FING€RTEC

AC800 • AC800 PLUS • AC800 PLUS MC SERIES

FINGERPRINT TIME ATTENDANCE & DOOR ACCESS CONTROL SYSTEM

HARDWARE USER MANUAL

AC800 • AC800 PLUS • AC800 PLUS MC SERIES
FINGERPRINT TIME ATTENDANCE & DOOR ACCESS CONTROL SYSTEM

HARDWARE USER MANUAL

CONTENTS

INTRODUCTION TO FINGERTEC® AC800 MODELS

The FingerTec® AC800 models are bestseller models, which function to record time and attendance and to control access. For FingerTec® AC800 models there are three series available. AC800 is the standard unit, AC800 Plus is the high-end unit and AC800 Plus MC is the high-end unit with a card function. The differences of the AC800 models are tabulated in page 8.

Specifications	Model		
Model AC800		**AC800 Plus**	**AC800 Plus MC**
Functions	Time Attendance & Door Access System		
Series available	AC802, AC803	AC802	AC802
FP template capacity	1,500 (AC802) 2,800 (AC803)	1,500	
Transaction storage	100,000 (AC802) 150,000 (AC803)	50,000	30,000
Connections	TCP/IP, RS232, RS485	TCP/IP, RS232,RS485, USB Flash Disk	
Subnet mask & a gateway option	Not available	Available	
Work code function	Not available	Available	
Card reader	Not available		MiFare Card
Card capacity	Not applicable		4000 users if no fingerprint templates are stored inside reader
Sensor type	Optical sensor with silicon coating	URU 4000B Module with silicon coating	
Software language available	English, Arabic, Chinese Simplified, Chinese Traditional, French, German, Indonesian, Malay, Russian, Farsi, Portuguese, Spanish, Thai and Vietnamese.		

Complete Package – FingerTec® AC800 Model

AC800		AC800 Plus/AC800 Plus MC	
Power cable		Power supply cable 2	USB extention
RS485 cable extender	3-pin adapter	26-bits wiegand output cable	TCMS V2 software dongle
RJ45 cable	RS232 cable	Door accessories cable	Software CD
Communication I/O controller	Wireless doorbell	RS232 connector	Screwdriver
		Power supply cable	USB pen drive
Screwdriver		RS485 connector	Wireless doorbell
Software CD		DC 12V power supply	MIFARE Card (1 piece) **For AC800 Plus MC only**

9

Materials provided with FingerTec® AC800 Model

	AC800	AC800 Plus	AC800 Plus MC
Quick Start Guide	√	√	√
Hardware User Manual	√	√	√
Software User Manual	√	√	√
Video Guide for Hardware	√	√	√
Video Guide for TCMS V2	√	√	√
Sample of enrollment form	√	√	√

Basic Features of FingerTec® AC800 Model

1 LCD Display

4 Keypads

2 Speaker

3 L.E.D. Display

5 Fingerprint Sensor

AC800 Model

AC800 Plus/AC800 Plus MC Model

Note

Fingerprint Sensor
(URU 4000 Sensor)
Card Induction Area
(AC800 Plus MC only)

10

Number pad (0-9)
Escape/Cancel
Scroll Up/Check-In
Scroll Down/Check-Out
Power On/Off
Menu Function
Doorbell
OK
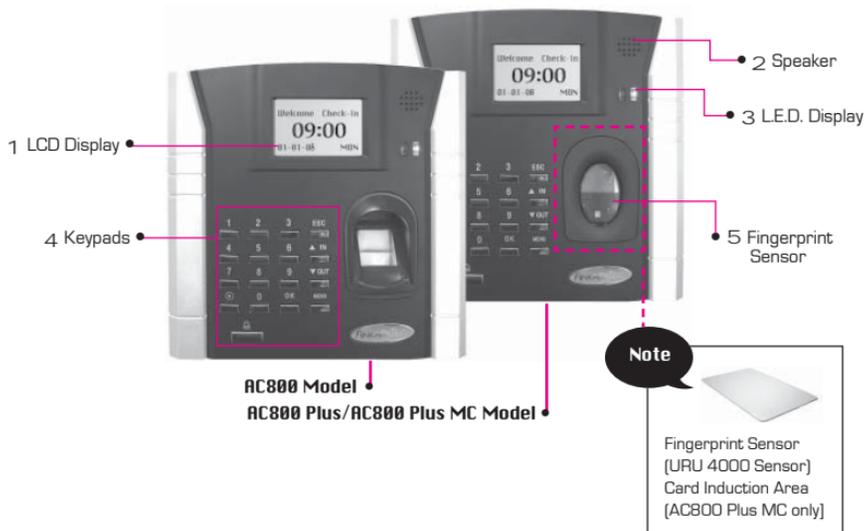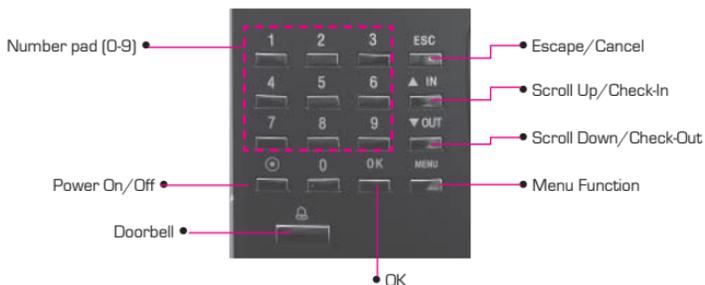
1 **L.E.D Display:** The L.E.D display has two lights.

Green	The reader is in standby mode or to indicate that user has been successfully verified.
Red	To indicate that user verification has failed.

2 **LCD Screen:** Screen that displays instructions and status of the reader.

3 **Speaker:** Indicating success or failure of fingerprint identification by voice greetings.

4 **Keypads:** Keys from 0-9, a Power on and off button, an OK button, an Escape/Cancel button, a Scroll up/ Check-In button, a Scroll Down/Check-Out button, a Doorbell button and a Menu button. Please refer to Figure 1.2 for details.

5 **Fingerprint Sensor:** For user to place fingerprint for identification/verification. AC800 is using optical sensor and AC800 and AC800 Plus & AC800 Plus MC are using URU 4000 sensor.

TYPES OF SCANNER	
Optical scanner Standard scanner to capture fingerprint image	**U.r.U 4000 scanner** Enhanced scanner with 512dpi to capture better fingerprint image

11

FingerTec® fingerprint reader provides 3 types of enrollment method:

• **Fingerprint   Enrollment**
   User enrolls his fingerprint template into a reader and the template will be used for future verifications.

• **Password   Enrollment**
   For user who has difficulty to enroll his fingerprint due to poor fingerprint quality, he is recommended to enroll password. Password enrollment is also suitable for visitors and temporary workers.

• **Fingerprint and Password Enrollment**
   Under this option, a user can enroll both fingerprint and password at the same time. The user can either use fingerprint or password to report attendance or to gain access.

USING THE FINGERPRINT READER

This chapter will guide on how to use the FingerTec® fingerprint reader effectively. To get a good reading every time, a fingerprint enrollment for the first time must be done properly.

• **Center points**
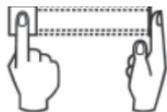
What you should do

Place finger flat on the finger-print sensor. Make sure the finger's midpoint is placed at the center of the fingerprint sensor.

What you should NOT do

UPRIGHT

ASKEW

OFF CENTER

PART

TIPS FOR BEST FINGERPRINT ENROLLMENT

There are 5 tips to get good fingerprint enrollment:

- **Use INDEX finger**
  Index finger is smaller than thumb and it can be comfortably placed on the sensor. The use of thumb is not recommended because the center points might not be placed properly on the sensor, hence cannot be read by the sensor due to its larger size.

- **Make sure the finger is not wet, too dry, injured or dirty**
  The finger needs to be slightly moist to enable the sensor to read the minutiae points on the fingerprint.

- **Place the center points of your finger at the center of the sensor**
  The center points of a finger is an area where there is a swirl and the center points must be properly placed on the sensor during enrollment.

- **Don't press hard at the sensor, just place your finger on the sensor**
  The sensor is reading minutiae points of your finger and placing a finger properly on the sensor will prompt the sensor to read those points. Pressing your finger hard on the sensor is not necessary.

- **Don't do enrollment under bright light or direct sunlight**
  It is important to note that bright light or sunlight could inter-fere with the reading of the sensor. Avoid placing the reader under direct sunlight or bright light to avoid difficulty in enroll-ment and future verification.

INITIAL SET UP OF THE FINGERTEC® FINGERPRINT READER

Date/Time Adjustment

When first installing the FingerTec® fingerprint reader, it is important to set the correct date and time.

Follow the steps below to access the Date/Time adjustment menu:

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	MENU Press once
User Manage ▸ Options Sys Info	▾ Press once OK Press once
▸ System Opt Power Mng Comm Opt	OK Press once
▸ Date Time Language ENG Fmt DD-MM-YY	OK Press once
	Use the keypad to key in the year, month and date. Scroll down more to change the day, hour, minute and seconds
YY-MM-DD 24H 2008-1-17 08:24:25 ESC OK	OK Press once

Enrollment

To assist in fingerprint enrollment, we have designed a form for the administrator to use to keep track of the enrollment detail or you can design your own form to suit to your company's requirements.

User Enrollment Template Form for FingerTec® Reader   Reader ID:_____

No.	User ID	Employee No.	Name	Department	IC No.	No. of Fingers Enrolled	Date Registered	Note	Signature

Enrollment of Supervisor/Administrator

Once the FingerTec® fingerprint reader is switched on, a display on the screen will appear. First, to enroll a supervisor or an administrator, who is the in-charge person to administer the fingerprint templates and the transaction data in the FingerTec® reader. Choose trustworthy people for this particular role.

