

Fingerprint Door Lock System

(Model : BFS-1000)



Installation and Operation Manual

- Thanks for choosing fingerprint doorlock from BioEnter
- Please read this manual carefully before starting installation and operation
- It is strongly recommended that you keep this manual for future reference



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※The design and specification of this product are subject to change without prior notice for product development/improvement purposes.

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Please read this manual carefully before operation. If any problem occurs or if you need further instruction or assistance, please contact your BioEnter Dealer.

1. Introduction

1.1 Product Concepts

Designed for User convenience

No more keys, cards or remotes. The ultimate convenience of nothing to carry, forget, pass on, be duplicated or to have stolen. Plus, very easy and quick to enroll and to verify fingerprints.

Highest Security Level

Fingerprint-based identification is the oldest and the most reliable among all the biometric technologies because your fingerprints are unique and invariable throughout your lifetime.

Adapted the 4th Generation/World best Optical Sensor

The 4th generation optical sensor using world's most reliable fingerprint algorithm ranked number 1 position in International Fingerprint Verification Competition (IFVC) with the lowest error rate in light category

Sufficient fingerprint capacity

1,000 fingerprints in 1:N mode can be enrolled

Auto Locking, Temporary open and Temporary Fingerprint Removal mode

User can set up auto locking, temporary open mode or temporary fingerprint removal mode

Audible/visible indicators

LED light and buzzer sound indicate operation results

Voice prompt/Silence mode

Voice guidance is available to tell you the operation results

Emergency User Access Code and Terminals for External Power Source

User Access Code can be used in case your enrolled finger is injured, or to allow others emergency access. A 9V square battery can be used externally to provide power if the internal batteries are run down.

Master Finger (Administer) Mode

Master finger is necessary for fingerprint enrollment/deletion and change of function set-up in "master finger mode" to enhance general security.

Emergency Override Mechanical Cylinder Key

Mechanical key used in case of an emergency

Sleep mode and initiation sensor

The lock powers down when not in use. In manual "Fingerprint Sensor On" mode, the infrared initiation sensor will "wake up" the fingerprint sensor when a finger is placed on the sensor glass, thus improving battery life and sensor efficiency.

Connector for DC Power source

DC (6V) can be connected to and used as well where the battery does not work properly due to cold weather.

Audit Trail (Option)

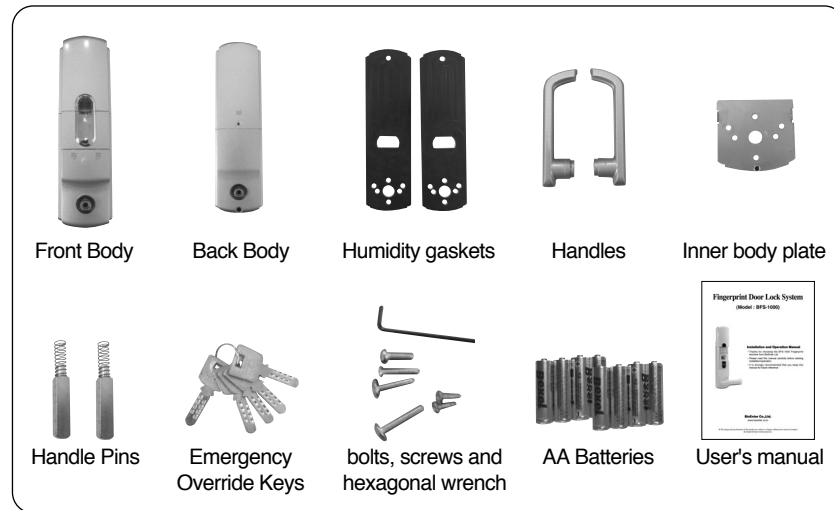
Entry log data such as time of entry and ID stored in the lock can be downloaded up to 1,000 events to PC through serial cable

Applications

stand-alone lock for commercial and residential

1.2 Package Contents

1.2.1 Standard Configuration



1.2.2. Option

Audit Trail Kit



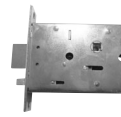
Lockset Type



Single Latch (Standard)



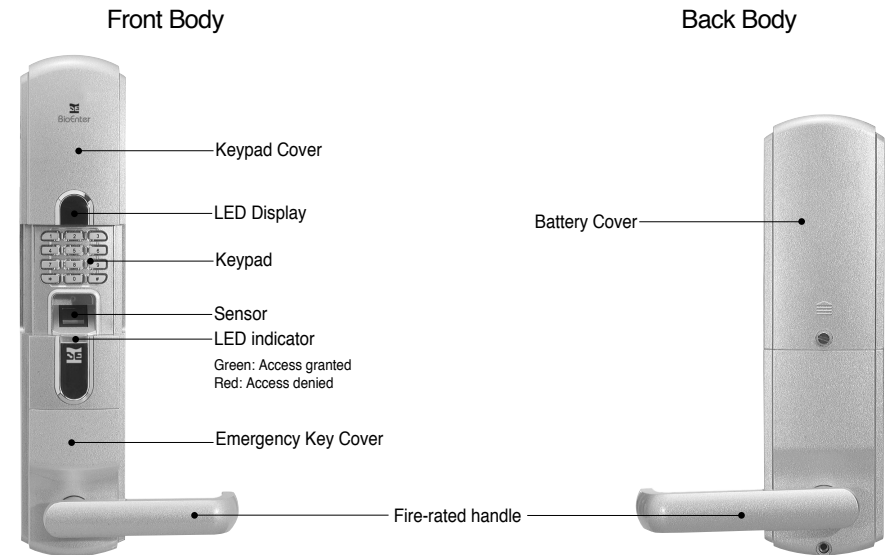
Mortise (Option)



Mortise Latch (Option)

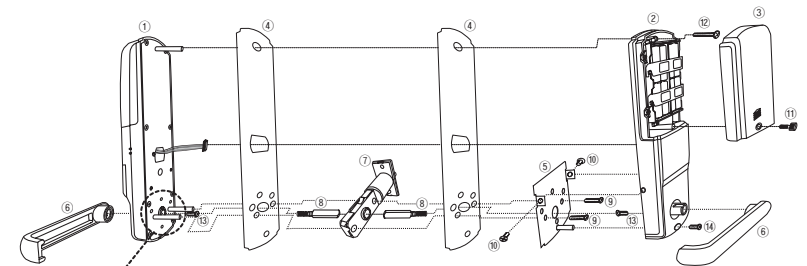
1.3 Description of Components & Exploded view

