




Preface

- Congratulations on your purchase of HD BIOMETRIC fingerprint products.
- We are honored of being your supplier.
- Please read the manual carefully, so you can master the product quickly and skillfully. Please keep the manual as a reference later.
- We can only offer the functions described in the manual.
- Manufacturer will not be responsible for any damages caused by the users improper use.

 Please write down the serial number on the line below, you can find it on the side of the packing box.

SN: _____



Brief introduction of fingerprint recognition technology

In the highly confidential system, the traditional methods of identity verification are the authentication of effective certificate or authenticating object, checking on password or key, magnetic card, ICC and so on .The essential aspect of the traditional methods was to check

on the material evidence held by a certain person, not the person himself. If the material evidence has been confirmed, the identity of its owner has been confirmed at the same time. These traditional methods do clearly have loopholes. Firstly, the legal person lost his material evidence (such as password or key), he would be refused to enter into the system. Secondly, these certificates, and authenticating objects could be counterfeited, the password could be translated or embezzled, and the illegal person may get a chance to enter into the system. The fingerprint recognition technology is based on fingerprint, which could not be counterfeited, and has many characters, such as “individuality”, “permanency in one’s life” and “carry on one’s person”. The fingerprint recognition technology is a reliable method of identity verification to ensure safety of person, property and important information.



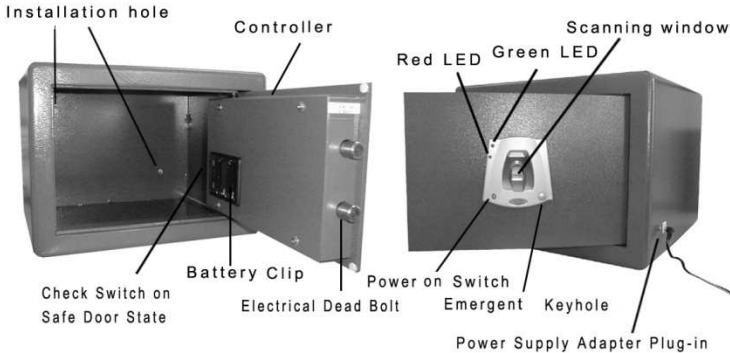
Special attention when you open the safe

Unload the decorative lid of emergent keyhole, insert the emergent key into the hole (mark point at the upper end) and rotate 50 degrees clockwise to open the safe door. Keeping up the door in open state, rotate the key anticlockwise to the initial position and remove the key. Plug the power supply adapter in; install 5pcs of AA Nickel-Hydrogen rechargeable cells (or install 5pcs AA alkaline cells and do not plug the power supply adapter in). Press the power on switch to power on the system. The electrical deadbolt will automatically return. Now the system is ready to do store operation. **(Don’t connect with power supply when the emergent key is in the emergent keyhole)**

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1. Names of fingerprint recognition safe parts



2. Characters of fingerprint recognition safe

Our company has developed HD BIOMETRIC Fingerprint safe with the most advanced fingerprint recognition technology in the world. It is a new type multi-functional safe, which merges the new technologies optical, electric, mechanical and algorithmic into an organic whole. The fingerprint recognition technology is based on fingerprint, which could not be counterfeited, and has many characters, such as “individuality”, “permanency in one’s life” and “carry on one’s person”.

When you use the fingerprint recognition safe, your fingerprint will be the only key owned by yourself.

You just need to put your finger on the scanning window, fingerprint recognition system will automatically scan, match and verify the fingerprint data. If matching is successful, the electronic controlled lock will be unlocked.

Fingerprint recognition safe has passed the examination of Ministry of Public Security. It is ideal secure and theft-proof products in the 21

century. It is suitable to application in the field such as Army, Public Security, Bank, Insurance Company, Traffic and Family.