When you see this	Do this

Welcome   Check-In
08:24
07-01-08   Mon

(MENU) Press once

▸ User Manage
   Options
   Sys Info

(OK) Press once

   Enroll User
▸ Enroll Admin
   Delete

(▼) Press once
(OK) Press once

▸ Enroll FP
   Enroll Pwd
   FP & Pwd

(OK) Press once

Admin Accredit
     Supervisor
ESC   OK

(OK) Press once to confirm or
(ESC) Press once to cancel operation

Enroll FP
     New Enroll
ESC   OK

(OK) Press once to confirm or
(ESC) Press once to cancel operation

New Enroll
User ID 00001
ESC   OK

Press 1 on the keypad for ID 00001
(OK) Press once to confirm or
(ESC) Press once to cancel operation

When you see this	Do this

New Enroll
     00001
Place Finger...
     ESC/Exit

Place the center point of fingerprint properly on the sensor. Place fingerprint 3 times during enrollment.

Read page 11 for tips on fingerprint scanning technique.

New Enroll
     00001-0
ESC   OK [Save]

This shows templates has been successfully captured; and "-0" means that the first fingerprint template is recorded.
(OK) Press once to confirm or
(ESC) Press once to cancel operation

New Enroll
   Continue?
ESC   OK [Save]

(ESC) Press once to add backup fingerprint for enrolled user ID. or
(OK) Press once to add new user

Backup Enroll
     00002-1
Place Finger...
     ESC/Exit

Place the center of your fingerprint properly at the sensor. Place the fingerprint 3 times in order for the reader to capture the fingerprint templates.
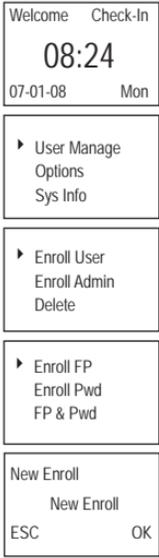

Backup Enroll
User ID 00001-1
ESC   OK [Save]

This shows templates has been successfully captured; the "-1" means template of the second finger is captured good.
(OK) Press once to confirm or
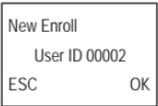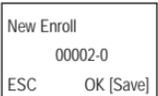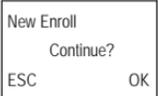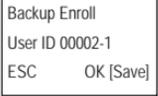(ESC) Press once to cancel operation

---

Congratulations! A supervisor has been enrolled in the system. As a supervisor, he can manage the FingerTec® fingerprint reader by adding users, deleting users and various other functions through the keypad.

Enrollment of Normal User

A normal user is only allowed to use FingerTec® reader for identity verification, and he does not have any other authorities to access the system. To add a nomal user, follow the steps below:

| --- | --- |
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once
▸ User Manage Options Sys Info	(OK) Press once
▸ Enroll User Enroll Admin Delete	(OK) Press once
▸ Enroll FP Enroll Pwd FP & Pwd	(OK) Press once
New Enroll New Enroll ESC OK	(OK) Press once to confirm or (ESC) Press once to cancel operation

To enroll more users, repeat the same steps above.

| --- | --- |
New Enroll User ID 00002 ESC OK	Press number 2 on the keypad for ID 00002 (OK) Press once to confirm or (ESC) Press once to cancel operation
New Enroll 00002-1 Place Finger... ESC/Exi	Place the center point of your fingerprint properly at the sensor. You need to place your fingerprint 3 times for your reader to capture your fingerprint template.
New Enroll 00002-0 ESC OK [Save]	This shows template has been successfully captured; the "-0" means template of first finger is captured good. (OK) Press once to confirm or (ESC) Press once to cancel operation
New Enroll Continue? ESC OK	(ESC) Press once to add backup fingerprint for enrolled user ID. or (OK) Press once to add new user.
Backup Enroll 00002-1 Place Finger... ESC/Exil	Place center point of fingerprint properly at the sensor. Place the fingerprint 3 times for your reader to capture your fingerprint template.
Backup Enroll User ID 00002-1 ESC OK [Save]	This shows template has been successfully captured; the "-1" means template of first finger is captured good. (OK) Press once to comfirm (ESC) Press once to go back

17

Fingerprint Verification

FingerTec® reader supports 2 types of finger-
print verification method. User can choose
either method to verify his fingerprint at the
FingerTec® reader. 2 types of fingerprint veri-
fication methods are:

• 1 to Many (1:N) fingerprint matching
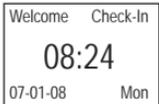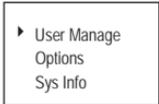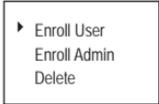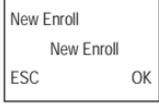• 1 to 1 (1:1) fingerprint matching

1 to Many (1:N) Fingerprint Matching

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	Place the enrolled finger prop- erly on the fingerprint sensor.
FP Verify Remove finger	Wait a second before removing the finger from the fingerprint sensor.
FP Verify User ID 00001 Verified	FingerTec® reader verifies that the user ID is 00001.
FP Verify Please Try Agn.	If a finger failed to be verified by the FingerTec® reader, it will prompt the user to try again.

1 to 1 (1:1) Fingerprint Matching

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	Key in the user ID as defined when enrolling a finger on the FingerTec® fingerprint reader. For example 1 for 00001.
1:1 FP Verify User ID 00001 ESC OK[Pwd]	Place the enrolled finger prop- erly on the fingerprint sensor.
1:1 FP Verify User ID 00001 Verified	The FingerTec® fingerprint sen- sor verifies that the user ID is 00001.
1:1 FP Verify User ID 00001 Please Try Agn.	If a finger failed to be verified by the FingerTec® reader, it will prompt the user to try again.

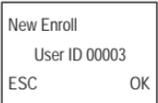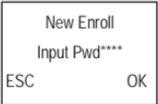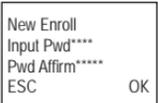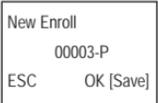## Password Enrollment

For user who cannot enroll his fingerprint, he can choose to use passwords. Follow the steps below:

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once

▶ User Manage
  Options
  Sys Info
	(OK) Press once

▶ Enroll User
  Enroll Admin
  Delete
	(OK) Press once

▶ Enroll FP
  Enroll Pwd
  FP & Pwd
	(▼) Press once
	(OK) Press once

New Enroll New Enroll ESC OK	(OK) Press once to confirm or (ESC) Press once to cancel operation

When you see this	Do this
New Enroll User ID 00003 ESC OK	Press number 3 on the keypad for ID number 00003 (OK) Press once to confirm or (ESC) Press once to cancel operation
New Enroll Input Pwd**** ESC OK	Key in the password Maximum 5 characters in length (OK) Press once to confirm
New Enroll Input Pwd**** Pwd Affirm***** ESC OK	Retype the password for confirmation and (OK) Press once to confirm
New Enroll 00003-P ESC OK [Save]	The "-P" shown means that password has been successfully recorded. (OK) Press once to confirm or (ESC) Press once to cancel operation

Password Verification

User with password enrollment can always use password to report attendance or gain access from the FingerTec® readers.

Deleting Users

The FingerTec® system also allows deletion of user from the system. This is important as employees come and go. Therefore, for those who had left the company, their fingerprint templates or records must be deleted from the system to avoid any misuse of the system. Only an administrator or a supervisor has the rights to delete user. Follow the steps below to delete any user:
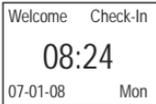
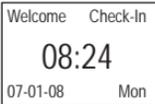| When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	Key in the user ID by using keypad
1:1 FP Match User ID 00003 ESC OK	Press OK to confirm that it is the correct ID. (OK) Press once to confirm
Pwd Affirm User ID 00003 ESC OK[PWD]	Key in the matching password by using keypads (OK) Press once to confirm

Pwd Affirm
    User ID 00003
    Verified!
	The FingerTec® fingerprint reader verifies that user ID user ID is 00003

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once

▸ User Manage
  Options
  Sys Info
	(OK) Press once

Enroll User Enroll Admin ▸ Delete	(▼) Press 2 times (OK) Press once
Delete User ID 00001 ESC OK	Key in user ID (OK) Press once

20

When you see this	Do this

Del Fingerprint

1-0

ESC　　　　　OK

OK Press once to confirm or
ESC Press once to cancel operation

Del User

1

ESC　　　　　OK

OK Press once to confirm or
ESC Press once to cancel operation

Del User

Delete

ESC　　　　　OK

OK Press once to confirm or
ESC Press once to cancel operation

User will be deleted from the reader following the above steps.

Note Remember to key in the correct User ID for deletion.

BRIEF INTRODUCTION TO ACCESS OPTIONS

Access option function setting is the settings of user's accessibility to certain doors. It is known as Time Zone. A combination of time zones is known as Group Time Zone. There are a total of 50 time zones available in FingerTec® AC900 model. Below are some examples of Time Zone configurations and combinations of Time Zones.

Time zone	SUN	MON	TUE	WED	THU	FRI	SAT
1	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00

Table 1.1 Time Zone 1

Time Zone 1: Constant access time for a period of one week

Table 1.1 is showing the time zone 1 detailed schedule where users are only allowed access from **9am to 6pm from Monday to Sunday.**

Time zone	SUN	MON	TUE	WED	THU	FRI	SAT
2	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00
3	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00	09:00-18:00

Table 1.2   Time Zones 2 & 3

Time Zone 2: Variation in access for a period of one week
Table 1.2 is showing the time zone 2 where users are allowed to access from 8am to 12pm from Monday to Friday but denied any access on the weekends.

Time Zone 3: Variation in access for a period of one week

Table 1.2 also is showing the time zone 3 where users are allowed to access from 2pm to 6pm from Monday to Friday but denied any access on the weekends.