- Description of Components



- Exploded View

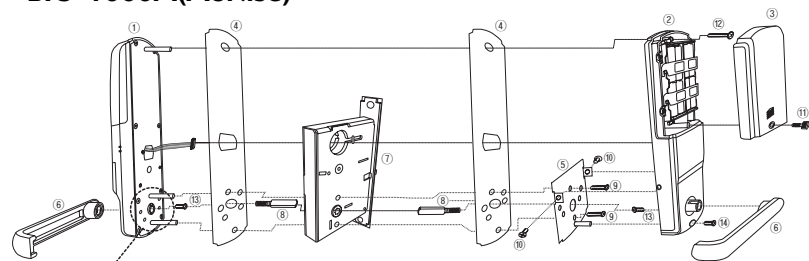
BFS-1000S(Single Latch)



CAUTION
Please note that the cut point should be always upper direction

No	Description	No	Description	Specification
1	Outer Body	9	Outer Body Fixed Screw	M5 x 20mm. 2eaD
2	Inner Body	10	Inner Body Fixed Screws	M4 piece screw. 2ea
3	Battery Cover	11	Battery Cover Fixed Screw	M4. 1ea
4	Rubber Pad	12	Outer-Inner Body Fixed Screw	M5 x 25mm. 1ea
5	Inner Body Plate	13	Handle Fixed Screw	M5 x 10mm. 2ea
6	Handles	14	Inner Body Fixed Screw	M5 x 10mm. 1ea
7	Single latch			
8	handle Latch Pins			

BFS-1000M(Mortise)



CAUTION
Please note that the cut point should be always upper detection

No	Description	No	Description	Specification
1	Outer Body	9	Outer Body Fixed Screw	M5 x 20mm, 2ea
2	Inner Body	10	Inner Body Fixed Screws	M4 piece screw, 2ea
3	Battery Cover	11	Battery Cover Fixed Screw	M4, 1ea
4	Rubber Pad	12	Outer-Inner Body Fixed Screw	M5 x 25mm, 1ea
5	Inner Body Plate	13	Handle Fixed Screw	M5 x 10mm, 2ea
6	Handles	14	Inner Body Fixed Screw	M5 x 10mm, 1ea
7	Mortise			
8	handle Latch Pins			

1.4 Technical Specification

Item	Technical parameters
Fingerprint sensor	The 4 th Generation CMOS Optical Sensor
Sensor resolution(sensing size)	500 dpi (16 x 19mm)
Enrollment time	< 1 second
Verification time	< 1 second
False Rejection Rate (FRR)	1/30 ~ 1/100
False Acceptance Rate (FAR)	1/100,000 ~ 1/1,000,000
Fingerprint Scanning	twice to get on fingerprint template
User Capacity	up to 1,000 fingerprints (1: N Mode)
Initiation sensor	Infrared Sensor applied
Lock Type	UL Grade 1 latch(Standard), Mortise (Option)
Supply Voltage	DC 12V
Power	1.5V AA x 8 Alkaline battery
Battery life	Approx. 12 months (20 times/day)
LED Display	ID Number, or program or error codes
Emergency Power Source	Terminal for 9V square battery
Emergency Override Key	Mechanical Cylinder Key
LED Display	ID Number indicator
Audible/Visual Guidance	Voice/Silence, LED and Buzzer
Audit Trail	Entry log data downloadable up to 1,000 events (Option)
Thickness of the door	38mm ~ 60mm
Material	Body : Zinc alloy die-casting Keypad/Battery Cover : AL alloy fie-casting
Dimension	Front Body : 80(w) x 290(h) x 39(d)mm Back Body : 80(w) x 290(h) x 39(d)mm
Weight (Net)	5.5 Kg
Operating Environment	- Temperature : -20 °C ~ +70 °C - Humidity : 45% RH-80% RH
Safety Certification	FCC, CE

2. Programming

The function button used for programming is hidden by the battery cover on the back body. This means that only people authorised to be on the inside and with knowledge of the lock programming will be able to add/delete/change data and settings. The door will need to be open when programming, in order to give access to the front and back of the lock.

Helpful Hints for Programming

1. User Access Codes (PIN Code) :

- Default User Access Code under ID number at “01” : “0000”
- All User Access Codes consist of 4 to 12 digits

2. Management Levels and fingers identified by ID numbers that correspond to the stored fingerprints :

- Master Finger : 1 fingerprint at ID number “00” assigned automatically
- Sub master fingers : 9 fingerprints at ID numbers “01” ~ “09”
- User fingers : 990 fingerprints at ID numbers “10” ~ “999”

* Master finger or sub-master fingers are required to be verified for all programming procedure in “Master Finger Mode” only

3. Information to be recorded for future use

- ID numbers and personal details of fingerprint enrollment
- ID numbers and User Access Codes

4. Fingerprints Enrollment

- Several finger enrolment (one finger from each hand) are recommended for master and sub-master fingerprints
- Pointer fingers are recommended to use when enrolling fingerprints

5. Definition of LED Display

- F0 : Initiation of Programming Processes
- no : Lock is waiting for the entry of function code
- id : Lock is waiting for the entry of ID number
- P0 : Lock is waiting for the entry of User Access Code (PIN Code)

6. Indication of Beep Sounds

- Double beep sound and a red light : Unsuccessful programming or Verification
- Triple beep sound and a green light : Successful programming or Verification
- Alarm Sound indicates the batteries are low and need to be replaced with new ones

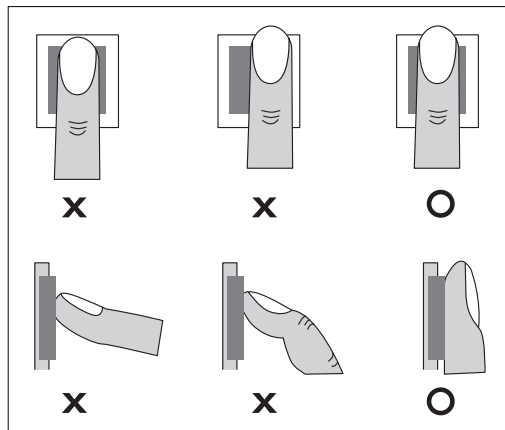
7. Master Finger Mode

- This lock is pre-set in “Master Finger” mode and you are required to verify Master finger or sub-master fingers first in all programming processes
- You can change to “User Finger” mode if you prefer simple programming processes which do not require Master finger (or sub-master finger) verification

2.1 Fingerprint enrollment

This lock is pre-set in the Master Finger (Administer) mode. This means that Master Finger is required to verify for all the enrollment/deletion of the fingerprints/User Access Codes (PIN Codes) and change of data/setting. You can change the setting to User Finger mode where you do not need Master Finger to verify for all the enrolment/deletion of the fingerprints/User Access Codes (PIN Codes) and change of data/setting. (Please refer to 2.9 Master Finger/ User Finger Mode)

Correct Fingerprint Placement



Recommendation on Finger for enrollment and verification

1. Moist fingers give better images than dry fingers. If you have difficulty in enrolling or verifying your fingerprint, try to moisten your finger with your breath or a moisture
2. Dirty fingers are not recommended to apply not only generating obscure fingerprint image, but also possible scratching the glass of the fingerprint sensor. Make your finger clean before use
3. Pointer fingers are recommended to use when enrolling fingerprint. They are the easiest and most convenient fingers to use in programming and verification process.

