

User Manual

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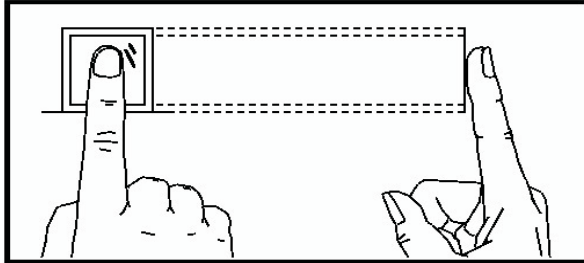
Disclaimer: our fingerprint recognition device is only used to recognize some characteristics of fingerprints instead of keeping fingerprints, and it is unable to restore fingerprint images, therefore, no invasion of human rights or privacy is involved. As the manufacturer, our company shall not liable, directly or indirectly, for any consequences arising out of improper use of our device or in connection with invasion of human rights or privacy by any user.

I. Notice to Users

1.1 How to Fingerprint

Suggestion: choose one finger, such as index finger, middle finger or ring finger instead of thumb or little finger (to avoid awkward movement) to press sensing area for fingerprinting.

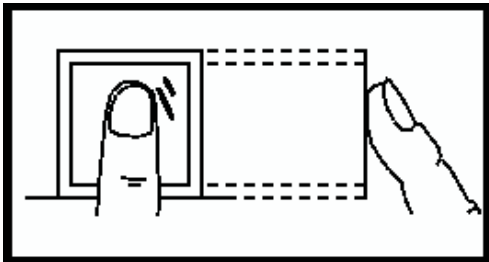
Correct:



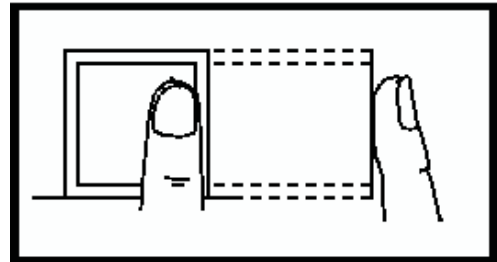
Press evenly on central area.

Wrong:

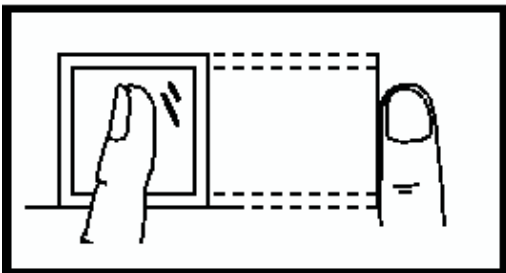
Incomplete touch



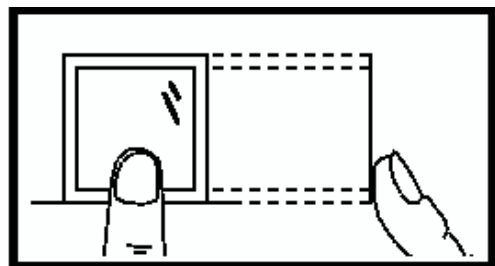
Off center



Turn fingerprint sideways



Excessively low position



Note: Please register fingerprint correctly, and our company shall not be liable for poor fingerprinting due to improper operation. We reserve the right of final interpretation and modification of this function.

1.2 Cautions during Installation:

*Keep this device away from direct sunlight which may affect fingerprint acquisition or cause failure to correctly recognize fingerprint.

*It is suggested to use the device at places with temperature between 0°C~60°C to ensure the best performance. In case it is necessary to use this device outdoors, it is suggested to protect it with sunshade, cooling unit or thermal insulation unit to avoid too low or too high temperature.

*Before installation, please connect other wires before connecting power supply. In case of abnormal operation of the device, please turn off main power switch before troubleshooting. Please be reminded any damaged device due to failure to shut down the device is out of our warranty.

II. Basic Functions

2.1 Definition and Description of Basic Functions:

- User registration
- User verification
- User's ID number
- Authority level

User registration and verification are the most important functions of this device.

2.2 User Registration

Two different fingerprints can be registered to identify one ID number (which provides two choices for user verification). Technically, it is necessary to register all fingerprints of the user so that the user can use anyone of them for verification without worrying about which fingerprint has been registered before. Actually, it is enough to register two fingerprints, such as left and right index finger, one of which can serve as standby in case the other is hurt.