The Time Zone 2 and Time Zone 3 belongs to the same group of employee, therefore they can be grouped together in Group Time Zone, for example Group Time Zone 1.

There are a total of 5 Group Time Zones available for use.

Every new registered user belongs to Time Zone 1. Default grouping combination is Group 1 and default Group Time Zone 1.

Group time zone	Time zones		
1	2	3	
2			
3			
4			
5			

Table 1.3 Group Time Zones

Under a condition where Group 1 and Time Zone 1 are in factory default status, new registered user defaults in unlocking status. If the grouping of that user does not include in grouping combination setting, then user can only record time attendance but cannot unlock the door.

```
Access Options      ▲
▶ Define TP
   User Acc Opts
   GRP TZ Define
```

```
Access Options      ▲
   GRP TP Define
   Access Comb
   Lock         254
```

"Access Options" has 5 main functions:

Define TP	To define time zones unit in Access Option.
User Acc Opts	To process correlative setting according to user's requirement.
GRP TP Define	To define group time zones, a group can support up to 3 different time zones.
Access Comb	To define different Time Zone combinations, and each combination is composed of different groups.
Lock	To control time to open electronic lock. The value 250 represents (5 sec), 200 (4 sec), 150 (3 sec), 100 (2 sec) and 50 (1 sec).

VERIFICATION FLOW OF ACCESS OPTIONS
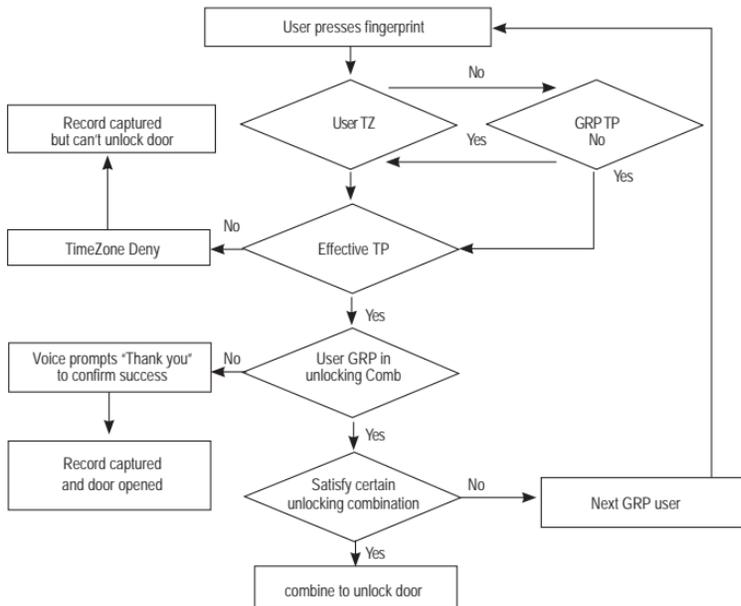
If a user verifies his fingerprint and he is the user assigned in the time zone, the system will check whether the user is included in the user group of unlocking combination. If yes, he has to satisfy certain unlocking combination for the door to be unlocked. If he does not satisfy the unlocking combination required, he will be denied access and he needs to be verified again.

If the user is in the time zone but not included in the effective time zone, he will be denied entry but the data of his fingerprint will be recorded as data for time & attendance.

If the user is included in the time zone but not included in the user group for unlocking combination, the user's data will only be recorded as time & attendance data and he will be denied access.

FUNCTION DESCRIPTION DEFINITION OF TIME ZONE

Time Zone	Range of time specified for access options. The system can define a maximum of 50 time zones. Each user can set a maximum of 3 time zones.
Time Region	A certain period of time with a format of HH:MM – HH:MM, operates in 24 hours format and accurate to the minutes. For each time zone, 7 time regions can be set.

- **Enter "Define TZ" and screen displays as follows:**
  Press "OK" to enter settings of time zone 1 and the screen will display as follow:

```
Define TZ        ▲      Def Time Zone 1   ▲      Def Time Zone 1   ▲      Def Time Zone 1   ▲
 ▸ Time Zone No            Sun  00:00-23:59        Tue  00:00-23:59        Thu  00:00-23:59
                          Mon  00:00-23:59        Wed  00:00-23:59        Fri  00:00-23:59
ESC           OK           Tue  00:00-23:59        Thu  00:00-23:59        Sat  00:00-23:59
```

Definition of time zone 1 above is all-day open, i.e. factory default status.

- **For example:**
  Users are allowed to access from 08:30-18:00 during work time from Monday to Friday. Saturdays and Sundays are off day in which the users are not allowed any entry.

  Users are allowed to redefine the time zones depending to their practical requirements.

```
Def Time Zone 1   ▲      Def Time Zone 1   ▲      Def Time Zone 1   ▲
 Sun  23:59-00:00         Tue  08:30-18:00         Thu  08:30-18:00
 Mon  08:30-18:00         Wed  08:30-18:00         Fri  08:30-18:00
 Tue  08:30-18:00         Thu  08:30-18:00         Sat  23:59-00:00
```

DEFINITION OF GROUPING FUNCTION

Grouping function can segregate users into group and combine different groups into different unlocking combinations. The function provides convenience to grouping management of Access Options. The grouping function can combine as many unlocking combinations as possible from the five groups. New registered user default belongs to Group 1 but the users in Group 1 can be relocated into another group.

• Enter "GRP 1 TZ Define" and screen displays as follows:

```
GRP TZ Define  ▲
    Group No.
       1
ESC         OK
```

```
GRP1 Dflt TZ  ▲
TZ 1          1
TZ 2          8
TZ 3         40
```

There are 3 time zones in GRP TZ Define. Relationship amongst these 3 time zones is "OR". Group 1 is effective in time zone 1, 8 and 40.

Press OK to enter

• Enter "GRP 2 Dflt TZ" and screen displays as follows:

```
GRP TZ Define  ▲
    Group No.
       2
ESC         OK
```

```
GRP1 Dflt TZ  ▲
TZ 1          1
TZ 2          8
TZ 3         40
```

Setting of time zone of group 2:
From the diagram shown above, Group 2 is effective in time zone 2, 10 and 38.

Press OK to enter

USER ACCESS OPTIONS

User Access Options is to process correlative setting according to user's requirements.

• Enter Access Options menu to check user's Access Options status.
User Access Options include user grouping setting, use group time zone and user time zone

Grouping	divides registered users into several groups making it managable.
Use group time zone	is whether the user uses default time zone of the belonged group.
User time zone	is for user to set user's unlocking time, and select number of time zone already being set.

• **Example of settings:**
The following example is to set user 00001 and 00002 to group 1 and group 2, respectively.
* Enter setting interface of serial number 00001, and screen displays as the following:

Press "OK" to enter setting menu of use group time zone. Press "▲" and "▼" keys and select "Yes". The screen will display as the followings:

User Acc Opts ▲		User 00001 Opt ▲		User 00001 Opt ▲	
Enroll ID: 00001		Belong to GRP	2	TZ 1	1
		Use GRP TZs	No	TZ 2	40
ESC	OK	TZ 1	1	TZ 3	48

User of serial number 00001:
User's belonged grouping is "1", it uses time zone of group 1 (serial number of user time zone is serial number of group time zone).

• **User 00001 is effective in time zone1, 8 and 48.**
* Enter setting the interface of serial number 00002, and screen will display as the followings: Press OK to enter.

If serial number of user time zone is 1 or 20, then use group time zone automatically change to "No".

User Acc Opts ▲		User 00002 Opt ▲		User 00002 Opt ▲	
Enroll ID: 00002		Belong to GRP	2	TZ 1	1
		Use GRP TZs	No	TZ 2	20
ESC	OK	TZ 1	1	TZ 3	

User of serial number 00002:
The user belongs to Group 2, he does not belong to any Group Time Zone but his effective time zones are 1 and 20.

When he wants to use group time zone, select "Yes". In user time zone, serial number of group time zone will be automatically assigned the value if serial number of group time zone. In contrary, if a user wants to use user time zone, just directly modify the serial number in user time zone and use group time zone will automatically change to "No".

ACCESS COMB

In order to allow user to use different time zone groups, please set the followings accordingly:
- Comb1 value set to 1
- Comb2 value set to 2
- Comb3 value set to 3
- Comb4 value set to 4
- Comb5 value set to 5

Access Options	▲
▸ DSen Delay	10
DSen Mode	NC
DSen Alarm	

DSEN. DELAY (Door sensor delay)
DSen. Delay can be configured to alert users if a door is not closing well after a time period and the input is in second format. Door sensor must be installed prior to activation of this option.

Access Options	▲
DSen Delay	10
▸ DSen Mode	NC
DSen Alarm	

DSEN. MODE (Door sensor mode)
DSen Mode to configure the time for internal buzzer to alert user if door is not closing well. You must install door sensor to activate this option.

Access Options	▲
DSen Delay	10
DSen Mode	NC
▸ DSen Alarm	

DSEN. ALARM (Door sensor alarm)
DSen. Alarm can be configured to alert users if a door is not closing well after a time period.

DURESS OPTIONS

The FingerTec® AC800 model will trigger the alarm system after a duress fingerprint is verified successfully.

MANAGEMENT OF DURESS FINGERPRINT

Duress FP   ▲
▶ New Enrollment
Def. Duress FP
Undef Duress FP

Duress FP   ▲
New Enrollment
Def. Duress FP
Undef Duress FP

Duress FP   ▲
New Enrollment
Def. Duress FP
▶ Undef Duress FP

Duress FP   ▲
Def. Duress FP
Undef Duress FP
▶ Undef. All

Enrollment of Duress Finger	Allow enrollment of new fingerprint as duress fingerprints. Procedure for enrolling duress fingerprint is the same as normal enrollment.
Define Duress Finger	Define fingerprints to become duress fingerprint. User could use the same fingerprint for normal activity to become duress fingerprints. Recommended to define backup finger as duress finger. **Note** Do not use duress finger to clock in or out. Duress finger is only used in AC800 model to send signal to alarm system.
Undefined Duress Finger	To delete duress fingerprint. User is still able to use the particular fingerprint to clock in and out.
Delete all	To delete all duress fingerprints in the reader.