2.1.1 How to enroll master finger (ID number : 00)

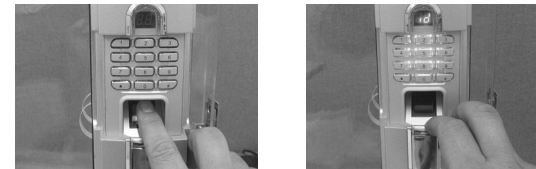
This is the first fingerprint enrollment after successful installation of the lock on the door.

Step 1: Open battery cover and press the “F” button in the back body



Step 2: Pull up the sliding cover in the front body of the lock within 10 seconds upon the completion of Step 1. You should see the fingerprint sensor light up in red

Step 3: As soon as the sensor light comes on (in red, as explained in the Step 2), place the finger of your choice - flat, firmly against the surface of the sensor (scanning platform). When the sensor light turns off, remove your finger and then promptly put it back on the scanning platform again. The sensor will light up in red the second time and then turn itself off following the second scan of that same finger. You will hear a triple beep sound indicating the success of this fingerprint enrollment and then see the LED display “id”



* ID number “00” will be assigned automatically for master finger

* Master fingerprint will remain undeleted until deletion of all fingerprints or factory reset mode is made.

Step 4: If you want to register other finger continuously, then put your preferred “ID” number (01 ~999) and press “#”. (or just press “#” for next available ID number) and the fingerprint sensor will turn on for the new fingerprint enrollment continuously.



(if you do not complete Step 4 above within 5 seconds, the mode will be changed to main control mode and LED displays “no”).



* “no” in LED means the lock is waiting for entry of function codes (for example : “01” for sub-master or user enrolment) for further programming. (refer to 2.10 for programming code table)

* You can exit from programming mode by pulling down the sliding cover in the front body.

2.1.2 How to enroll sub-master fingers (ID Number 01 through 09)

After successful master fingerprint enrolment, you can enroll sub-master fingerprints up to 9 fingers with assigned ID number at 01 through 09. Each sub-master fingerprint can also be used to verify for all the enrolment/deletion of the fingerprints/User Access Codes (PIN Codes) and change of data/setting exactly same as master fingerprint. For your own security and maximum convenience, you are recommended to enrol several sub-master fingers from each hand and from your family member to be prepared for difficulty in verifying your master finger. (for example : the injury to the master finger etc).

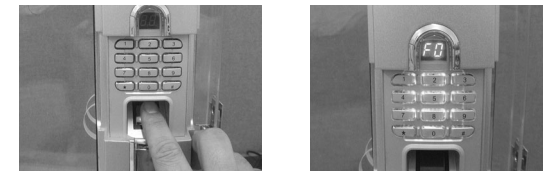
Step 1: Open battery cover and press the “F” button in the back body of the lock



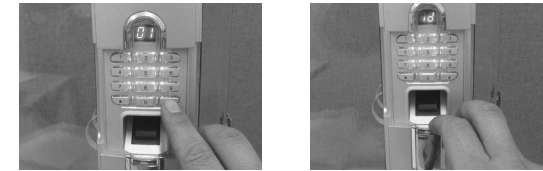
Step 2: Pull up the sliding cover in front body of the lock (The fingerprint sensor will then turn on with a red light)



Step 3: Place the master finger on the glass of the sensor to verify (LED displays “F0” and soon changed to “no”)

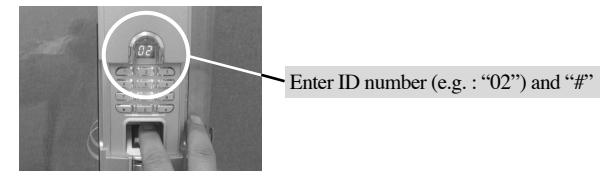


Step 4: Press “01” and “#” button (LED displays “id”)



Step 5: Enter ID number with 2 digits between 01 and 09 and press “#” button or just press “#” button

* The fingerprint sensor will then turn on with a red light and LED displays ID number you just entered (in case of entering ID + “#”) or next available(empty) ID number (in case of pressing “#” only)



Please record the ID number and the details for each fingerprint enrolled. The correct ID number will be needed when deleting an individual fingerprint (Refer to 2.2.1 for deletions)

Step 6: Place chosen sub-master finger on the glass of the fingerprint sensor twice while the fingerprint sensor turns on and off.



* A triple beep sound and a green light indicate the success of the sub-master finger enrollment and LED displays "id" for more sub-master finger enrollment.



* To continue enrolling more sub-master fingers, or try again if unsuccessful, enter "ID" number ("01" through "09") and press "#" button and then repeat Step 6

* To stop enrolling sub-master finger, please pull down the sliding cover in the front body

2.1.3 How to enroll user fingers (ID Number 10 through 999)

The ID numbers assigned for user fingerprints are from "10" through "999" and you can take same steps for sub-master fingerprints with different ID numbers.

Step 1: Open battery cover and press the "F" button in the back body of the lock



Step 2: Pull up the sliding cover in the front body of the lock (The fingerprint sensor will then turn on with a red light)



Step 3: Place master finger or sub-master finger on the glass of the sensor to verify (LED displays "F" and soon changed to "no")



Step 4: Press "01" and "#" button (LED displays "id")



Step 5: Enter an ID number, which is a 2 - or 3 - digits number's between "10" and "999" and press "#" button (The fingerprint sensor will then turn on with a red light and LED displays ID number you just entered)

Please record the ID number and the details for each fingerprint enrolled. please note that you need this id number when you delete the fingerprint that's associated with this number (Refer to 2.2.1 for deletions)

Step 6: Place chosen user finger on the glass of the fingerprint sensor twice while the fingerprint sensor turns on and off twice.