3. Specifications of fingerprint recognition safe

Contour size (mm)	Inside size (mm)	Weight
W350xD300xH255	W343xD241xH248	17.5 kg

4. Technical parameters of fingerprint recognition safe

- Size of fingerprint scanning window: 12mmx16mm
- Resolution of fingerprint system image: 500 DPI
- Time of fingerprint scanning: $\leq 1s$
- Time of fingerprint recognition match: $\leq 5s$
- FAR: $< 0.0001\%$
- FRR: $< 1\%$
- Translation tolerance: $< \pm 3mm$
- Rotation tolerance: $\pm 15^\circ$
- System power supply: 5 pieces AA of Nickel-Hydrogen rechargeable cells, plug power supply adapter in (or install 5 pieces AA of alkaline cells, and do not plug the power supply adapter in).
- The largest power: $\leq 10W$
- Operating temperature: $-5^\circ C--55^\circ C$
- Operating humidity: 10%-85%
- Insulation resistance: $\geq 100M \Omega$
- Reactance strength: 50Hz, 1.5KV, 1 Minute, not punctured, not arcing
- Static discharge sensitivity: Voltage 15KV, No false action.

- Anti-radiation sensitivity: field strength 1V/m, 20—1000MHz.

5. Functions of fingerprint recognition safe

1. The maximum store capacity: 24 fingerprints.
2. Automatic scanning and matching fingerprint data.
3. After fingerprint matching is correct, the electric door lock will automatically unlock.
4. Controller provided, the system carry out 3-level fingerprint secret management.
5. With the controller, you can store or delete the fingerprint according to different level authority.
6. Prompt sounds and indicator lamps indicate different working states.
7. After close the safe door, the safe will automatically lock.
8. If the safe door under opened state over 3 minutes, it will send out prompt sounds.
9. 5pcs AA alkaline cells can support over 360 times of unlocking operation. If electricity is lack, red indicator lamp will twinkle to prompt.
10. Use the emergent key provided to unlock the safe in an emergency.

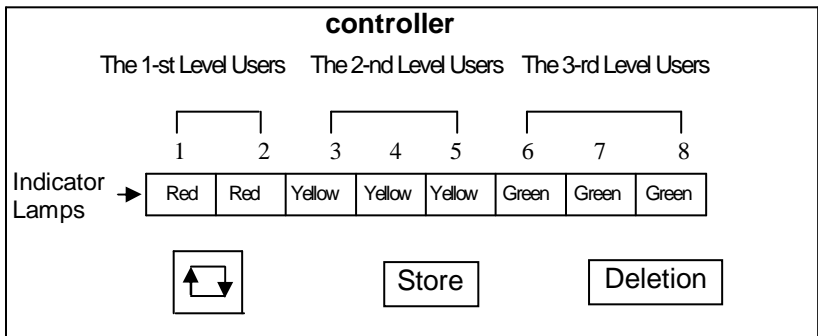
6. Installation of fingerprint recognition safe (See figure 1)

7. Use method of fingerprint recognition safe

7.1 Fingerprint management

- (1) The fingerprint management (storing and deleting fingerprint) should only be done, while the safe is in the normally opening state. On the operating panel of controller, each indicator lamp represents a group of fingerprints. Every group has 3 fingerprints. The LED brightens continuously that means the fingerprints have been stored at the position, otherwise some the corresponding indicator twinkles. There is no fingerprint stored in the safe when it left from factory.
- (2) Fingerprint Store and deletion adopts 3-level mode management.

Sketch Map of controller Level Management



Group 1 and 2 (red indicator lamps) are the first level users.

Group 3,4 and 5 (yellow indicator lamps) are the second level users.


Group 6,7and 8 (green indicator lamps) are the third level users.

- (3) If you are the first level user, after opening the safe, you can delete


the second and third level users fingerprints (from the third to eighth groups) or store other second and third level fingerprints. The first level users can manage each other, but the second and third level users cannot manage each other. If there is no fingerprint stored at the first level users position, after normally opening, the second or third level users can store their fingerprints as the first level users.

- (4) If your fingerprint stored as the second level user, after normally opening the safe, you can delete your fingerprint or store others fingerprints as the third level users, but you cannot store or delete the first level users or the same level users as your.
- (5) If you are the third level user, after normally opening the safe, you do only have the authority to delete your fingerprint data.

