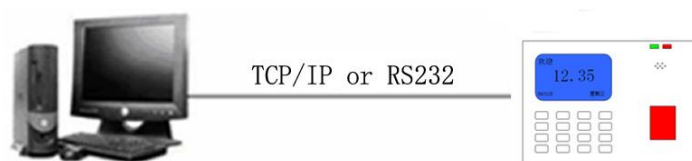


Figure2—1

- 2) Fingerprint machine connects with PC through RS485 network:

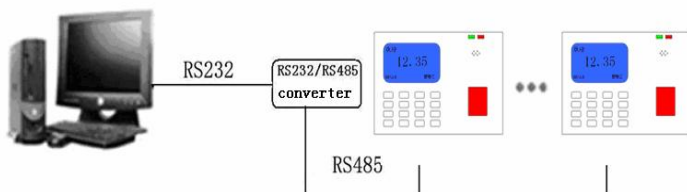


Figure2—2

- 3) Fingerprint machine connects with PC through TCP/IP network:

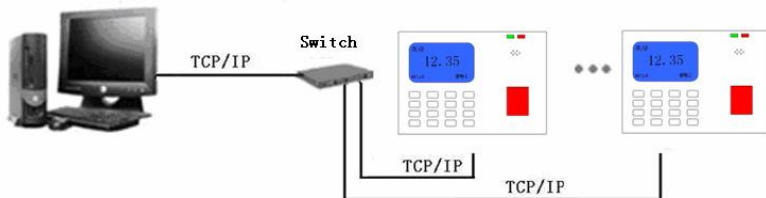


Figure2—3

## 3. Installation

### 3.1 Install fingerprint machine

- ◆ Determine the position of mounting plate on the wall. The fingerprint machine should be mounted on the wall of the approximately 1400mm from the ground to the unit bottom.
- ◆ After the position is determined, attach the installation template on the wall, you could drill two holes for fixing screw, these two holes should be on the same horizontal line
- ◆ Fix fingerprint machine:
  - 1) If the fingerprint machine has a mounting plate, use the screw to fix mounting plate on the wall, then tie this fingerprint machine on the mounting plate
  - 2) If the fingerprint machine has not a mounting plate, align fixed screw which is on the wall to hang up fingerprint machine.
- ◆ After installation, please make sure the fingerprint machine is reliable, fasten, not loose



## 3.2 Connect with peripheral equipment

**Caution: Do not to connect peripheral equipment before the power of the device is cut down, otherwise it is possible to damage the device badly. Always follow installation instruction closely.**

- Ethernet connection
- RS232 connection
- RS485 connection
- Door lock and release door button connection.
- Power connection

### 3.2.1 Ethernet connection

1) Connects with PC through cross cable.

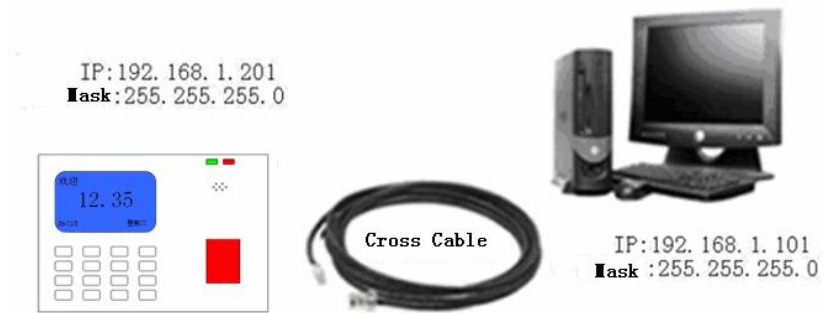


Figure 3—2

2) Connects with PC through network and HUB to create a local network.