Duress Options   ▲
Duress FP
▶ Help Key   Y
1:1 Trug   N

Help Key

You may choose to change the Help Key to "Yes". Please hold down " ▼ " key for 3 seconds followed by the duress fingerprints verification. Success in duress fingerprint verification could trigger the alarm system.

Trigger Method

Duress Options ▲	Duress Options ▲	Duress Options ▲
Duress FP	Duress FP N	1:1 Trlg N
Help Key N	1:1 Trlg N	1:N Trlg N
▸ 1:1 Trlg Y	▸ 1:N Trlg Y	▸ Pwd Trlg Y

There are 3 types of trigger method, which are:

1:1 Trigger	To trigger alarm by using 1:1 fingerprint verification. Use 1:N matching or password verification during normal operation to avoid conflict.
1:N Trigger	To trigger alarm by using 1:N fingerprint verification. Use 1:1 matching or password verification during normal operation to avoid conflict.
Password Trigger	To trigger alarm by using password verification. Use fingerprint verification during normal operation to avoid conflict.

You may choose only one method or all methods.

Duress Options   ▲
1:1 Trlg   N
Pwd Trlg   N
▸ Alam Delay   10

Alarm Delay

The timer could be configured to set off the alarm after successful verification on fingerprint. The time range is from 0 to 255 seconds.

FingerTec® AC900 models are provided with output for alarm system. Two types of signal could be used:

• **NO (Normally Open)**
• **NC (Normally Close)**

Consult your installer for more details. Email to **support@fingertec.com** for more information.

SYSTEM OPTION

Options ▼
▸ System Opt
   Power Mng
   Comm Opt

System option enables user to configure the following areas:
• Date & Time Setting
• Date & Time Format
• Languages
• Advance Options

Reset Opts	to restore all settings back to original factory settings
Del Attlogs	to clear all attendance log stored in reader
Clear all Data	to clear all user data (i.e user name, ID number)
Clr Admin Pri	to clear administrator's privilege
Del Slogs	to delete all records of action performed by an administrator or a supervisor.
Show Score	to show the quality of image captured during verification, the maximum is 50
Match Thr	to configure sensitivity of the optical sensor for 1:N matching
Must Input ID	to disable 1:N matching method
1:1 Thr	to configure sensitivity of optical sensor for 1:1 matching
Adj VOL(%)	to adjust the volume of greeting voice.

POWER MANAGEMENT

Options ▼
   System Opt
▸ Power Mng
   Comm Opt

This enables user to manage the reader in the following areas:

Shut down	to enable a specific time for reader to shut down
Lock power	To lock power button to avoid shutting off of a reader accidentally or intentionally by unauthorized person

COMMUNICATION OPTION

Options ▾
System Opt
Power Mng
▸ Comm Opt

This is to configure communication settings of Q2 readers. User can choose the type of communication (TCP/IP, RS232 or RS458). Improper settings will cause connection to computer to fail.

Those options are:

Baud rate	to adjust baud rate of connection with RS232 or RS485
Dev num	the number of reader in an installed environment
IP Addr	to configure the IP address of reader
Net speed	to adjust the speed connection of Ethernet
Netmask	to configure netmask to suit reader into local area network.
Gateway	to configure gateway to suit reader into local area network.
Ethernet	to enable or disable Ethernet as communication method
RS 232	to enable or disable RS232 as communication method
RS 485	to enable or disable RS485 as communication method
COMM key	communication key between reader and software, always set to "0"

LOG OPTION

Options ▾
Power Mng
Comm Opt
▸ Log Opt

If reader has capacity storage limit of a maximum 100,000 transaction logs and to ensure that all transactions are intact in the reader, user can adjust the warning level of transaction storage to for example 90,000 or 95,000. When the transaction storage reaches the warning level, reader will alert users with a beep.

Alm SuperLog	to instruct reader to alert user if the transaction storage of administrator login is less than as configured, default is 99.
Alm AttLog	to instruct reader to alert user if the transaction storage is less than as configured, default is 99.
ReCheck Min	to instruct reader to update clocking times of all user in a time interval, default is 10 minutes.

AUTO TEST

Options ▼
Comm Opt
Log Opt
▶ Auto test

This option allows fingerTec® resellers/technician to run test to the reader to identify any error. Please do not run test without guidance/supervision from fingerTec® resellers/technicians.

SYSTEM INFO

Options ▼
Log Opt
Auto test
▶ Sys Info

User may check the information stored in the reader under this option.

The information includes:

User Cnt	to show total of users in reader	
FP Cnt	to show total of fingerprints templates in reader	
Att Log	to show total of attendance log in reader	
Admin Cnt	to show total of administrators in reader	
Pwd Usr	to show total of password users in reader	
Super Logs	this item is used by FingerTec® technicians for testing purpose	
Free Space Inf	to show empty spaces which are available in reader	
Dev Info FPCnt	**(100)**	to show the number of fingerprints templates stored in reader
	AttLog (10k)	to show the amount of attendance log could bestored in reader
	Super Logs	for testing purpose
	Manu time	manufacturing time of reader
	Serial Num	serial number of reader
	Manufacturer	name of manufacturer
	Device name	name of reader
	Alg Version	to show the algorithm version use by the reader
	Firmware ver	to show the firmware version use by the reader

Note

This Chapter is meant for qualified installer only. The installation of FingerTec® reader shall be handled by a well-trained installer. If you are not a qualified installer, you can ignore this Chapter or this Chapter serves as reference for all types of connections available for the FingerTec® reader only.
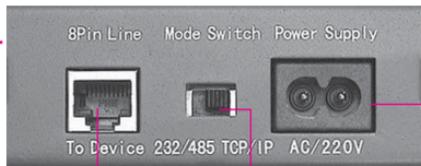
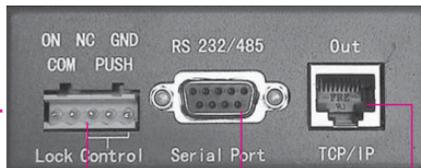# CONNECTIONS AVAILABLE

FOR AC800 SERIES
The Communication I/O Controller

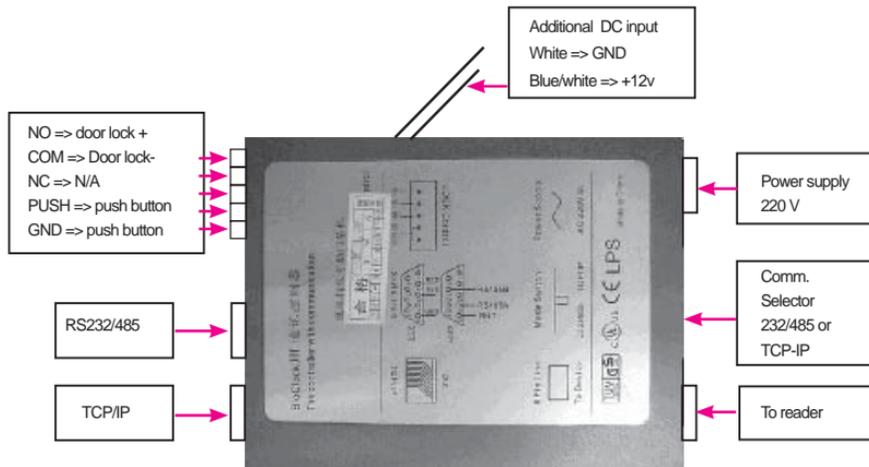**1** Data I/O Port

2 8 Pin Line Port   **3** Mode Switch   **4** Power Supply

5 Lock Control   **6** Serial Port   **7** TCP/IP Port

1 Data I/O Port: The port is located at the back of the reader. This port is connected to the 8-Pin Line port at the Communication I/O Controller.

2 8–Pin Line Port: Located at the back of the Communication I/O Controller. This port connects to the back of the reader using the straight RJ45 cable provided. The distance from the controller to the reader is recommended to be not more than 15 meters.

3 Mode Switch: This switch switches between 2 different communication types. The switch on the left is for RS232/RS485 connection and the switch on the right, is for TCP/IP connection.

4 **Power Supply:** Plug in the power cable provided here for supply of electricity to the reader.

5 **Lock Control:** This port allows you to connect to an optional electromagnetic door (EM lock) and door push button.

6 **Serial Port:** RS232 is a serial communication cable used to connect from this port at one end to a serial port of a PC at another end. RS485 cable extender should be connected to this port and the other end should connect to an optional RS232/RS485 Data Converter before it can be connected to the serial port of a PC.

7 **TCP/IP Port:** A straight RJ45 cable is used to connect to a network switch/hub. A crossover RJ45 cable is used instead to connect directly to a PC network port.

The diagram of an I/O Controller and its points of connections.

TCP/IP port

| DC 12V 3A Power Supply | GND |
| | PWR |

Door Sensor (NO or NC)	SEN
	GND
Push Release button	BUT
	NO
EM lock/ Drop Bolt	COM
	NC
Warner/ Alarm device	AL+
	AL-

RS232 cable	TXD
	RXD
	GND
	CTS
26 bits weigand output	RTS
	WD0
	WD1
	GND
RS485 cable	485A
	485B

Note: Alternatively, user could opt to use AdapTec AC, a controller come power supply to connect a reader to a computer and/ or to door accessories. Go to **http://user.fingertec.com** to find out more about AdapTec.