7.2 Fingerprint store operation

- (1) After normally opening the safe, under door-opened state, press key  to check the fingerprint store states at each position. If the indicator lamp brightens continuously that means fingerprints has already stored at the position. If the indicator lamp twinkles means no fingerprint stored at the position.
- (2) Press key to select a position without fingerprint stored, put your finger on scanning window with medium pressure. Press “STORE” key, the red indicator brightens that means the system is reading the fingerprint data. After reading end, the red indicator lamp will die out and prompt sound is sent out. At this time, remove your finger. A moment later, data store is ended; prompt sound is sent out; green indicator lamp brightens. Repeat the above process two times. The corresponding indicator lamp brightens that means the store operation is successful. If the system could not scan three

qualified fingerprint, the fingerprint cannot be stored in the system.

 **Suggestion:** For getting better effect, change fingerprint positions a litter during three times of scanning fingerprint.

7.3 Locking operation


Close the door of safe, it will automatically lock and a prompt sound is sent out. If the safe is locked, then the system enters into electricity saving state. Otherwise, the system will send out prompt sound after three minutes.

7.4 Unlocking operation

- (1) When the safe is in locking state, put the finger having been stored fingerprint on fingerprint scanning window with medium pressure.
- (2) Press the power on switch, prompt sound is sent out, each red and green indicator lamps twinkles one time.
- (3) Then, red indicator lamp brightens that means the fingerprint scanning-window is now scanning fingerprint data. At this time, do keep finger not moved. Red indicator lamp dies out and prompt sound is sent out that means the fingerprint data have been read off.
- (4) You can remove your finger; the system is matching and checking the fingerprint data. If the match is successful, prompt sound is sent out, green indicator lamp brightens at the same time and then lock-body will automatically unlock. At this time, you can open the safe door.

- (5) If unlocking is failing, the system returns into electricity saving state.
- (6) After the safe door is opened, you can see the corresponding indicator lamp brightens.
- (7) If the battery is installed correctly and the system has not stored any fingerprint, press the power on switch, the lock-body will automatically unlock. When the system has stored fingerprint, you have to use the stored fingerprint to unlock the safe.

7.5 Delete fingerprint

After normally unlocking the safe, open the safe door, press  key to select the fingerprint to be deleted in operation limits according to user different authority. Press “deletion” key, prompt sound is sent out, at the same time green indicator lamp brightens that means the deletion operation is successful.

7.6 Unlock the safe in an emergency

When the safe fingerprint recognition system could not work normally, use the emergent key to unlock the safe.

7.7 Working abnormality treatment


When the safe working abnormality appears, please check on whether the battery installation is correct or not; electricity is lack or not. If the safe could still not work normally, remove the battery to let the system restore to the original position. A moment later, install the battery again. After ten seconds, you can do the normal operation.

8. Illustration for unlocking the safe in an emergency

When unlocking the safe in an emergency, you should use the emergent key provided by manufacturer.

Note: The emergent key should be kept at a secure place and taken care by a special person.

9. Points for attention when the safe is put into use

- (1) Indication for pressing button: one prompt sound is sent out when a button is pressed.
- (2) Indication of a mistake: If an operation is wrong (such as over authority to manage fingerprint or failing fingerprint match), three prompt sounds will be sent out and red indicator lamp brightens.
- (3) When unlocking the safe at each time, please retain the position, angle and putting pressure of the finger as similar as possible to when the fingerprint was enrolled.
- (4) Only may a few users fail to store their fingerprints. The system will send out three prompt sounds and red indicator lamp brightens. It is caused by damage or unfit humidity of the finger. Change another finger or adjust finger humidity to try again.
- (5) Try to select the finger with clear fingerprint to store in the fingerprint recognition safe. It is suggested that the user store spare fingerprints with another fingers to be used in case.
- (6) The emergent key must be kept in a secure place. (Do not keep it in the safe)
- (7) The user can delete all fingerprints stored and set up level management again, when the level management is confused. The method to delete all stored fingerprints at the same time: Open the safe door; press the check switch on safe door state to keep the electric dead bolt in locking state. Press  , STORE and

DELETE buttons at the same time, then press the power on switch to power on the system. All fingerprints stored will be deleted in three seconds.

- (8) Change the alkaline cells in time, if low-voltage alarms.
- (9) To protect the safe, do not let the safe contact chemical substances (such as painting, alcohol), drench with water or damp.