* A triple beep sound and a green light indicate the success of the user finger enrollment and LED displays "id" for more user finger enrollment.

* To continue enrolling more user fingers, or try again if unsuccessful, enter "ID" number ("10" through "999") and press "#" button and then repeat Step 6

* To stop enrolling user finger, please pull down the sliding cover in front body

* **CAUTION** : When you press "#" button without entering your own ID number to enroll more user fingers, the next available ID Number will be automatically assigned and might be enrolled as sub-master fingers if the assigned ID numbers are between "01" through "09"

2.2 Fingerprint Deletion

2.2.1 How to delete Single Fingerprint from lock

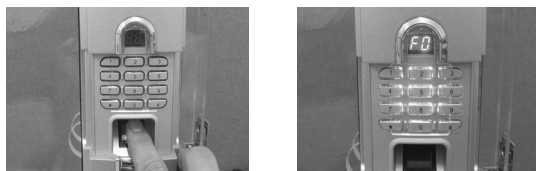
Step 1: Open the battery cover and press the "F" button in the back body of the lock



Step 2: Pull up the sliding cover in the front body of the lock
(The fingerprint sensor will then turn on with a red light)



Step 3: Place the master finger or the sub-master finger on the glass of the sensor to verify (LED displays "F0" and soon changed to "no")



Step 4: Press "02" and "#" button (LED displays "id")



Step 5: Enter the ID number (2 or 3 digits) of the enrolled fingerprint you wish to delete and press "#" button. A triple beep sound and a green light indicate the success of the fingerprint deletion

- * To continue deleting an individual fingerprint, press "02" and "#" button, then repeat Step 5.
- * You can delete all enrolled fingerprints by this mode except master fingerprint. Master fingerprint (ID number "00") is protected from deleting by this mode for the safety reason.
- * To stop deleting individual fingerprint, please pull down the sliding cover in front body

2.2.2 How to delete all Fingerprints from Lock

Step 1: Open the battery cover and press the "F" button in the back body of the lock



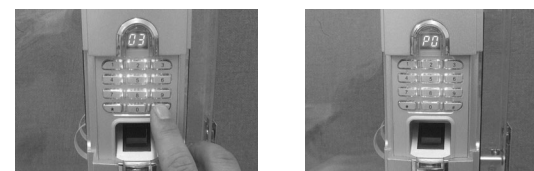
Step 2: Pull up sliding cover in front body of the lock
(The fingerprint sensor will then turn on with a red light)



Step 3: Place master finger or sub-master finger on the glass of the sensor to verify (LED displays "FO" and soon changed to "no")



Step 4: Press "03" and "#" button (LED displays "PO")
(The fingerprint sensor will then turn on with a red light)



Step 5: Enter the PIN code at ID number "01" and press "#". Voice prompt saying "Function installed" will be heard to indicate successful total deletion including sub-master fingerprint

- * You can delete all enrolled fingerprints but user access codes will remain undeleted in this mode.

2.3 User Access Code (PIN Code)

2.3.1 How to enroll User Access Code (PIN Code)

Each lock comes with the factory default User Access Code of 0000 at ID number "01". You can enroll User Access Codes up to 5 including default User Access Code. For your own security, you are recommended to immediately delete default User Access Code (0000 at "01") and register a new User Access Codes of your own choice (4 to 12 digits), and also to consider doing them at various intervals in the future.

Step 1: Open the battery cover and press the "F" button in the back body of the lock



Step 2: Pull up the sliding cover in the front body of the lock
(The fingerprint sensor will then turn on with a red light)



Step 3: Place the master finger or the sub-master finger on the glass of the sensor to verify (LED displays "F0" and soon changed to "no")



Step 4: Press "04" and "#" button (LED displays "id")



Step 5: Enter the ID number of the PIN Code (Unoccupied ID number between "01" and "05") you wish to enrol and then press "#" button (LED displays ID number you just entered)



If you want to change the PIN code already enrolled, delete the ID number of the enrolled PIN Code first and then enrol new PIN Code

Step 6: Enter in your own PIN Code (4 to 12 digits) and then press "#" button



Please record the ID number and the PIN Code for each enrolment and the change.

This information will be needed when deleting PIN Code (Refer to 2.3.2 for User Access Code deletion)

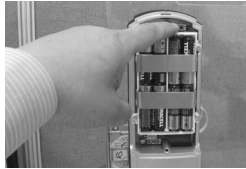
Step 7: Do Step 6 again (double entry is required). A triple beep sound and a green light indicate the successful enrollment of your PIN Code.



* To continue enrolling and changing PIN Code, press "04" and "#" button and then repeat Step 5 through Step 7.

2.3.2 How to delete a single User Access Code (PIN Code)

Step 1: Open the battery cover and press the “F” button in the back body of the lock



Step 2: Pull up the sliding cover in the front body of the lock
(The fingerprint sensor will then turn on with a red light)



Step 3: Place the master finger or the sub-master finger on the glass of the sensor to verify (LED displays “F0” and soon changed to “no”)



Step 4: Press “05” and “#” button (LED displays “id”)



Step 5: Enter the ID number of the User Access Code you wish to delete and then press “#” button (LED displays ID number you just entered) A triple beep sound and a green light indicate the successful deletion of the PIN Code.



* To continue deleting a User Access Code, press “05” and “#” button and then repeat Step 5

2.3.3 How to delete all User Access Codes (PIN Codes)

Step 1: Open the battery cover and press the “F” button in the back body of the lock



Step 2: Pull up the sliding cover in the front body
(The fingerprint sensor will then turn on with a red light)



Step 3: Place the master finger or the sub-master finger on the glass of the sensor to verify (LED displays “F0” and soon changed to “no”)



Step 4: Press “06” and “#” button (LED displays “id”)



A triple beep sound and a green light indicate the successful deletion of all PIN Codes except factory default PIN code (“0000”) at “01”.

* Factory default User Access Code (“0000”) at ID number “01” will be reinstated after the completion of all PIN codes deletion.

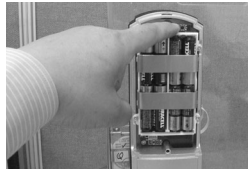
2.4 Temporary Unlock Mode

This lock is pre-set in “Automatic Locking Mode”. After being electronically opened, it will automatically lock within 5 seconds of the door remaining in, or returning to, its fully closed position.