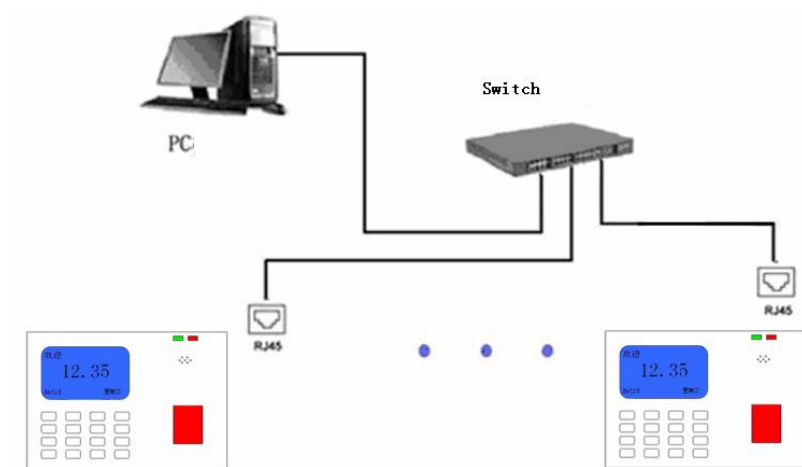
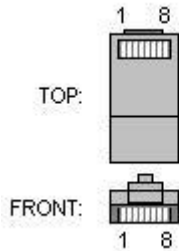


Figure 3—3

3) RJ45 plug wiring diagrams for Ethernet

a) RJ45 plug standard



b) Ethernet 10/100Base—T Crossover Cable

mostly apply to HUB and Switch, or directly connect two Ethernet terminals(not through HUB), fully support 10Base-T and 100Base-TX.

<i>Plug1</i>	<i>Pin</i>		<i>Pin</i>	<i>Plug 2</i>
TX+	1	<—>	3	RX+
TX-	2	<—>	6	RX-
RX+	3	<—>	1	TX+
RX-	6	<—>	2	TX-

c) Ethernet 10/100Base-T Straight Thru Cable

Support 10Base-T and 100Base-TX, apply to connect with network card and HUB (or network outlet), sometime it is called (whips)”

<i>Wiring standard</i>	<i>Pin</i>	<i>Color</i>	<i>Pin</i>	<i>Wiring standard</i>
TX+	1	<— white orange —>	1	TX+
TX-	2	<— Orange —>	2	TX-
RX+	3	<— white green —>	3	RX+
	4	<— Blue —>	4	
	5	<— Blue white —>	5	
RX-	6	<— Green —>	6	RX-
	7	<— White brown —>	7	
	8	<— Brown —>	8	

### 3.2.2 RS232 Connection

Along with our fingerprint machine there is a piece of RS232 cable supplied, connect one end of the RS232 cable with the RS232 outlet of fingerprint machine or control box, another one connect to PC serial port.

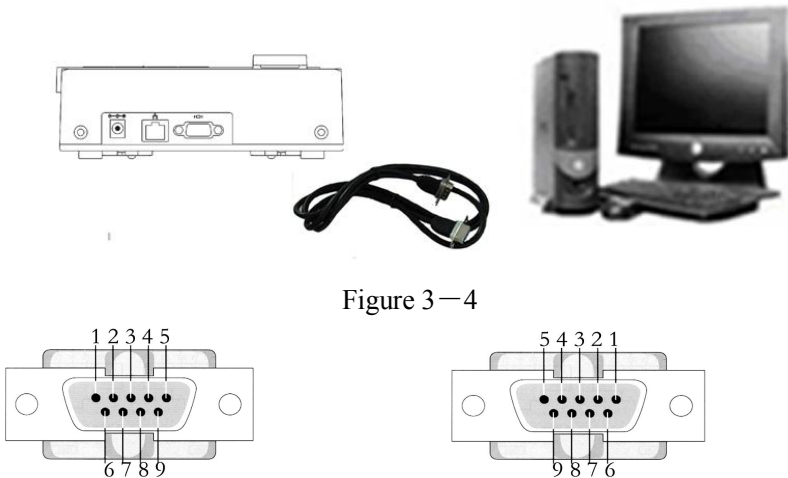


Figure 3—4

Fingerprint Machine Port

- 2----Received data (RTX)
- 3---Transmitted Data (TXD)
- 5—Signal Ground (GND)

PC Port

- 2----Received data (RTX)
- 3---Transmitted Data (TXD)
- 5—Signal Ground (GND)

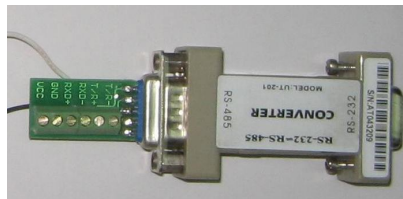
Connection way: 2 to 2、3 to 3、5 to 5.