2.3 User Verification

Once the user puts on fingerprint or enters an ID number and then puts on fingerprint again or enters password, the device will compare scanned fingerprint with saved one to verify user. The user can use fingerprint to check work attendance as long as the fingerprint has been registered. The verification result will be given and the successful fingerprint verification will be saved.

2.4 User's ID Number

A new ID number will be given to user for registration, and this ID number will be bonded with fingerprint or password for user verification.

2.5 Authority Level

There are three authority levels:

User: refer to those who need to be verified for some purpose, such as opening the door or keeping access record.

Super administrator: refer to those who are allowed to use all functions and change all settings.

III. Quick-Start Guide

3.1 Keypad:

1	2	3	C
4	5	6	M
7	8	9	▲
	0	OK	▼

Note: Keypad may vary due to different model.

3.2 Keys & Functions:

0...9	Enter value
C	ESC, to exit or cancel during operation
M	Menu
▲	Up
▼	Down
	Wired doorbell

3.3 Main Menu

In initial interface, press “M” to view main menu as below:

Menu & user management & communication setting & access control & system setting & system information	
ESC	OK

User management: register or delete user information and set management authority level.

Communication setting: set parameters for communication with PC, such as downloading via flash drive, Baud rate, IP address, gateway, subnet mask, etc.

Access control: set related functions for access control, such as time, user access definition, operation combination for opening door, alarm, etc.

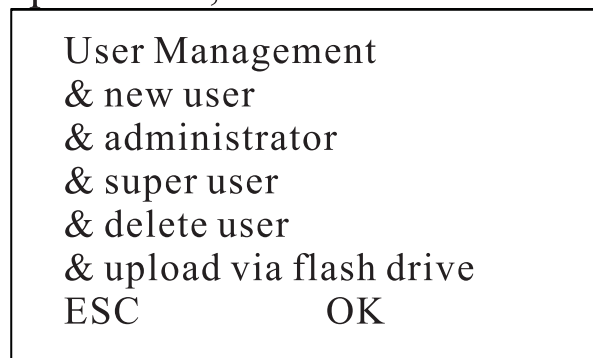
System setting: set related system information, such as device reference number, record, time, doorbell, etc.

System information: view system information, such as registration capacity, record details, parameters, etc.

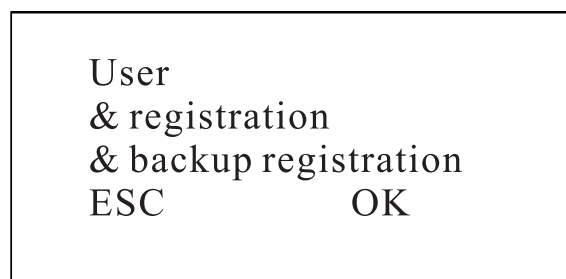
IV. Personnel Management

4.1 User Registration

There are five sub-items under “user management”, i.e. “new user”, “administrator”, “super user”, “delete user” and “upload via flash drive”.



Remarks: those sub-items are mainly used for personnel management. As for user registration, there are two sub-items under “user”, i.e. “registration” and “backup registration”.



Registration: such as fingerprint, password and card information registration.
Backup registration: mainly register backup information.

4.2 How to Register Fingerprint

Step 1: Select “registration” on user menu list, press “▼” or “▲” , select “fingerprint registration”, and then select OK to confirm. Please refer to below figure:

Registration & fingerprint registration & card registration & password registration & fingerprint and card & fingerprint and password ESC OK	
--	--

Step 2: Enter ID number and select OK to confirm. Please refer to below figure:

Registration	
ID Number	0 0 0 0 4
ESC	OK

Step 3: Put fingerprint on twice according to system information to finish registration.

Registration 0 0 0 0 4 First

In case fingerprint is registered successfully, the system will ask whether to “continue or not”. Please refer to below figure:

Registration	
Continue or not?	
ESC	OK

Select OK to finish registration or select ESC to move back to previous step. Please refer to below figure:

Registration & fingerprint registration & card registration & password registration & fingerprint and card & fingerprint and password ESC OK	
--	--

Note: During fingerprint registration, please be reminded two different fingerprints can be registered to identify one ID number.