However, you can set a “Temporary Unlock Mode” to enable free access without the use of fingerprints or User Access Code. For example, this is useful for storeroom and office doors that need to remain unlocked during office hours.

2.4.1 How to set the temporary unlock mode

Step 1: Open the battery cover and press the “F” button in the back body of the lock



Step 2: Pull up the sliding cover in the front body of the lock
(The fingerprint sensor will then turn on with a red light)



Step 3: Place the master finger or the sub-master finger on the glass of the sensor to verify (LED displays “F0” and soon changed to “no”)



Step 4: Press “07” and “#” button (LED displays “id”)



Step 5: Enter “0” and then press “#” button. Voice prompt saying “Manual closing mode” will be heard to indicate success of Temporary Unlock Mode setting.



- * In this mode, automatic locking within 5 seconds after the door is opened and the closed (Automatic Locking Mode) is not applied, and the lock will be kept unlocked.
- * In order to lock the door during this mode (temporary unlock mode) is still on, just press “#” button or open and then close the sensor cover of the front body. The “temporary unlock mode” will be resumed with verification by any enrolled fingers.

2.4.2 How to set automatic Locking mode

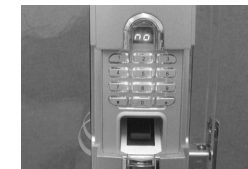
Step 1: Open the battery cover and press the “F” button in the back body of the lock



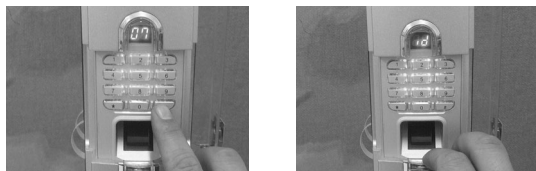
Step 2: Pull up the sliding cover in the front body of the lock
(The fingerprint sensor will then turn on with a red light)



Step 3: Place the master finger or the sub-master finger on the glass of the sensor to verify (LED displays “F0” and soon changed to “no”)



Step 4: Press “07” and “#” button (LED displays “id”)



Step 5: Enter the ID number in one digit (“1”) and then press “#” button. Voice prompt saying “Automatic closing mode” will be heard to indicate success of Automatic Locking mode setting.



* In this mode, this lock will be automatically locked within 5 seconds of the door returning to its fully close position after having been opened

- ▶ ID number for Temporary Unlock/Automatic Locking Mode
- 0 : Temporary Unlock Mode
- 1 : Automatic Locking Mode (Factory default Mode)

2.5 Temporarily Remove & Reinststate Fingerprints

An enrolled fingerprint can be temporarily removed without being deleted. It can then be reinstated, as needed, without having to be re-enrolled. This allows certain enrolled people to be granted or denied access for temporary periods on a regular or irregular basis.

- Note:** - The total number of fingerprints that can be temporarily removed from the lock is limited to 20 at any point in time.
- Take care to note all temporary removals and reinstatements in the ID Number and Fingerprint Record on page 39 and 40 of this manual.

2.5.1 Temporarily remove a single fingerprint from lock

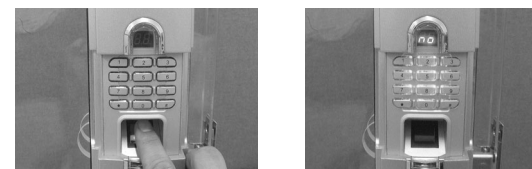
Step 1: Open the battery cover and press the “F” button in the back body of the lock



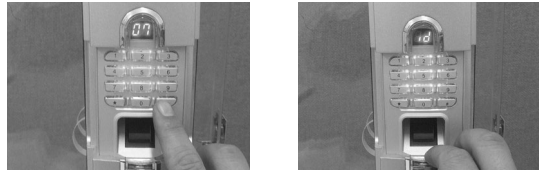
Step 2: Pull up the sliding cover in the front body of the lock (The fingerprint sensor will then turn on with a red light)



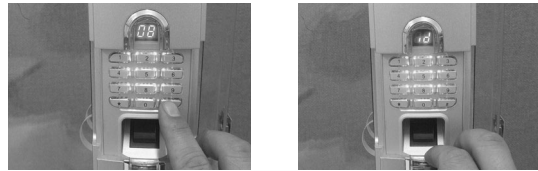
Step 3: Place the master finger or the sub-master finger on the glass of the sensor to verify (LED displays “F0” and soon changed to “no”)



Step 4: Press “08” and “#” button (LED displays “id”)



Step 5: Enter the ID number in two or three digits of the enrolled fingerprint you wish to temporarily remove, and then press “#”. A triple beep sound indicate a successful temporary removal.



- * To continue the Temporary Removal of other individual fingerprints, up to the maximum limit of 20 at any point in time, just press “8” and “#”, and then repeat Step 5.
- * Master and sub-master fingers at ID number “00” ~ “09” can not entered in Step 5 and therefore can not be temporarily removed

2.5.2 Reinstate a single removed fingerprint to the lock

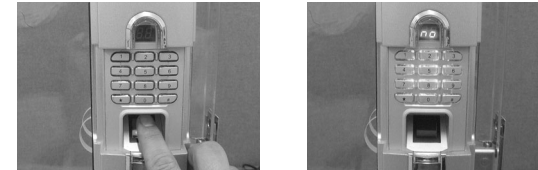
Step 1: Open the battery cover and press the “F” button in the back body of the lock



Step 2: Pull up the sliding cover in the front body of the lock (The fingerprint sensor will then turn on with a red light)



Step 3: Place the master finger or the sub-master finger on the glass of the sensor to verify (LED displays “F0” and soon changed to “no”)



Step 4: Press “09” and “#” button (LED displays “id”)



Step 5: Enter the ID number in two or three digits of the enrolled temporarily removed fingerprint you wish to reinstate, and then press “#”. A triple beep sound indicate a successful reinstatement.

- * To continue reinstating other temporarily removed individual fingerprint, press “9” and “#”, and then repeat Step 5.

2.6 Sound Setting Mode

This lock pre-set in the “Voice On” mode. There are 3 modes to choose from as per your preference and environment situation.

Voice Mode (1)

In this mode, results of programming or operation will be heard in voice as follows.