### 3.2.3 RS485 Connection

like as follow picture, one end of RS485 adaptor is DB9 connector, other end is RJ45 jack, plug DB9 connector into the fingerprint machine serial port, fetch out RS485 signal from RJ45 jack..

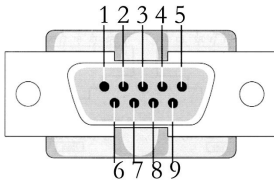


With RS 485 converter connect RS485 signal, which get from RJ45 jack, like following illustration. Then connect RS 485 into PC serial port.

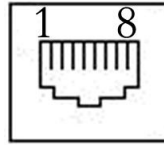


Because of the type of machine is different, the Pin definition also is different:

DB9, RJ45 there are two type of the signal transferred.

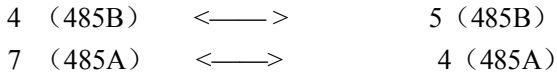


**DB9Connector**



**RJ45**

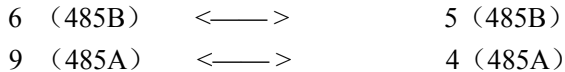
1. By 4, 7 PIN (T/R+, T/R-) of DB9 connector,



**DB9 connector**

**RJ45**

2. By the 6, 9 PIN (T/R+, T/R-) of DB9 connector to transfer RS485 signal



RS-485 systems using a bus structure configuration connect the more than two fingerprint machine. The transmission line is made by a group of pair-twisted cable. Each transmitted signal has a pair of conductors consisting of inverted and non-inverted signal lines, join RS485 signal ,from RS485 converter, into RS485 network, like as following illustration

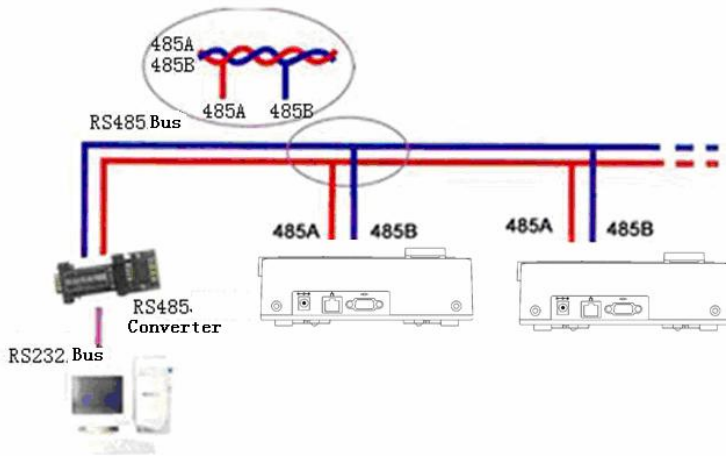


Figure3—6

**Notice:**

**RS 485 converter is not standard supply, you may buy it by yourself or contact with our sales to buy it.**

**Because there are differences of the RS485 signal defined in the DB9connector; if you fail to determine the definition of RS 485 connector PIN, please contact us to get technical assistance.**

### 3.2.4 Release door button and lock connection

**Some fingerprint machine may be powered by a controller box, under this condition, through the controller box to connect lock is available, the lock and fingerprint machine is separate, boost up the security, If the fingerprint authenticate successfully. The controller box will send a signal to control lock**

#### 1) Release door-button

The release door-button is installed for in-door operation. When the switch of the button is close, the door will open. The distance is approximately 1400mm from ground to exit-button bottom. Make sure that the exit-button position is to align correct, upright and the connection is accurate and reliable. (Unused exposed end of cable should be cut off, and use insulating tape to wrap it.) Pay attention to electromagnetic disturbance. (For example: The light switch, the computer and so on)

#### 2) Door Lock

The way of installing door lock depends on the type of lock and local condition. Internal resistor which comes from long distance transfer should be taken into consideration when selecting the cable of electric power. The door lock should be installed reliable and stable. Ensure the wiring is correct. For the strike lock and electromagnetic lock, you should pay attention to positive and negative terminal connection. The unused bare end of wire should



be cut off and use insulating tape to wrap it. The delay time of strike lock is adjustable according to different conditions.