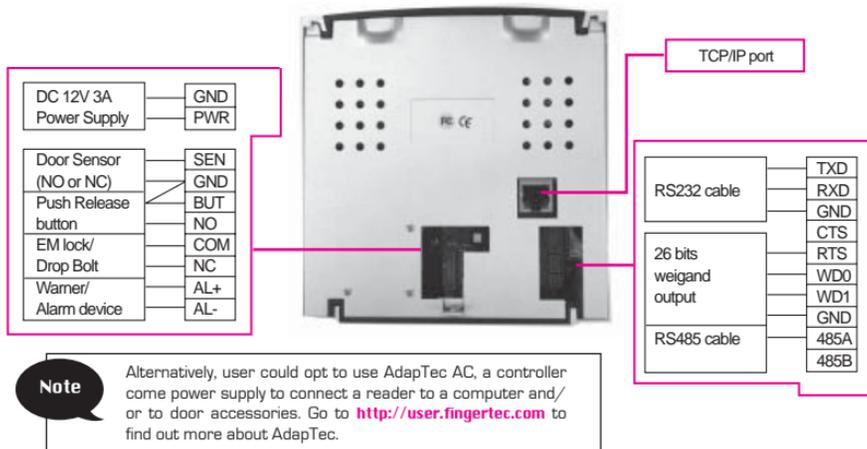Diagram showing available connections on AC800 Plus and AC800 Plus MC Series. The AC800 Plus and AC800 Plus MC have the same available connections.

STARTUP AND SHUTDOWN

FOR AC800 SERIES

Power cable   Communication I/O controller   AC800 Reader

1. Connect the communication I/O controller to the FingerTec® AC800 model.
2. Turn on the power supply.
3. Press the power button to switch on or shutdown the reader.

DC 12V power supply   Power cable   AC800 Plus or AC800 Plus MC Reader

1. Connect DC 12V power adapter to power source.
2. Connect power supply cable to the DC 12V power adapter.
3. Connect power supply cable to AC800 Plus or AC800 Plus MC.
4. Press the power button to switch on or shutdown the reader.

COMMUNICATION CONNECTION

FingerTec® AC800 model be connected to computer by four ways:

```
IP Addr
192. 168. 1.201

ESC                OK
```

```
Comm Opt          ▼
▶ Ethernet        Yes
  RS232           No
  RS485           No
```

Note

When RS232/RS485/Ethernet is enabled, only the Ethernet function will be enabled while the RS232/RS485 will be disabled.

TCP/IP Connection

1. Setup the IP address by network configuration
    The machine default IP address is 192.168.1.201; this is a legal and available IP address in many LAN environment. If the host IP address is 192.168.1.X and it is in the same network region, then this IP can be used directly. If not, please make sure that you have changed the IP address accordingly.
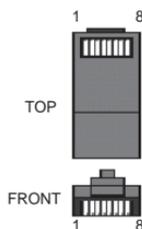
2. Setup of Ethernet.
    Access Menu select "Options" > "Comm. Opt" > "Ethernet", select "Yes" to enable Ethernet function.

3. Turn the power off.

4. Plug the network plug to the Ethernet interface.

5. Turn the power on.

AC800 Reader ➡ Communication I/O controller ➡ PC

AC800 Plus or
AC800 Plus MC Reader ➡

Ethernet 10/100Base-T Crossover Cable

This cable can be used to cascade hubs, or for connecting two Ethernet stations back-to-back without a hub. It works with both 10Base-T and 100Base-TX.

TOP

FRONT

Joint 1 Pin			Joint 2 Pin
TX+	1 ●————————● 3		RX+
TX-	2 ●————————● 6		RX-
RX+	3 ●————————● 1		TX+
RX-	6 ●————————● 2		TX-

Ethernet 10/100Base-T Straight Thru Cable

This cable will work with both 10Base-T and 100Base-TX and is used to connect a network interface card to a hub or network outlet. These cables are sometimes called "whips".

Connector Pin	Cable Color	Connector	
TX+	1 ●———— White/Orange ————● 1	TX+
TX-	2 ●———— Orange ————● 2	TX-
RX+	3 ●———— White/Green ————● 3	RX+
	4 ●———— Blue ————● 4	
	5 ●———— White/Blue ————● 5	
RX-	6 ●———— Green ————● 6	RX-
	7 ●———— White/Brown ————● 7	
	8 ●———— Brown ————● 8	

RS232 Connection

1. Setup of RS232

   Access to Menu, select "Options" > "Comm. Opt" > "RS232", select "Yes" to enable RS232 function.

Note   When RS232 function is enabled, the Ethernet will be disabled.

2. Turn off the reader.
3. Plug the RS232 cable to the RS232 port of the PC.
4. Plug the RS232 other end to the RS232 joint.
5. Turn the power on.

AC800 Reader   Communication I/O controller   RS232 cable   PC
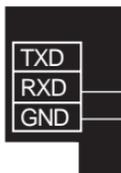

TXD
RXD
GND

Back of Reader   Connectors on AC800 Plus and AC800 Plus MC   RS232 cable   PC

RS485 Single Connection

```
Comm Opt          ▾
  RS232        Yes
▸ RS485        Yes
```

1. Setup of RS485

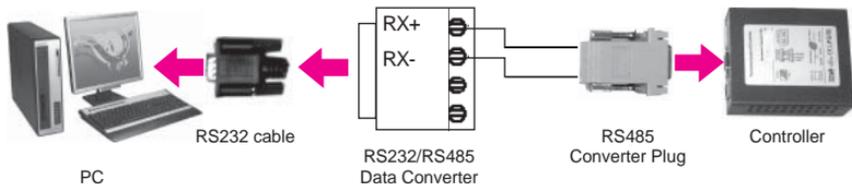   Access Menu, select "Options" > "Comm. Opt" > "RS485", select "Yes" to enable RS485 function.

2. Turn off the reader.
3. Plug the RS485 cable extender to the connector. Connect another end of the cable to the RS232/485 data converter.
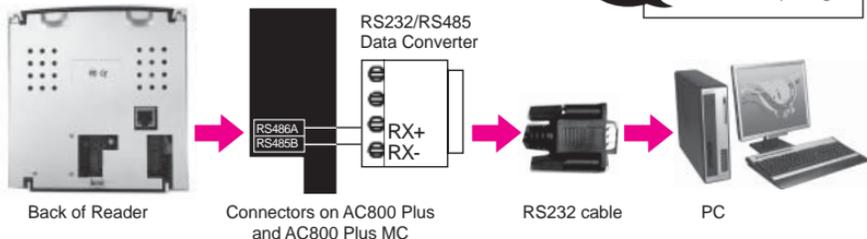4. Connect the RS485 data converter to the RS232 port of PC.
5. Turn the power on.

PC   RS232 cable   RS232/RS485 Data Converter   RS485 Converter Plug   Controller

RX+
RX-

6. If you are using AC800 Plus or AC800 Plus MC, connect the RS485cables to AC800 Plus or AC800 Plus MC .

RS232/RS485 Data Converter

RS486A
RS485B

RX+
RX-

Back of Reader   Connectors on AC800 Plus and AC800 Plus MC   RS232 cable   PC

40

## RS485 Network Connection

Comm Opt	▼
RS232	Yes
▸ RS485	Yes

1. Setup of RS485
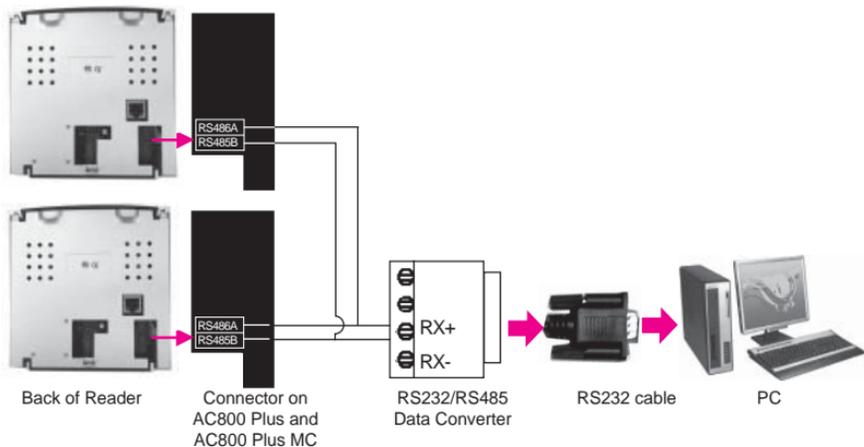   Access Menu, select "Options" > "Comm. Opt" > "RS485", select "Yes" to enable RS485 function.

2. Turn off the reader.

3. Plug the RS485 cable extender to the RS232/485 port on the Power Controller, and another end of the cable to the RS232/485 network.

4. Connect computer to the RS485 network with the RS232/485 converter.

5. Turn the power on.
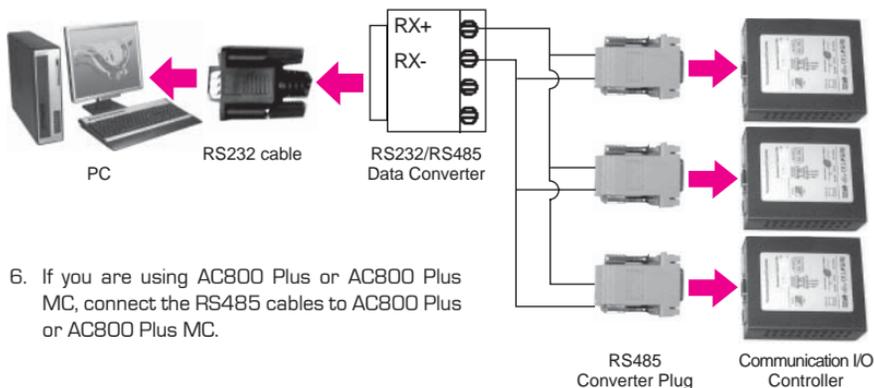
PC

RS232 cable

RS232/RS485 Data Converter

RX+
RX-

6. If you are using AC800 Plus or AC800 Plus MC, connect the RS485 cables to AC800 Plus or AC800 Plus MC.

RS485 Converter Plug

Communication I/O Controller

41

Back of Reader | Connector on AC800 Plus and AC800 Plus MC | RS232/RS485 Data Converter | RS232 cable | PC

Wiegand 26-bit Output (For AC800 Plus & AC800 Plus MC only)

FingerTec® AC800 models are preset with output format, which enables integration with 3rd party controller for a complete access control system of preference.