Function	Voice Guidance
Lock is open after finger verification	Is opened
Lock is closed	Is closed
When programming code for PIN code enrollment is ready	Password register
When programming code for fingerprint enrollment is ready	Key register
After the programming has been completed successfully	The function installed
After programming of automatic locking mode has been completed	Automatic closing mode
After programming of Temporary Unlock mode has been completed	Manual closing mode
When batteries are low or run out	Replace the batteries

* Voice message for low battery warning can still be heard in buzzer or silence mode

Buzzer Mode (2)

In this mode, the success or failure of the programming and the operation is indicated in buzzer sound

Silence Mode (0)

In this mode, there is no indication of the results of programming or operation. This mode recommended to be used in the facilities requiring silence such as library, at night etc

Note : Voice guidance of warning such as Batteries low will be still heard in all above modes.

2.6.1 How to set sound mode

Step 1: Open the battery cover and press the “F” button in the back body of the lock



Step 2: Pull up the sliding cover in the front body of the lock (The fingerprint sensor will then turn on with a red light)



Step 3: Place the master finger or the sub-master finger on the glass of the sensor to verify (LED displays “F0” and soon changed to “no”)



Step 4: Press “10” and “#” button (LED displays “id”)



Step 5: Enter the ID number of sound modes in one digit (0”, “1” or “2”) you wish to set and then press “#” button. Voice prompt telling “Function installed” will be heard to indicate success of sound mode setting.

ID number of sound mode setting

1 : Voice mode (Factory Default Mode)



2 : Buzzer mode



0 : Silence mode



2.7 Automatic “Fingerprint Sensor On” mode

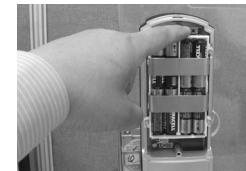
This lock is pre-set in the automatic “Fingerprint Sensor On” mode. This means that the fingerprint sensor will be turned on automatically when the keypad is backlit(sliding cover or press “*”) in front body. This mode is recommended for locks installed in strong direct sunlight.

You can change it to manual “Fingerprint sensor On” mode for the power saving if the lock installed in the indoor. In the manual “Fingerprint Sensor On” mode, the fingerprint sensor will turn on only when the initiation sensor detects a finger being placed on the sensor glass.

Note: Permanent use of the automatic “Fingerprint Sensor On” mode may slightly reduce battery life

2.7.1 How to set automatic “Fingerprint Sensor On” mode

Step 1: Open the battery cover and press the “F” button in the back body of the lock



Step 2: Pull up the sliding cover in the front body of the lock (The fingerprint sensor will then turn on with a red light)



Step 3: Place the master finger or the sub-master finger on the glass of the sensor to verify (LED displays “F0” and soon changed to “no”)



Step 4: Press “11” and “#” button (LED displays “id”)



Step 5: Enter “0” then press “#” button. Voice prompt telling “Function installed” will be heard to indicate success of automatic sensor on mode setting.



2.7.2 How to set Manual “Fingerprint Sensor On” mode

If the lock is in direct sunlight which is stronger than the light emitted by initiation sensor, then the finger may not be detected and the fingerprint sensor may not be turn on

Step 1: Open the battery cover and press the “F” button in the back body of the lock



Step 2: Pull up the sliding cover in the front body of the lock
(The fingerprint sensor will then turn on with a red light)



Step 3: Place the master finger or the sub-master finger on the glass of the sensor to verify LED displays “F0” and soon changed to “no”



Step 4: Press “11” and “#” button (LED displays “id”)



Step 5: Enter the “1” and then press “#” button. Voice prompt saying “Function installed” will be heard to indicate success of Manual Sensor On mode setting.



2.8 Time Setting mode

This is the mode to set the month/date/time which is required only if you are using the optional audit trail function. You can download entry log data with month/date/time of the each event as well as ID number of the entrant stored in this lock to PC via serial cable.

2.8.1 How to set Month/Date/time

Step 1: Open the battery cover and press the “F” button in the back body of the lock



Step 2: Pull up the sliding cover in the front body of the lock
(The fingerprint sensor will then turn on with a red light)



Step 3: Place the master finger or the sub-master finger on the glass of the sensor to verify (LED displays “F0” and soon changed to “no”)



Step 4: Press “12” and “#” button (LED displays “id”)



Step 5: Enter the year/month/day/date/time/minute/second consists of 13 digits in sequence then press “#” button. Voice prompt saying “Function installed” will be heard to indicate success of the time setting.

*Date will be one digit number: “0” for Sunday, “1” for Monday ...“6” for Saturday

Example) In case of 2:25:36 PM on July, 8, 2006 (Saturday)

➔ 06/07/08/6/14/25/36

2.9 Master Finger Mode/User Finger Mode

This lock pre-set in the “Master Finger” mode. In this mode, only administrators enrolled as a master finger or sub-master fingers can perform the programming of this lock (enrolling/deleting fingerprint and programming and changing set up) as the master finger or sub-master finger should be verified during the programming process. If, however, you want to simplify the programming process in enrolling/deleting fingerprint and programming and changing set up, you can change to User finger mode where it does not require master or sub-master finger to be verified for programming. Therefore anyone who has knowledge on the programming of this lock can enroll/delete fingerprints and program/change settings.

Note : You are highly recommended to use this lock in master finger mode to keep programming or changing settings from manipulation by unauthorized persons.

2.9.1 How to set User finger mode

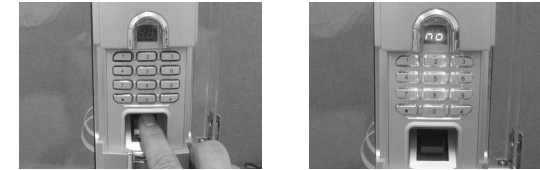
Step 1: Open the battery cover and press the “F” button in the back body of the lock



Step 2: Pull up the sliding cover in the front body of the lock (The fingerprint sensor will then turn on with a red light)



Step 3: Place master finger or sub-master finger on the glass of the sensor to verify (LED displays “F0” and soon changed to “no”)



Step 4: Press “13” and “#” button (LED displays “id”)



Step 5: Enter “0” and then press “#” button. Voice prompt saying “Function installed” will be heard to indicate success of User finger mode setting.