**Select electric lock :** it is better to use **electric drop bolt** for the two –direction opening glass door (both open to inside or outside direction ) ,for the single opening wood door in company internal , we recommend to use magnetic lock, the magnetic lock also be called as electric magnetic lock,. The magnetic lock is more reliable than the electric drop bolt, but the electric drop bolt is much safer than the magnetic lock. In the small living community, it is better to use electric drop bolt and magnetic force lock. The electric control lock gives out higher noise; the electric control lock is commonly used to building communication. Now there is a soundless electric control lock which is able to be applied. Please pay attention, the lock is made of iron and easy rust, so you must beware of not exposing it to water or harsh condition, there are some other electric locks available, we don't recommend you to use them.

**Connect with electric lock :**Through the C1 controller box the fingerprint machine obtain the simple Access Control function, plug the power supply cable into the C1 power inlet( Power Supply), connect C1 controller box (8 pin line inlet) with fingerprint machine through the Ethernet cable which is along with the fingerprint machine, If the fingerprint authenticate successfully. The controller box will send a signal to control lock, the machine is able to support both of the two kinds of locks at the same time, and it is only need to connect with a different connection terminal

**Normally close( NC),** under normal state the equipment keep up

closed ,if force the equipment open, the circuit cut off, bring out the state change..

**Normally Open (NO)**, under normally state the circuit is cut off, if force the equipment open, the circuit will be closed, produce a state change.

The way of lock connection changes with the type of lock. For NO lock, the NO terminal will be used; for NC lock, the NC terminal will be used.

#### 1、 Normal Open Lock connection

Normal open lock is open when the power is off, because the normal open lock often is powered on, so its drive current always no more than 1A.abtilty to connect fingerprint machine with C1 controller. See figure 3—3

#### 2、 Normal Close Lock connection

Normal close lock is close when the power is off. Power-on and unlock, there are many kind of lock, please select the proper lock which drive current is no more than 1A, otherwise need to connect with external power and relay to control lock. See figure3—3

Plug connector(figure 3—2 a) into Controller box drew circle, in order to get convenience to fix lock connection, for more detail see each terminal wiring figure3-3



Figure3—2

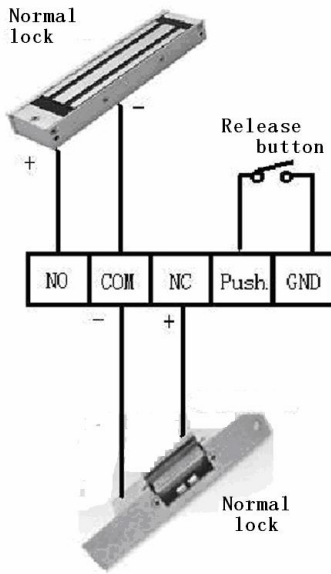


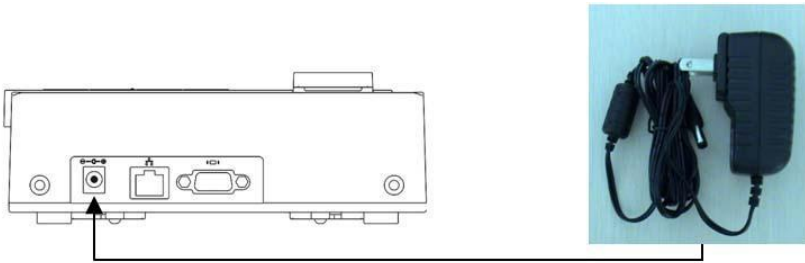
Figure3—3

### 3.2.5 Power supply connection

There are two way to supply fingerprint machine.:

1) **5V power supply** : The fingerprint machine is powered by an AC adapter (220V~5V), the fingerprint machine will automatically start and enter work state

Connection way: plug the adapter plugs into the fingerprint machine power inlets and power on it, see following figure.