3rd party controller with
Wiegand 26-bit Input:

Back of Reader
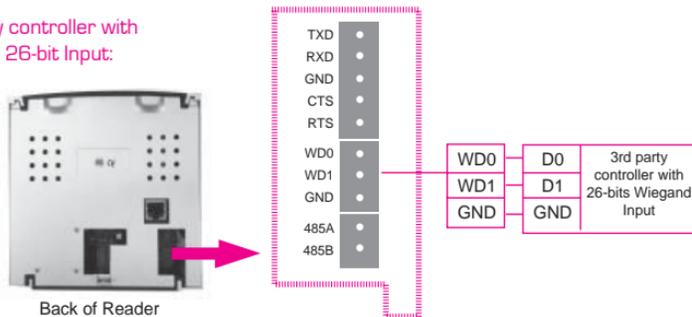
DOOR LOCK CONNECTION

All door lock accessories are linked to the connector pins at the back of FingerTec® AC800 model. Please read carefully before you started to connect door accessories to the FingerTec® AC800 model.

FingerTec® model output an EM output (DC12V) to control door lock system. Attention: AC800 model do not act as dry contacts for independent door lock system; it needs power supply to control them.

* For AC800 only
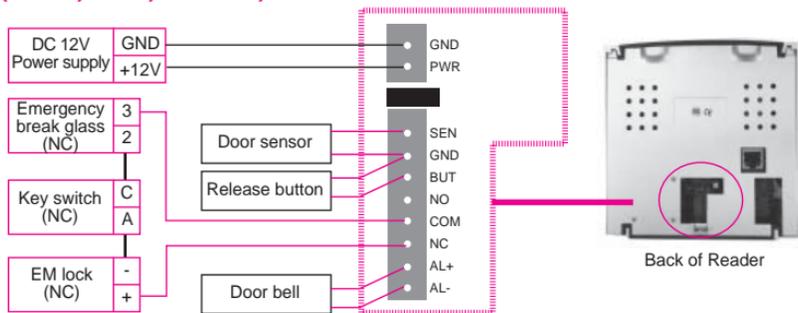
NC (normally closed) door lock system:

AC800 Reader   Communication I/O controller

NC	
COM	
NO	
PUSH	
GND	

+ / − EM lock (NC)
2 / 3 Emergency break glass (NC)
A / C Key switch (NC)
Push release button

For NO (normally open) door locksystem:

AC800 Reader   Communication I/O controller

NC	
COM	
NO	
PUSH	
GND	

+ / − EM lock (NO)
1 / 3 Emergency break glass (NO)
B / D Key switch (NO)
Push release button

43

* For AC800 Plus and AC800 Plus MC only

NC (normally closed) door lock system:

| DC 12V Power supply | GND |
| | +12V |

| Emergency break glass (NC) | 3 |
| | 2 |

Door sensor

Release button

| Key switch (NC) | C |
| | A |

| EM lock (NC) | - |
| | + |

Door bell

GND
PWR

SEN
GND
BUT
NO
COM
NC
AL+
AL-

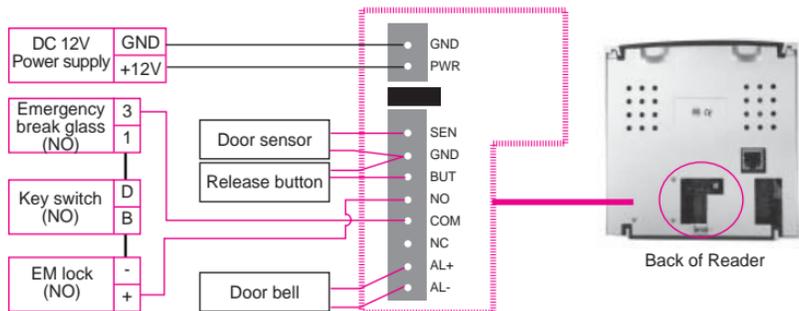Back of Reader

Note Please refer to AdapTec AC Installer Manual if you are using AdapTec AC with FingerTec® AC800 model.

For NO (normally open) door lock system:

| DC 12V Power supply | GND |
| | +12V |

| Emergency break glass (NO) | 3 |
| | 1 |

Door sensor

Release button

| Key switch (NO) | D |
| | B |

| EM lock (NO) | - |
| | + |

Door bell

GND
PWR

SEN
GND
BUT
NO
COM
NC
AL+
AL-

Back of Reader

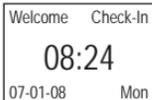### For AC800 Plus/AC800 Plus MC
ADVANCED OPTIONS

Turn Off Alarm

The reader will trigger alarm system when it is illegally dismantled or duress finger is present. Option "Turn Off Alarm" appear in menu of reader when alarm is triggered.

Try to de-activate alarm from reader by this option.

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	MENU Press once
	▼ 4 times

Menu   ▼
  Pen Drive Mng
  Sys Info
▶ Turn Off Alarm
	OK Press once to stop alam output

	ESC Press once to back to main menu.

45

Upd Firmware

User could update the firmware version of a FingerTec® reader by using a flash disk. Before a user plugged in the pen-drive into a reader, please make sure that the firmware file has been copied to the flash disk. Choose "Upd Firmware" option as shown on the LCD and the reader will request user to plug in the flash disk. Plug the flash disk carefully and press "OK" to start the updating process.

Perfomance of a reader will be enchanced after the firmware flash disk upgraded. Please consult your local dealer for firmware upgrade patch files as and when nessesary.

Work Code

AC800 Plus and AC800 Plus MC are providing Work Code feature. The work code feature allows a user to key in a predefined number after fingerpint or password verification. User will key in a number after fingerpint or password verification. User will key in related work codes to show purpose of their clocking data, which can ease management to monitor their movement. Table below showing examples of word code function predefined by number.

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once

Menu ▼
  User Manage
▸ Options
  PenDrive Mng
	(▼) Press once
	(OK) Press once

Options ▼
▸ System Opt
  Power Mng
  Comm Opt
	(OK) Press once

System Opt ▼
  Language ENG
  Fmt YY-MM-DD
▸ Adv Opt
	(▼) Press 3 times
	(OK) Press once

Adv Opt ▼
  Two Sensor N
  Voice Y
▸ Upd Firmware
	(▼) Press 10 times
	(OK) Press once

Plug Pen Drive	Make sure a flash disk is inserted properly. Press OK to unplug the flash disk when the process completes.
Copy Daya succ	(OK) Press onc

46

Reasons	Work Code
Check In	00
Check Out	01
OT start	04
Done	05
Sick Leave	10
Emergency Leave	11
Half Day Leave	12
Meeting client	20
Outstation	21

These numbers are predefined by user in software and represent different reasons, such as "10" for Sick Leave, "11" for Emergency Leave.

Please follow the steps below to enable or disable the Work Code feature.

In latest development, reader is able to support 2 modes of work code.

Mode 1: User enters work code after fingerprint or password verification.

Mode 2: User enters work code before fingerprint or password verification.

When you see this	Do this

Welcome   Check-In
08:24
07-01-08   Mon

(MENU) Press once

Menu
  User Manage
▸ Options
  PenDrive Mng

(▼) Press once
(OK) Press once

Options
▸ System Opt
  Power Mng
  Comm Opt

(OK) Press once

System Opt
  Language   ENG
  Fmt   YY-MM-DD
▸ Adv Opt

(▼) Press 3 times
(OK) Press once

Adv Opt
  Voice   Y
  Upd Firmware
▸ Work Code   N

(▼) Press Press 11 times
(OK) Press once
(▲) Press once or
(▼) to change to Y, to enable the option
(ESC) Press once

System Option
Save?
ESC   OK(Save)

(OK) Press once
(ESC) Press 3 times to to save settings

47

Choosing "No" will disable work code function.

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once

Menu   ▼
  User Manage
▸ Options
  PenDrive Mng
	(▼) Press once
	(OK) Press once

Options   ▼
▸ System Opt
  Power Mng
  Comm Opt
	(OK) Press once

System Opt   ▼
  Language ENG
  Fmt YY-MM-DD
▸ Adv Opt
	(▼) Press 3 times
	(OK) Press once

Adv Opt   ▲▼
  Voice   Y
  Upd Firmware
▸ Work Code   N
	(▼) Press Press 10 times
	(OK) Press once
	(▲) Press once or
	(▼) to choose for NO, mode 1 mode 2
	(OK) Press once to confirm
	(ESC) Press once to leave page

System Option Save? ESC OK(Save)	(OK) Press once to save set-tings **or** (ESC) Press once to cancel operation (ESC) Press 3 times to back to main menu

Button Beep

Button Beep function is to enable emission of a beep sound when the buttons on the keypad are pressed. This function is optional and user may choose to enable or disable it by selecting "Yes" or "No".