2.9.2 How to set Administrator(Master Finger) mode

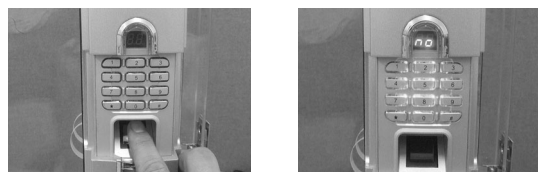
Step 1: Open the battery cover and press the “F” button in the back body of the lock



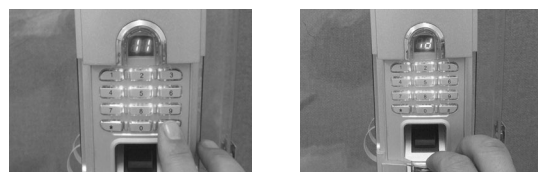
Step 2: Pull up the sliding cover in the front body of the lock (The fingerprint sensor will then turn on with a red light)



Step 3: Place the master finger or the sub-master finger on the glass of the sensor to verify (LED displays “F0” and soon changed to “no”)



Step 4: Press “13” and “#” button (LED displays “id”)



Step 5: Enter “1” and then press “#” button. Voice prompt saying “Function installed” will be heard to indicate success of master finger mode setting.



► ID number of administrator or user finger mode setting

0 : User finger mode

1 : Administrator mode (Factory Default Mode)

* In user finger mode (ID “0”), there is no step for master (or sub-master) finger verification before the programming process.

Programming process comparison between Administrator and User Finger Mode (in enrolment of user fingerprint at ID number “24”)

* **Administrator mode**

- “F” button -> Master finger -> “01”->“#”-> “24” -> “#” -> finger placement

* **User Finger Mode**

- “F” button ->“01” ->“#” -> “24” -> “#” -> finger placement

Note : In user finger mode, master fingerprint or sub-master fingerprints will be changed to just user fingerprints. When you change the mode back to “Administrator” mode, Master (sub-master) fingerprints (Any fingerprint enrolled in ID number at “00” ~ “09” in “User finger” mode) will be converted to master and sub-master fingers automatically

2.10 Programming Code Summary Table

Code (“no”)	ID (“id”)		Keystroke	Function
01	01 ~09	Sub-masters	“MF” “01”and “#”- “ID”and “#”	Fingerprint enrolment (Sub-masters)
	10~ 999	Users	“MF” “01”and “#”- “ID”and “#”	Fingerprint enrolment (Users)
02	01~999	Individual	“MF” “02”and “#”- “ID”and “#”	Delete single fingerprint by ID
03			“MF” “03”and “#”-PIN Code at “01” and “#”	Delete all fingerprints (“00~999”) using PIN Code at “01”
04	01~05	Individual (4~12 digits)	“MF” “04”and “#”- “ID”and “#” -PIN code” and “#”	Enter PIN Code (Do PIN and # twice) “0000” factory default PIN code at “01”
05	01~05	Individual	“MF” “05”and “#”- “ID”and “#”	Delete PIN Code
06			“MF” “06”and “#”	Delete all PIN Codes (“01” ~ “05”) PIN Code (0000) at “01” will be reinstated
07	0		“MF” “07”and “#”- “0”and “#”	Temporary Unlock Mode
	* 1	Factory Set	“MF” “07”and “#”- “1”and “#”	Automatic Locking Mode
08	01~999		“MF” “08”and “#” - ID- “#”	Temporary removal of a fingerprint (Max. 20 fingerprints) User fingerprint only
09	01~999		“MF” “09”and “#” - ID- “#”	Reinstate temporarily removed fingerprints
10	* 1	Voice Mode	“MF” “10”and “#” - “1”and “#”	11 voice guidance messages
	2	Buzzer Mode	“MF” “10”and “#” - “2”and “#”	Low battery warning(voice prompt)is effect
	0	Silence Mode	“MF” “10”and “#” - “0”and “#”	Low battery warning(voice prompt)is effect
11	*0	Factory Set	“MF” “11”and “#” - “0”and “#”	Automatic Sensor on Mode
	1		“MF” “11”and “#” - “1”and “#”	Manual Sensor on Mode
12		Time setting	“MF” “12”and “#” - “Time (13 digits)”and “#”	Year,month,day,date,time,minute,second * Date : Sun(0), Mon(1) ... Sat(6) EX) 06,07,08,6,14,25,36 (13 digits) For July 8, 2006 (sat) 2:25:36 PM
	0		“MF” “13”and “#” - “0”and “#”	User Finger Mode
13	* 1	Factory Set	“MF” “13”and “#” - “1”and “#”	Administrator (Master Finger) Mode

* Key Strokes are based on Administrator mode where master finger (or sub-master finger) should be verified for programming

* ID number marked with asterisk (*) means standard mode pre-set in the factory

* “no” and “id” are the indication displayed on LED in the front body.

- “no” indicates lock is waiting for the entry of programming code number

- “id” indicates lock is waiting for the entry of ID number

3. Unlocking the door

3.1 Unlocking the door from outside

3.1.1 With User Access Codes (PIN Codes)

Step 1: Pull up the sliding cover in the front body which turns on the keypad backlighting

* If the keypad backlight is not on, or turns off, then press “*” to turn it on again before proceeding.

Step 2: Enter one of User Access Codes (PIN Code) and then press “#”. The motor driving sound of the latch or mortise unlocking and a triple beep sound indicate successful unlocking

* When “Voice mode” is set, voice prompt saying “Is opened” will be heard to indicate the successful unlocking.

Note : 1. Just a double beep sound and red light indicates an Error. Please check your User Access Code and try again

2. The lock will automatically engage within 5 seconds of the door being closed once you have entered in “Automatic Locking” mode. However, the lock will be kept open in “temporary unlock” (manual closing) mode until pressing “*” button or sensor cover in front body up and down or until setting up the lock into “Automatic Locking” mode.

3.1.2 With fingerprint

Step 1: Pull up the sliding cover in the front body of the lock which turns on the keypad backlighting and fingerprint sensor in red

* If the keypad backlight is not on, or turns off, then press “*” to turn it on again before proceeding.

Step 2: Place an enrolled finger, flat, on the glass of the fingerprint sensor. The red sensor light indicates the finger is being scanned and compared to the stored template. This should take less than 1 second. The motor driving sound of the latch or mortise unlocking and the triple beep sound indicate successful verification and access granted.

* When “Voice mode” is set, voice prompt saying “Is opened” will be heard to indicate the successful unlocking.

Note : 1. Just a double beep sound and red light indicates an Error. Please check that you are using an enrolled finger and try again.

2. If there is no reaction and the red sensor light remains on, then another verification is required. Lift your finger off and then place it back, flat, on the sensor glass. If this does not work, then go back to Step 1 and try again with the same, or another enrolled finger.