2) Powered by C1 control box

Use specified data cable with RJ45 head plug to connect fingerprint machine with control box, the fingerprint machine is available to directly drive electric lock whose operating voltage is at 12V and current is less than 1 A through this supply power. Obtain the simple Access Control function.

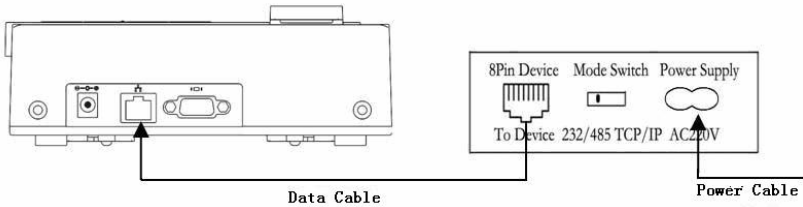


Figure 3—9

**Note:**

**When the control box is used, the RS232/RS485 communication port of control box is invalid; if the switch of control box must be switched to TCP/IP side.**

**If there is RS232/485 or fetching wire in the fingerprint machine, the RS232/RS485 communication port of control box is invalid the switch of control box must be switched to TCP/IP side.**

## 4. Take test after installation

After all system installation finished, make a test and examine prior to power on , inspect whether the lock driver is OK or not,, for more details, please see “User Guide” and “Software Manual”

- ◆ The green LED begins to glitter after power up.
- ◆ Enter menu->Option-> Auto-test.
- ◆ Enter menu->User manage->User Enroll-› Fingerprint Enroll, Enroll a fingerprint, and use the fingerprint to test system.
- ◆ If there is no any problem. Please delete this enrolled fingerprint.

## 5 Others

**This referred function only own by some fingerprint machine, the formation in this document is subject real fingerprint machine. If you have any question and request, please contact our business deputy or technician.**

### 5.1 Wireless doorbell

Put the doorbell in the proper place, press the doorbell key on the device, please see red circle mark, after the doorbell receive a signal, it will ring.

**Note: the doorbell is a wireless, so the distance from device to doorbell can not be too far, it will impact the receiver of doorbell signal if there is shield barrier. It is better that the distance between the doorbell and fingerprint machine is no more than 10 meter under no shield barrier condition.**

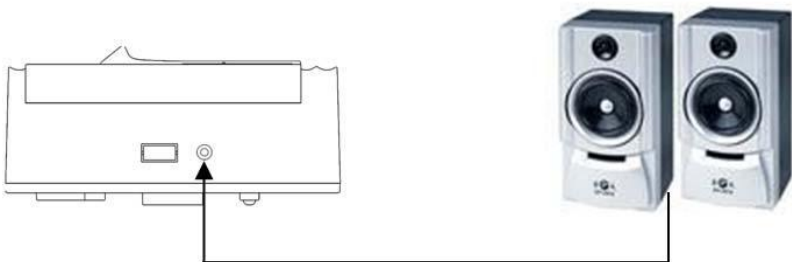
## 5.2 Using USB port

USB Port can be used to upload and download data by U disk, can be connected with U.are.U fingerprint sensor as an external fingerprint sensor. For more detail, please contact us to get technical assistance.

1. For USB slot position, please see 1.3
2. There are two type of USB slot.
  - a) Standard USB slot: directly plug only USB equipment
  - b) A mini-port of USB: Use USB converter to change mini-port into standard USB port.