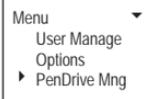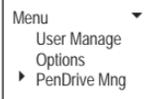| When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once

Menu   ▼
  User Manage
▸ Options
  PenDrive Mng
	(▼) Press once
	(OK) Press once

Options   ▼
▸ System Opt
  Power Mng
  Comm Opt
	(OK) Press once

System Opt   ▼
  Language ENG
  Fmt YY-MM-DD
▸ Adv Opt
	(▼) Press 3 times
	(OK) Press once

Adv Opt   ▲▼
  Voice   Y
  Work Code
▸ Button beep   N
	(▼) Press Press 12 times
	(OK) Press once
	(▲) to change to Y, to en-able the option

System Option Save? ESC OK(Save)	(ESC) Press once

48

PENDRIVE MNG

Download Attendance Log

To download attendance log from FingerTec® reader to a flash disk, plug in the flash disk into the reader and press "OK" to start downloading process.

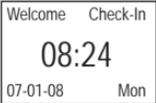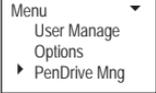| When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	Plug a flash disk into USB port of the reader.

Menu   ▼
  User Manage
  Options
▸ PenDrive Mng
	▼ Press 2 times
	OK Press once

PenDrive Mng   ▼
▸ DwnLoad AttLog
  DwnLoad User
  UpLoad User
	OK Press once

Copy Data succ	ESC Press once OK Press 3 times to return to main menu

Download User

To download users from FingerTec® unit to a flash disk, plug in the flash disk into the reader and press "OK" to start user download from reader to flash disk.

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	Plug a flash disk into USB port of the reader.

Menu   ▼
  User Manage
  Options
▸ PenDrive Mng
	▼ Press 2 times
	OK Press once

PenDrive Mng   ▼
  DwnLoad AttLog
▸ DwnLoad User
  UpLoad User
	OK Press once

Copy Data succ	ESC Press once OK Press 3 times to return to main menu

Upload User

To upload users from FingerTec® reader to a flash disk, plug in the flash disk into the reader and press "OK" to start user download from FingerTec® reader to a flash disk.

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	Plug a flash disk into USB port of the reader.

Menu ▼
    User Manage
    Options
▸ PenDrive Mng
	⬇ Press 2 times
	OK Press once

PenDrive Mng ▼
    DwnLoad AttLog
    DwnLoad User
▸ UpLoad User
	OK Press once

Copy Data succ	ESC Press once OK Press 3 times to return to main menu

ACCESS OPTION

Lock

System requires user to set the FingerTec® reader to control the time of opening / closing of electronic locks (EM-Lock). Setting to "0" means to disable the lock control function. One quantity unit is equivalent to 20ms (millisecond); a maximum value can be set is 254 which is 5.08s. Select "Lock" function and press "OK" to enter Options. Then, press digit keys to enter corresponding digits. Finally press "ESC" to exit and to save the settings.

DSEN. Delay

If a door is not closed within a certain period, the FingerTec¤ reader will trigger the sensor to alert user. User can configure the timer of the FingerTec® reader to make sure that the door will shut properly.

DSEN Mode

There are two modes for door sensor to choose from; NO is for Normally Open and NC is for Normally Close. Choosing of NC and NO is depends on the type of door sensor using together with FingerTec® readers. To disable the DSEN Mode function, please choose NONE.

Alarm CNT

Reader will trigger alarm if a user failed to get his verification several times continuously. This can avoid not registered users to interrupt reader. Entering value from 0 to 9, to define the chances for trial. Entering value "0" into this option to disable it.

DSen Alarm

This integrated buzzer can alert user when a door is not closing well. Buzzer will alert users for a time period before the reader starts to trigger alarm.

Enter a value from 0 to 999, for example 10 represent 10 sec. Reader will trigger siren to ring for 10 sec and goes off. Reader triggers alarm immediately when siren goes off.

Duress Option

This function allows user to trigger the alarm system in case of emergency via reader by using duress fingerprint. User must register a finger as duress finger and a successful verification of the duress fingerprint will trigger the alarm.

Management of Duress Fingerprint

• Enrollment of Duress Finger

  The procedure to enroll duress finger is the same as an enrollment of a normal fingerprint.

• Define Duress Finger

  Duress finger needs to be defined before it can be used to trigger the alarm system. User can choose to enroll new finger or to use the same fingerprints for clocking activities for duress finger.

• Undefined Duress Finger

  This function allows user to delete duress finger. If the fingerprint templates for clocking activities which are also used for duress fingers are deleted from the duress option, those fingerprints are still available for clocking activities and user do not need to reregister his fingerprints.

• Delete all

  This function is to delete all duress fingerprints available in the FingerTec® readers.

Help Key

User may choose to enable the Help Key by choosing "Yes". The Help Key is to be used when the ID of the duress finger is different from the ID of the normal clocking activities. Alarm will be triggered when user press the down key button for 3 seconds followed by a duress fingerprint on the scanner.

Trigger Methods

There are 3 types of trigger method by using duress finger which user can choose from:

• 1:1 Trigger

   To be used when user always use 1:N for normal clocking activities.

• 1:N Trigger

   To be used when user always use 1:1 for normal clocking activities.

• Password Trigger

   To be used when user always use both methods for normal clocking activities. User may choose to select only one trigger method. These trigger methods are to be used if the ID for the duress finger is the same as the ID of the clocking activities.

Duress Delay

User can set the timer to trigger alarm after a successful verification of a duress finger. The timer can be set from 0 to 255 seconds and the alarm will goes off when the time is up.

Access Control

FingerTec® reader can control any digital lock or EM-lock that consumes 12V of power and current of less than 1A.

Setup Lock Function

In Access menu, select "Options" > "Access Options" > "Lock". The value of lock setting is the time period of a lock opens before it closes again; one unit value is 20ms. The value is between 0-254 where "0" means no lock opening signal is emitted and 254 is equivalent to 5s waiting time before the door closes.
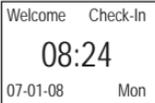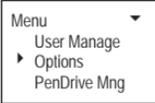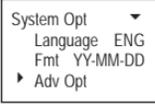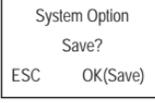
ADVANCED OPTIONS

Card Only

Configure this option to YES, reader will verify user by reading their MIFARE card only. Reader will capture attendance or allow door to open when users wave enrolled MIFARE card at the reader.

Configure this option to NO, user must perform fingerprint matching after waving their MIFARE card to the reader.

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once

Menu ▼
  User Manage
▸ Options
  PenDrive Mng
	(▼) Press once
	(OK) Press once

Options ▼
▸ System Opt
  Power Mng
  Comm Opt
	(OK) Press once

System Opt ▼
  Language ENG
  Fmt YY-MM-DD
▸ Adv Opt
	(▼) Press 3 times
	(OK) Press once

Adv Opt ⬍
  1:1 Thr   35
  Voice   Y
▸ Card Only   Y
	(▼) Press Press 9 times
	(OK) Press once
	(▲) Press once to change to Y
	(▼) Press once to confirm
	(ESC) Press once to leave this page

System Option Save? ESC OK(Save)	(OK) Press once to save settings (ESC) Press 3 times to to return to main menu

53

FPCard Key

This option gives extra security to the MIFARE card use together with FingerTec® readers. FP CardKey, a hidden password with maximum 6 digits, is written into each enrolled MIFARE card during first enrollment.

During enrollment of MIFARE card, this FP CardKey will write into the user's MIFARE card together with fingerprints, and user ID etc.

Reader always check FP CardKey store inside MIFARE card during every verification process. Verification process will only start if FP Card-Key are matched.

This can stop reader to read and verify any unregistered MIFARE card from any other users.

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once

Menu
  User Manage
▸ Options
  PenDrive Mng
	(▼) Press once
	(OK) Press once

Options
▸ System Opt
  Power Mng
  Comm Opt
	(OK) Press once

System Opt
  Language   ENG
  Fmt   YY-MM-DD
▸ Adv Opt
	(▼) Press 3 times
	(OK) Press once

Adv Opt
  Voice
  Card Only
▸ FPCard Key
	(▼) Press Press 10 times
	(OK) Press once

FPCard Key �8888� ESC OK(Save)	Enter FPCard Key by using keypad, maximum 5 digits. (OK) Press once to confirm

Adv Opt
  Voice
  Card Only
▸ FPCard Key
	(ESC) Press once to leave this page

System Option Save? ESC OK(Save)	(OK) Press once to save settings (ESC) Press 3 times to to return to main menu

FP CARD MNG

Create PINCard

After a fingerprint has been enrolled into a FingerTec® reader, there will be only one PIN (Personal Identification Number) to every user. The system will require user to input ID for the enrollment. Once the ID is input, press "OK". The system will prompt, "Show the card". Move the card to the scanner. If the system accepts the card, it will prompt, "Write succ", which means an ID has been established and the card is ready to be used for attendance. When a PINCard is created, the ID is not stored in the FingerTec® reader. Please check and examine the PIN you input to match the ID in the FingerTec® reader.

Enroll FPCard

In Menu, select User Manage > Enroll User > Enroll FPCard. When this item is selected, user will be prompted to store his fingerprint into the card. This operation is to put your fingerprint into the card and the fingerprint template will NOT be saved in the FingerTec¤ reader. Thus, when you report attendance you need to show your card.