3. The lock will automatically engage within 5 seconds of the door being closed once you have entered in “Automatic Locking” mode. However, the lock will be kept open in “temporary unlock” mode until pressing “*” button or sensor cover in front body up and down or until setting up the lock into “Automatic Locking” mode.

3.2 Unlocking the door from inside

Just turn the lever handle on the back body to approx. 45 degrees clockwise (right handed) or 45 degrees counterclockwise (left handed) and then push to open the door.

The door will be automatically locked again after you close the door.

3.3 Unlock the door using emergency cylinder key

Step 1: Take out the cylinder cover in the front body of the lock



Step 2: Insert key into the keyhole



Step 3: Push and turn the key 90 degree clockwise



Step 4: Rotate the handle to unlock the door



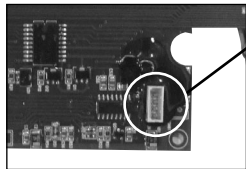
Step 5: Turn the key 90 degree counter-clockwise and pull off

Note : 1. Keep the mechanical cylinder key to be well prepared for emergency case.
2. This key is usually used in emergency case only when you forget the PIN numbers and enrolled fingerprint is not available.

4. Audit Trail Data Kit (Option)

This lock is designed to download the event logs up to 1,000 events saved in the memory of the lock through serial port equipped in the PCB. The event log data include time of the entry and User ID's. You need the serial cable and software included in optional Audit Trail Kit to download the event logs.

Picture showing serial port on the back body



RS232 4Pin connector (Male)

Please refer to the operation manual for Audit Trail Data Kit of BFS-1000 for more detailed information

5. Installation of the lock

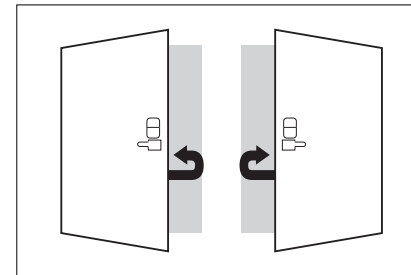
5.1 Checking before installation

- *You will need - Hole cutter (30 ~ 35mm)
- Electric drill (10mm drill bit)
- Screwdriver

*Door Thickness must between 38 ~ 60mm

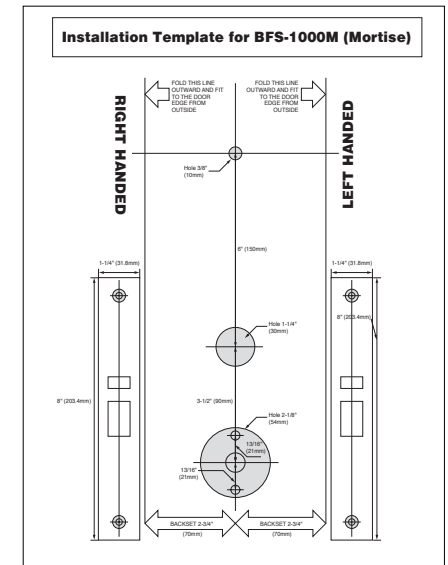
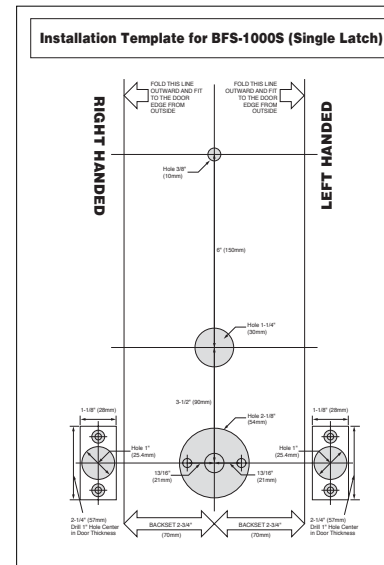
*Checked for right or left handed positioning

Left Hand/Right Hand



This product can be used for either left or right handed doors.

5.2 Installation Template



6. Maintenance

- This is a high-tech electronic device. It is highly recommended that all repairs are done by authorised persons only. Failure to comply could void your warranty.
- Keep the sensor surface clean and dry. Wipe gently with a clean, soft, dry cloth to remove any dirt, residues, stains or moisture.
- A low battery warning alarm will sound when the batteries run down to less than 30% of full power. You should then replace all of the batteries with a new set as soon as possible.
- If you do not change the batteries in time, or mix old and new batteries causing rapid power loss, and the lock ceases to function, then you can place a 9V square battery on the terminals at the base of the front body to provide temporary power. Your fingerprint records are not lost. You can enter using an enrolled fingerprint and then change the batteries.
- The batteries supplied with the lock may suffer some power loss during storage and transit prior to sale and will be subject to heavy use during initial testing and enrolment. They may need to be replaced sooner than normally expected.

7. Basic Troubleshooting

Problem		Possible reasons and checks	Solution
Forget User Access Code		Check with administrator for User Access Code records (Refer to 2.3.1.)	If no record exists, you must change access code again
If the lock does not recognize a fingerprint		Was the fingerprint properly placed(in the centre of the sensor)? The fingerprint was temporarily removed	Try again by putting the fingerprint in the centre of the sensor. Verify the finger after reinstatement of temporarily removed fingerprint (Refer to 2.5.2 for Fingerprint Reinstatement)
If the sensor light does not come on. If keypad does not work		Batteries may not be installed correctly or may be run down.	Use 9V square battery held against terminals beside of emergency cylinder to gain access.
Red indicator flashes with double beep sound and door can not be opened		Invalid or deleted fingerprint. Fingerprint covered/obscured or poorly positioned	Place an enrolled and unobscured fingerprint correctly on the sensor.
Cases of error in LED display	63	Sensor or fingerprint scanning error	Try again after changing batteries with new ones.
	6F	Invalid fingerprint	Enroll the fingerprint and then try again.
	6b	Poor image of fingerprint	Place finger correctly after cleaning the surface of the sensor or fingerprint.
	6C	Time-out for fingerprint placement	Place finger on the sensor within 5 seconds after keypad backlights go on.
	7d	Finger restricted temporarily	Reinstate temporarily removed fingerprints
	Er	General error	Use correct User Access Code within 5 seconds after keypad backlights go on or place finger in the correct position.

8. ID Number and Fingerprint Record

Record each ID number, its date of enrollment, and a fingerprint description for future reference.

ID No.	Date	Person	Finger	ID No.	Date	Person	Finger

Record each ID number, its date of enrollment, and a fingerprint description for future reference.

ID No.	Date	Person	Finger	ID No.	Date	Person	Finger