4.3 How to Register Card?

Step 1: Select “registration” on user menu list, press “▼” or “▲”, select “card registration”, and then select OK to confirm. Please refer to below figure:

Registration & fingerprint registration & card registration & password registration & fingerprint and card & fingerprint and password	
ESC	OK

Step 2: Enter ID number and select OK to confirm. Please refer to below figure:

Registration	
ID Number	0 0 0 1 2
ESC	OK

Step 3: Read card according to system information to finish registration.

Read card	
ESC	OK

4.4 How to Register Password?

Step 1: Select “registration” on user menu list, press “▼” or “▲”, select “password registration”, and then select OK to confirm. Please refer to below figure:

Registration & fingerprint registration & card registration & password registration & fingerprint and card & fingerprint and password	
ESC	OK

Step 2: Enter ID number and select OK to confirm. Please refer to below figure:

Registration	
ID Number	0 0 8 9
ESC	OK

Step 3: Enter password according to system information to finish registration.

Registration	
Password	
ESC	OK

4.5 Backup Registration

Steps for backup registration are quite similar to those for registration.

Select “backup registration” on user menu list, select registration type, enter ID number and select OK to confirm. (Backup registration is only available for user who already registered once.)

4.6 Administrator Registration

Administrator registration is available for administrator during management operation. For specific steps, please refer to “user registration”.

Difference: Those under administrator registration menu list are administrators, and those under user registration menu list are ordinary users. Similarly, backup registration is only available for administrator who already registered once.

4.7 Super User Registration

Super user registration is available for secondary administrator which is given limited authority for management operation. For specific steps, please refer to “user registration”.

Difference: Those under super user registration menu list are super users, and those under user registration menu list are ordinary users. Similarly, backup registration is only available for super users who already registered once.

V. How to Delete User?

Step 1: Select “delete user” on user management menu list, select OK.

User Management	
& new user	
& administrator	
& super user	
& delete user	
& upload via flash drive	
ESC	OK

Step 2: Enter ID number and select OK to confirm.

Delete User	
ID Number	0 0 8 6

Step 3: Select OK to delete user or select ESC to cancel.
Please refer to below figure:

Delete User	
Delete or not?	
ESC	OK

Finally, select ESC to exit.

VI. Communication Setting

On main menu list, select “communication setting”, and there are three sub-items under “communication setting”, i.e. “download via flash drive”, “download via RS485”, and “download via Ethernet”. Please refer to below figure:

Communication Setting	
& download via flash drive	
& download via RS485	
& download via Ethernet	
ESC	OK

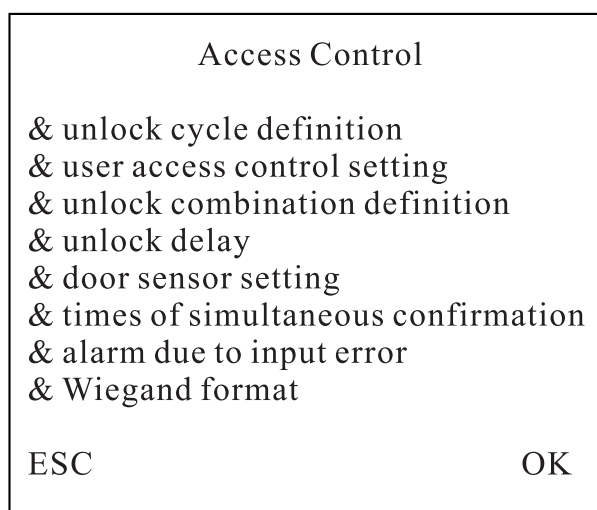
Download via flash drive: download door opening record and registered data. This function varies in device model.

Download via RS485: set speed for communicating with PC by pressing option key.

Download via Ethernet: set parameters for connecting to Ethernet, i.e. IP address, subnet mask and gateway by pressing option key and according to actual condition of Ethernet.

VII. Access Control

On main menu list, select “access control”, and there are eight sub-items under “access control”, i.e. “unlock cycle definition”, “user access control setting”, “unlock combination definition”, “unlock delay”, “door sensor setting”, “number of users for verification”, “alarm due to input error” and “Wiegand format”. Please refer to below figure:



Here is further explanation of these sub-items:

7.1 Unlock Cycle Definition

Duration include daily cycle and weekly cycle!