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once

Menu   ▼
▸ User Manage
  Options
  PenDrive Mng
	(OK) Press once

User Manage   ▼
▸ Enroll User
  FPCard Mng
  Enroll Admin
	(▼) Press once
	(OK) Press once

FPCard Mng   ▼
▸ Create PINCard
  Enroll FPCard
  Create FPCard
	(OK) Press once

Create PINCard UserID 00001 ESC OK	Key-in ID (OK) Press once
Create PINCard Show the card ESC OK	Place card to sensor
Create PINCard Write succ ESC/Exit	(ESC) Press once

When you see this	Do this
Welcome Check-In 08:24 07-01-08 Mon	(MENU) Press once

Menu
▸ User Manage
  Options
  PenDrive Mng
	(OK) Press once

User Manage
▸ Enroll User
  FPCard Mng
  Enroll Admin
	(▼) Press once
	(OK) Press once

FPCard Mng
  Create PINCard
▸ Enroll FPCard
  Create FPCard
	(▼) Press once
	(OK) Press once

Enroll FPCard UserID 00002 ESC OK	(OK) Key-in ID Press once
Enroll FPCard 00002-0 Place finger...	Place finger on scanner
Enroll FPCard 00002-0 Remove finger...	Remove finger

When you see this	Do this
Enroll FPCard 00002-0 Third press...	Place finger on scanner
Enroll FPCard 00002-0 Remove finger...	Remove finger
Enroll FPCard 00002-0 Third press...	Place finger on scanner
Enroll FPCard 00002-0 Remove finger...	Remove finger
Enroll FPCard 00002-0 show the card ESC/Exit	Place card on scanner
Enroll FPCard 00002-0 Write succ ESC/Exit	(ESC) to exit

Create FPCard

In Menu, select User Manage > Enroll User > Create FPCard. When you select this item, you will be prompted to copy the fingerprint in the FingerTec® reader into a card. This means that you can use your fingerprint or your card to report attendance.

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once

Menu ▼
▸ User Manage
  Options
  PenDrive Mng
	(OK) Press once

User Manage ▼
▸ Enroll User
  FPCard Mng
  Enroll Admin
	(▼) Press once
	(OK) Press once

FPCard Mng ▼
  Create PINCard
  Enroll FPCard
▸ Create FPCard
	(▼) Press twice
	(OK) Press once

Create FPCard UserID 00003 ESC OK	Key-in ID (OK) Press once
Create FPCard Show the card ESC OK	Place card to sensor
Create FPCard Write succ ESC/Exit	(ESC) Press once

57

Reg FPCard

In Menu, select User Manage > Enroll User > Reg FPCard. The registration of enrolled MIFARE card is required in a situation where there are more than 2 FingerTec® readers in your company and you have enrolled PINCard in one reader and you want to use fingerprint in the other reader.

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once

Menu
▸ User Manage
  Options
  PenDrive Mng
	(OK) Press once

User Manage
▸ Enroll User
  FPCard Mng
  Enroll Admin
	(▼) Press once
	(OK) Press once

FPCard Mng
  Enroll FPCard
  Create FPCard
▸ Reg FP Card
	(▼) Press 3 time
	(OK) Press once

Reg FP Card Show the card ESC OK	Place card to sensor

Reg FP Card
  UserID 00001
  ESC/Exit
	(OK) Press once

Unreg FPCard

In Menu, select User Manage > Enroll User > Unreg FPCard. This function shall be performed if user wishes not to use MIFARE card in any particular FingerTec® reader.

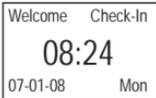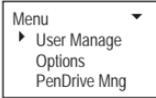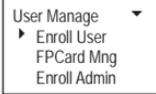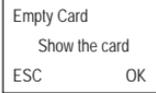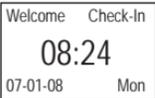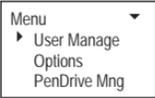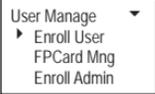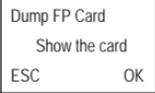| When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once

Menu
▸ User Manage
  Options
  PenDrive Mng
	(OK) Press once

User Manage
▸ Enroll User
  FPCard Mng
  Enroll Admin
	(▼) Press once
	(OK) Press once

FPCard Mng
  Enroll FPCard
  Reg FP Card
▸ Unreg FP Card
	(▼) Press 4 time
	(OK) Press once

Unreg FP Card Show the card ESC OK	Place card to sensor

Unreg FP Card
  UserID 00001
  ESC/Exit
	(OK) Press once

58

Empty FPCard

In Menu, select User Manage > Enroll User > Empty FPCard. This operation is to erase all data contained in a MIFARE card.

Dump FPCard

In Menu, select User Manage > Enroll User > Dump FPCard. This operation is to copy fingerprint from a card to a FingerTec® reader. The fingerprint template can be used once the operation is completed.

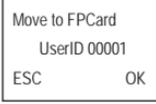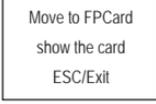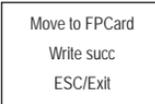| When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once
Menu ▼ ▸ User Manage Options PenDrive Mng	(OK) Press once
User Manage ▼ ▸ Enroll User FPCard Mng Enroll Admin	(▼) Press once (OK) Press once
FPCard Mng ▼ Unreg FP Card ▸ Empty Card Dump FP Card	(▼) Press 5 time (OK) Press once
Empty Card Show the card ESC OK	Place card to sensor
Empty Card Write Succ ESC/Exit	(OK) Press once

When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once
Menu ▼ ▸ User Manage Options PenDrive Mng	(OK) Press once
User Manage ▼ ▸ Enroll User FPCard Mng Enroll Admin	(▼) Press once (OK) Press once
FPCard Mng ▼ Unreg FP Card Empty Card ▸ Dump FP Card	(▼) Press 4 time (OK) Press once
Dump FP Card Show the card ESC OK	Place card to sensor
Dump FP Card UserID 00001 ESC/Exit	(OK) Press once

Move To FPCard

Fingerprint stored inside reader can move into MIFARE card without user to re-enroll. The fingerprint template is deleted in reader after moving into MIFARE card.
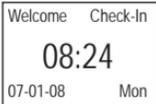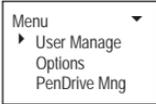
When you see this	Do this
Welcome Check-In **08:24** 07-01-08 Mon	(MENU) Press once
Menu ▼ ▸ User Manage Options PenDrive Mng	(OK) Press once
User Manage Enroll User ▸ FPCard Mng Enroll Admin	(▼) Press once (OK) Press once
FPCard Mng ▼ Empty Card Dump FP Card ▸ Move to FPCard	(▼) Press 7 times (OK) Press once
Move to FPCard UserID 00001 ESC OK	Enter user ID by keypad (OK) Press once
Move to FPCard show the card ESC/Exit	Place card at the induction area

When you see this	Do this
Move to FPCard Write succ ESC/Exit	Fingerprint templates of the user is copy into card
FPCard Mng ▼ Empty Card Dump FP Card ▸ Move to FPCard	(ESC) Press 3 times to back to main menu

60
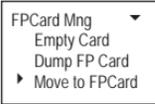
1 **I can't turn on the FingerTec® Fingerprint Reader. When I pressed the power button, nothing happened.**
   • Check if your FingerTec® Fingerprint Reader's LCD screen is lighted and there is a beep sound when the reader is turned on. If not, make sure the power in turned on at the electrical supply outlet.
   • Check the connection of the power adapter to an electrical supply outlet; it may not be fitted properly.
   • If you are confirmed that there is no problem with the power supply, your FingerTec® Fingerprint Reader may need to be replaced. Kindly contact your reseller.

2 **I can't connect the FingerTec® Fingerprint Reader to the PC. Every time I try it, the software prompts "unable to connect" message.**
   Check the settings on the reader to see if TCP/IP or RS232/RS485 connection is enabled.
   • Check whether the COMM key is used, default is 0.
   • For TCP/IP connection, check the IP address.
   • For the RS232/RS485, the baudrate for the reader and software must be the same. Make sure that the DevID is correct.
   • After changes are made, restart the FingerTec® Fingerprint Reader.

3 The FingerTec® Fingerprint Reader has difficulty recognizing my finger. It takes many tries before I am verified.

• Please make sure that your finger is not too oily or too dirty because the oil and dirt will cover the minutia points of the fingerprint, thus make reading difficult.

• Make sure that the reader is not facing direct sunlight because it will disrupt the readings of the scanner. To deal with light interference, cover the scanning area when you want to do finger verification.

4 When the FingerTec® Fingerprint Reader is on, the red LED is blinking. Is there something wrong?

There is nothing wrong with the reader. The red LED blinks to indicate that the reader is on the standby mode. When a fingerprint is verified, the LED will turn to green.

5 The FingerTec® Fingerprint Reader was accidentally shutdown by a staff. Will we lose all the transaction data in the reader?

All the transaction data up until the minute the reader was shutdown stays in the reader and can be downloaded to the PC by using the TCMS V2 software. The data will only disappear if it has been downloaded to the PC.

6 The FingerTec® Fingerprint Reader did not voice "Thank You" or "Please Try Again"during verification. What should I do?

You may enable the voice function under Advance Option. The voice option might have been disabled.

7   When I tried to enroll my fingerprint into the FingerTec¤ Finger-print Reader, the reader produced "Duplicate Finger" voice message. Why is that?

The "Duplicate Finger" voice message will only be produced if the enrolling finger is found to have existed in the reader. Choose another finger.

8   The FingerTec® Fingerprint Reader produces "The clock is full" every time I perform verification. What should I do?

This means that the transaction storage of the reader full. Download the data from the reader to the PC by TCMS V2. After download process has been performed, the data will be deleted automatically.

9   Could I configure the FingerTec® device to shut down or power on automatically?

The schedule can be configure under the Power Management Option. This is advisable as to let the device takes a break after a long-hour usage.

10   My previous card access system left me the old cards. Can I use these cards to work on AC800 Plus MC?

AC800 Plus MC will only read or write MIFARE card. Please make sure that your card is MIFARE card for it to work on AC800 Plus MC.

11   I lost my USB extension for AC800 Plus/AC800 Plus MC. Can I purchase a normal USB extension from my local market?

Yes. This USB extention is universal and available everywhere.

12 How to clean the U.r.U 4000 scanner of the AC800 Plus series?

Stick cellophane tape on the scanner surface to remove dust and dirt. To ensure not to ruin the scanner, please do not use any chemical fluid or any type of cleaning agent on the U.r.U 4000 scanner surface.