## 5.3 External sound box

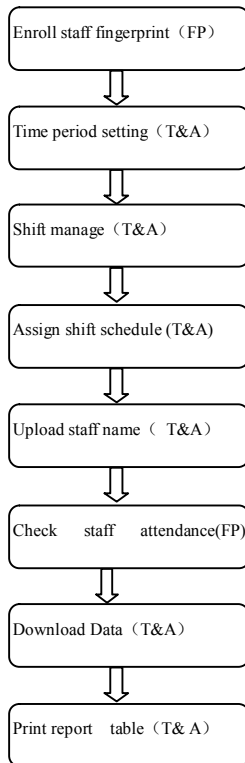
Some fingerprint machines include audio-output function; you insert only the audio-input cable of the sound box into left jack of the fingerprint machine, such as figure 5-3





# 6 First time getting start

## 6.1 Flow of Introduction



## 6.2. About the work flow

### 1. Take on operation in the fingerprint machine:

- 1) Enroll employee's fingerprint: Press Menu key, press up or down key and OK key till " please place finger..." appear on the screen, press finger three times, enroll fingerprint, then press Ok key, if you want to backup a fingerprint, may press ESC to enroll a backup fingerprint, after than press ESC key to begin enroll next fingerprint.
- 2) Manager Setting: Press Menu key, then press Ok key, to enroll manager, press" down scroll key" set super administrator.

### 2. Take on operation in the software:

- 1) Install software: after installing the software, be sure the fingerprint machine connect with compute, for more detail see appendix (1)
- 2) Input employee's name under "employee maintenance" directory, the forward part of user No. can not be "0", E.g. , Jack's No. is 1, and that can not be "0001"
- 3) Set the time under " Time Period" item, example, such as punch in or out four times per day, this Time Period is divided into "AM" and "PM", AM clock in time is 08:00, clock out time is 12:00, take as 0.5 workday, PM clock in time is 14:00; clock out time is 18:00,take as 0.5 workdays.
- 4) Click " shift schedule management" under " maintenance/

setting” item, click “+” symbol behind shift name , then click “+” symbol behind “ Shift Time Period”, add date of this Time Period to the shift period of time sort, if do not need to be on work on Sunday, may cancel the tick in front of this control bar, using same way to add the “PM”.

- 5) Upload the employee’s name to the fingerprint machine: through the menu “external program”,-> “ standalone fingerprint machine communication program” , ->“connect”, click “ employee and fingerprint management”, right-click the red tick, “ all cancel”, then right-click “ Upload employee Info.”, “all select”, then click “ execute”.
- 6) Assign staff shift schedule: click “all select”, then click the first picture behind “employee”, may assign staff shift schedule”.
- 7) T& A report table: if want to get the T&A report forms, through under the menu “external program”,-> “ standalone fingerprint machine communication program” , ->“connect”, click “ Download data from fingerprint machine”, then view the T&A table . Through “Query and calculate” preview report table, print corresponding report table.

**Note:**

- 1) **For more detail about enrolling staff’s fingerprint and manager setting, please see (User Guide).**
- 2) **about detail of the software operation step, please refer to ( T& A software instruction).**

# 7 Appendix

## 1) Fingerprint machine connect with software

The machine fully supports **RS232, RS485, TCP/IP**, whether the machine are used to a Single Unit or Link to Networking, it will satisfy the user's demands.

### A. Via RS232 connection

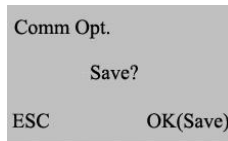
1. Take out the manufacturer provided RS232 cable, for more detail, please refer to 3.2.2 instruction.
2. Set this machine communication way as RS232, enter “menu-> option-> Comm.” To complete this setting, the result picture is like as following figure, pay attention to baud rate, Link code setting, for more detail, see the communication option in the (User Guide)

**Note: when RS232 is on, then RS485 must be off.**

Comm Opt	▼
▶ Baud Rate	115200
Dev Num	1
RS232	Y
RS485	N
Link code	0

3. After completing option , Press “ESC” key, enter the interface, prompt you to save the option, like as following illustration, select OK to save above option, select ESC to cancel saving above option.

**Note: After saving option, be sure to restart this device, so this option takes effect.**



4. Open the time & attendance management program, select “Device”, The value which fills in this interface should be relative to the 2nd step of machine “the communication option”.