Daily Cycle

Set daily Cycle for keeping door open according to user's schedule and regulation. There are 8 daily cycles, such as from 6:00 to 8:00 in the morning and from 17:00 to 19:00 in the evening (i.e. daily cycle 1 in below table), all day long (i.e. daily cycle 2 in below table).

Daily cycle 1:

1	06:00	08:00
2	17:00	19:00
3	00:00	00:00
4	00:00	00:00

5	00:00	00:00
---	-------	-------

Daily cycle 2:

1	00:00	23:59
2	00:00	00:00
3	00:00	00:00
4	00:00	00:00
5	00:00	00:00

Weekly Cycle

Set weekly cycle based on daily cycle and according to user's schedule and regulation. For example, set above daily cycle for Monday to Friday, and set door open all day long on Saturday and Sunday.

Weekly cycle 1:

Monday	1
Tuesday	1
Wednesday	1
Thursday	1
Friday	1
Saturday	2
Sunday	2

Remarks: weekly cycle 0 means keeping door open all day long. Without changing daily cycle, select other weekly cycle to keep door open all day long.

7.2 User Access Control Setting

Step 1: Enter ID number, and then select OK to confirm.

User Access Control Setting	
ID Number	00000007

Step 2: Enter related information. Please refer to below figure:

User Access Control Setting	
* User group	0
* Weekly duration	0
* Period of validity	
ESC	OK

User group: users can be classified into 10 groups.

Weekly cycle: define when to open and close the door.

Period of validity: define the beginning and ending time of user access authority.

Note:

There should be a group number and a cycle number for each user, which might be 0 by default if not modified, i.e. having access authority all day long.

During user verification (by fingerprint or password), fingerprint recognition device determines which cycle is applicable to the user. If current time belongs to such cycle, the door opens. If not, the door remains closed.

For example, an employee ID number is 00000001, group number is 1 and cycle number is 1. Please refer to below figure.

User Access Control Setting	
1. User group	1
2. Weekly duration	1
3. Period of validity	1
ESC	OK

When this user puts on fingerprint, the device will determine whether this group has access authority (refer to “unlock combination setting”).

If so, the device will further determine whether current time belongs to access cycle. If so, the door opens; if not, the door remains closed.

7.3 Unlock Combination Definition

Combination 1	0
Combination 2	0
Combination 3	0
Combination 4	0
Combination 5	0

In case unlock combination is set as 12, one user from group 1 and another user from group 2 can work together and use cards to unlock the door.

Case 1: Unlock the door by a user

Combination 11

Combination 20

...

Combination 50

Combination 1, i.e. 1, means unlocking the door by user from group 1.

Case 2: Unlock the door by more than one user from the same group

Combination 1111

Combination 2N.A

...

Combination 10N.A

Combination 1, i.e. 111, means unlocking the door by any three users from group 1 (after user verification in random order) within period of validity.

Case 3: Unlock the door by users from different groups

Combination 112

Combination 2N.A

...

Combination 10N.A

Combination 1, i.e. 12, means unlocking the door by user from group 1 and user from group 2 (after user verification in random order).

Neither user from group 1 nor user from group 2 is able to unlock the door independently.

Note

- In case no unlock combination is set, no user is allowed to unlock the door.
- As for this device, unlock combination 1 has been preset, which means any user from group 1 is allowed to unlock the door independently.

7.4 Unlock Delay

As control relay is powered on, set time interval to unlock the door in normal status. Value: 1~255; unit: second. Default value: 5 seconds.

7.5 Door Sensor Setting

A. Door Sensor Type

Set door sensor status. It is disabled by default.

B. Door Sensor Delay

Once control relay resumes normal status, in case the door is not closed after a certain period of time, the alarm sounds. Value: 1~255; unit: minute.

For example, when door is closed and 1 minute is set as door sensor delay, door sensor is turned on in case the door opens, and the alarm sounds in case the door remained unclosed for more than 1 minute.

Note: illegal intrusion alarm

In case the door is opened without user verification, it will be deemed as illegal intrusion, and the alarm will sound at once.

7.6 Number of Users for Verification

Define the number of users for opening the door. In case the number is set as 2, then 2 users are needed to open the door by reading cards.

7.7 Alarm Due to Input Error

Set when to give the alarm. In case it is set as 5, then the device will give the alarm after inputting incorrect password, fingerprint or card for 5 times.

7.8 Wiegand Format

Define output mode. Wiegand 26 output is preset, which can be changed to Wiegand 34 output.

VIII. System Setting

Select “system setting” on main menu list, and there are four sub-items under “system setting”, i.e. “device setting”, “record setting”, “time setting” and “time doorbell”.

System Setting
& device setting & record setting & time setting & time doorbell
ESC OK

8.1 Device Setting: set device parameters. For details, value range and default value, please refer to below table.

Items	Description	Value Range	Default Value
Device reference number	A unique number used to identify the device	1~255	1
Number of administrators	Set the number of administrators	1~10	10
Language	Menu language	Multiple	Chinese
Verification Methods	Multiple methods	Multiple	Fingerprint, password, card
Upload Interface	Change device user interface	N.A.	N.A.
Restore Factory Settings	Reset parameters according to factory settings	N.A.	N.A.
Cancel Administrator Authority	Cancel authority of all administrators	N.A.	N.A.

Verification methods: this device is able to verify user in multiple ways, such as card + fingerprint, i.e. the user should read card and then put on fingerprint.

F/P/C	Use Fingerprint, card or password to pass user verification
C	User card as the only way to pass user verification
F+C	Read card and then put on fingerprint to pass user verification
P+P	Enter ID number, password and then put on fingerprint to pass user verification

8.2.1 Management Record Alert

8.2 Record Setting

Each operation made by administrator (such as add or delete fingerprint) will be saved as a record. This device is able to save at most 1,000 management records.

In case the quantity of management record is close to maximum value, i.e. 1,000, this device will give “management record alert”.

Management record alert: set a value to remind user that the quantity of management record is close to maximum value, i.e. 1,000.

For example, it is set as 100, then this device will give “management record alert” when the quantity of management record reaches 900.

8.2.2 Access Record Alert

Steps for setting access record alert is same as those for management record alert. In case the quantity of access record is close to maximum value, i.e. 100,000, this device will give “access record alert”.

For example, it is set as 1,500, then this device will give “access record alert” when the quantity of management record reaches 98500; the user will see “record capacity reached” as system information and hear “thank you!” as voice prompt when saving another access record; the user will see “record capacity reached” when the quantity of access records saved are more than 99,999 and no more record will be saved.

The user can set a value (1~1,500) to give alert according to actual condition.

8.2.3 Repeated Verification Time

Check whether the user is verified repeatedly within a certain period of time. It is suggest to set as 5 (minutes).

In case the user is verified repeatedly within a certain period of time, this device will remind user without saving attendance record again (applicable to checking work attendance.).

8.3 Time Setting

Select “time setting” under “system setting”.

System Setting
2013/8/9 Friday
15:00

This device has been preset according to Beijing Time, however, time setting might be changed during functional test.

Before using this device, it is necessary to adjust time at user's location.

8.4 Time Doorbell

Select “time doorbell” under “system setting”.

Time Doorbell	
Number	0
Duration	
ESC	OK

Number: how many times the doorbell rings

Duration: how long the doorbell rings. At most 8 durations can be set.

IX. System Information

View basic information of the device, including “saved information”, “record information” and “device information”. Please refer to below figure:

System Information	
& saved information	
& record information	
& device information	
ESC	OK

9.1 Saved information: select it to view information already registered. Press “up” or “down” to move cursor to “details”, and then select OK or press numeric key “1” to view saved information. Please refer to below figure. Press “up” or “down” or numeric key to select registered information to view.

Saved Information	
Number of registered user	45
Number of management registration	4
Number of fingerprint registration	544
Number of password registration	445
Number of ID card registration	43
ESC	OK

9.2 Record Information: select it to view the number of records and all records already deleted. Press “up” or “down” to move cursor to “details”, and then select OK.

Record Information	
Number of access record	545
Number of management record	433
View access record	
Delete all records	
ESC	OK

9.3 Device Information: select it to view related information of device. Please refer to below figure:

Device Information	
Algorithm version	DF sensor V1.1
Firmware version	DF20 V2.0
Fingerprint device	CF200B-307
IP address	192.168.001.217
Device reference number	1
Baud rate	38400
Ex-factory date	MAR 28 2013-