**Device Number:** Identity ID, which is relative to the Device number in the fingerprint machine “Comm. Option”.

**Port:** communication port number of the selected compute, the default value as COM1, depending on the actual condition, other port can be used.

**Baud Rate:** there are five options, 9600, 19200 38400, 57600 115200; this means the speed of communication. We recommend value is 115200, which is relative to baud rate of the fingerprint machine “Comm. Option”

**Link code:** its default is that dot not need to fill in “Link code”, if the link code has been established in the fingerprint machine “the communication option”, need input corresponding link code (maximum digits are five).

**Name:** According to equipment, input the easy remembered name. When will use this software later, through designated this name

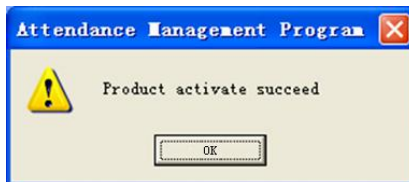
will be allowed to choose this fingerprint machine.

6. After setting connections, click the “test connection” button.

7. The prompt show as following figure “fail to connect” the dialog box, please inspect and examine 2nd step of and the 5th step of setting, then repeat 6th step.



8. The prompt show as following figure the “connect successfully” dialog box. Explain that between the fingerprint machine and the system have already established the connection relations.



9. After connects successfully, take on data transmission operation between the fingerprint machine and the time & attendance software. Please also see the standalone fingerprint machine communication program introduction of “Time & Attendance Software Instruction”.

## B. Connection through RS485

1. please see 3.2.3 introductions in this handbook.
2. Set the machine communication way as the RS485, enters “the menu - > option - > the communication option” to carry on setting. The result picture is such as following figure, please pay attention to the baud rate, the serial number, RS485 and link code setup. For more detail operation please see communication option introduction in the “User Guide”

**Note: When RS485 connection opens, RS232 connection must be close**

Comm Opt	▼
▶ Baud Rrate	9600
Dev Num	1
RS232	N
RS485	Y
Link Code	0

3. After setting, press “ESC” key, enter interface prompt you to save the option, like as following illustration, select OK to save above option, select ESC to give up.

**Note: After saving option, be sure to power off and restart this device, so this option take effect.**

Comm Opt.	
Save?	
ESC	OK(Save)

4. Open the time & attendance management program, select “Device”, The value which fills in this interface should be relative to the 2nd step of machine “the communication option”.

**Device Number:** Identity ID, which is relative to the Device number in the fingerprint machine “Comm. Option”.

**Port:** communication port number of the selected compute, the default value as COM1, depending on the actual condition, other port can be used

**Baud rate:** Through the RS485 connection, the recommend 9600/38400, its value is relative to “baud rate” in the fingerprint machine’s “communication option”

**Link code:** its default is that dot not need to fill in “Link code”, if the link code has been established in the fingerprint machine “the communication option”, need input corresponding link code (maximum digits are five)

**Name:** According to equipment, input the easy remembered name. When will use this software later, through designated this name will be allowed to choose this fingerprint machine.

6. After setting connections, click the “test connection” button.

7. The prompt show as following figure “fail to connect” the dialog box, please inspect and examine 2nd step of and the 5th step of setting, then repeat 6th step.





8. The prompt show as following figure the “connect successfully” dialog box. Explain that between the fingerprint machine and the system have already established the connection relation.



9. After connects successfully, take on data transmission operation between the fingerprint machine and the time & attendance software. Please see also see the standalone fingerprint machine communication program introduction of “Time & Attendance Software Instruction”.

## C. Through TCP/IP connection

1. Fingerprint machine connect with computer through Ethernet, for the specific connection method, please see 3.21 introductions.

3. Set the machine communication way as TCP/IP, enter “menu - > Option - > communication Option” to carry on the setup. The result picture is such as following figure; please note the IP address, the sub- net mask, the gateway address, the network speed and the link code setting. For more detail operation please see communication option introduction in the “User Guide”.

Comm Opt ▼	
▶ IP address	
Net Mask	
Gateway	
Net speed	AUTO
Net Num	1
Link code	0

3. After setting, press “ESC” key, enter interface that prompt you to save the option, like as following illustration, select OK to save above option, select ESC to give up .

**Note: After saving option, be sure to power off and restart this device, so this option take effect.**

Comm Opt.	
Save?	
ESC	OK(Save)

4. Open the time & attendance management program, select “Device”, The value which fills in this interface should be relative to the 2nd step of machine “the communication option”.

**IP address:** it defaults to IP address is 192.168.1.201. May according to oneself local area network sub-network to change the IP address, but cannot and in the local area network any terminal address conflict

**Port:** its default is 4,370, do not change it.

**Link code:** its default is that dot not need to fill in “Link code”, if the link code has been established in the “communication option” of fingerprint machine, need input corresponding link code (maximum

digits are five)

**Name:** According to equipment, input the easy remembered name. When will use this software later, through designated this name will be allowed to choose this fingerprint machine

6. After setting connections, click the “test connection” button.

7. The prompt show as following figure “fail to connect” the dialog box, please inspect and examine 2nd step of and the 5th step of setting, then repeat 6th step.



8. The prompt show as following figure the “connect successfully” dialog box. Explain that between the fingerprint machine and the system have already established the connection relation.



9. After connects successfully, take on data transmission operation between the fingerprint machine and the time & attendance software. Please see also see the standalone fingerprint machine communication program introduction of “Time & Attendance Software Instruction”.

## 2) Troubleshooting

Trouble	Cause & Measure
Power LED is off	<p><b>Cause</b> : No power or lack of voltage</p> <p><b>Measure</b>: ①Check and examine the connection of PWR, GND, make sure they contact well. ②Measure the supply voltage, ensure that it is 12VDC.</p>
Device is unable to connect with PC	<p><b>Cause</b>: The connection problem.</p> <p><b>Measure</b>: Check and examine the connection of RS232/RS485 or TCP/IP, whether its connection is correct or not.</p>
After device power is on, LCD display always shows “Please try again”.	<p><b>Cause</b>: ① For long time used, surface of fingerprint sensor becomes dirty, or there are some scratches on it, the device takes it as a fingerprint and does verification, ② Fingerprint connection cable of fingerprint sensor is loosed. ③Chip-on-board is broken.</p> <p><b>Measure</b>: ① Under such situation you can use scotch tape to adhibit the dirt. ②、③ Need to contact suppler and ask for repair.</p>
Startup bar cycles, and can't enter menu	<p><b>Cause</b> : ① Fingerprint connection cable of fingerprint sensor insert improperly</p> <p>②Fingerprint sensor broke down.</p> <p>③Chip-on-board is broken</p> <p><b>Measure</b>: ① Please take out the Fingerprint</p>

	<p>connection cable from slot of fingerprint sensor, plug it again.②、③ It need to contact supplier to repair.</p>
<p>The time display as “00:00” after restarting</p>	<p><b>Cause:</b> The clock battery is broke down.  <b>Measure:</b> Contact the reseller to replace a battery.</p>
<p>The fingerprint sensor light is off</p>	<p><b>Cause:</b> ① Fingerprint connection cable of fingerprint sensor connection is broken.                  ②fingerprint sensor broke down.  <b>Measure:</b> ① Please take out the FFC from slot of fingerprint sensor, plug it again.② Contact supplier, ask for repair.</p>
<p>keystroke and press finger without sound</p>	<p><b>Cause:</b> Trouble in the buzzer, loud- speaker or circuit.  <b>Measure:</b> Need to replace the buzzer and loudspeaker.</p>
<p>Some users’ fingerprints sometimes can’t be verified.</p>	<p><b>Cause:</b> The fingerprint quality is poor.  <b>Measure:</b> You’d better select fine fingerprint (less crinkle, no desquamation, clear image) when enroll fingerprint, make your finger touch fingerprint sensor with larger area, a comparable test should be made after enrollment, we suggest you enroll more fingerprints. By the way our device supports 1:1 match method and password identified function, you could choose one of them</p>

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