Fingerprint Lock Manual

User Guide and Operating Instructions

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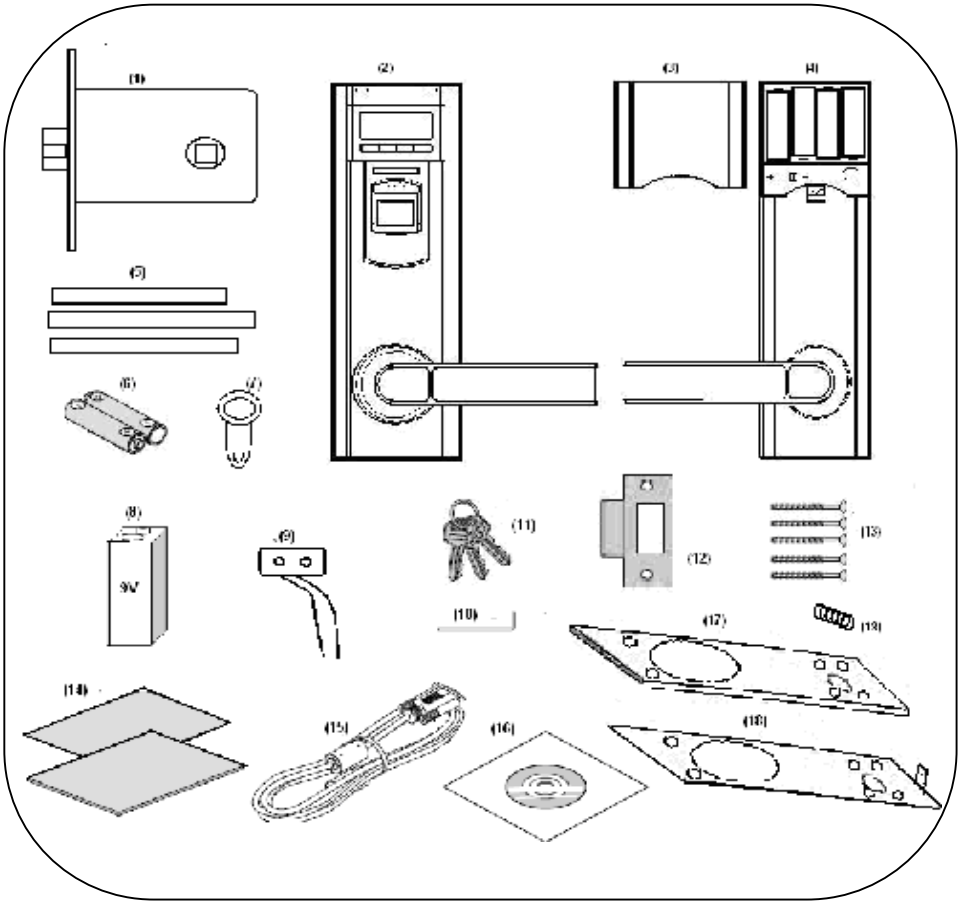
BOX CONTENTS

CHECK THAT THE CONTENTS OF YOUR BOX ARE CORRECT ACCORDING TO THE MODEL.
IF YOU ARE MISSING ANY PARTS, PLEASE CONTACT YOUR DEALER.

	Name	Quantity	L1000	L2000
1	Mortise latch	1	√	√
2	Front body and handle	1	√	√
3	Battery Pack Cover	1	√	√
4	Back body and handle	1	√	√
5	Square Axis shafts	3	√	√
6	1.5V AAA Battery	4	√	√
7	Tag for key cover	1	√	√
8	9v Emergency Power	1	√	√
9	Emergency Power wire	1	√	√
10	Allen key	1	√	√
11	Key	3	√	√
12	Mortise catch	1	√	√
13	Fixing bolts x4	4	√	√
14	Manual	1	√	√
15	Data Cable	1		√

16	Software CD	1		√
17	Seal	1	√	√
18	Support Plate	1	√	√
19	Spring	1	√	√



Please Note

1. This fingerprint door lock is a high-tech product. The environment of the door lock when installed is vital; avoid heavy corrosive dust - it will affect normal lock use. Therefore you should install the door lock only after the building project is completed. This will ensure your door lock will perform as expected and lengthen its service life.
2. The quality of the installation will affect the locks normal use and the service life. If unsure, use a professional installer. Components inside this lock should be serviced only by a trained technician.
Any tampering by non-authorised persons may result in your warranty being voided. Contact your dealer or if you have problems.
3. After the installation is completed, you should promptly register the Master Administrator's fingerprint and password. Failure to do so may result in your being locked out.
4. The fingerprint lock integrates biometric technology with a traditional electronic door lock. Please carefully read the User's manual before use. If you have any problems, please contact your Dealer listed below.

DEALER

TEL.

DATE . D_____M_____Y_____

1. Installation

Please read this Manual before starting any work. It will help with any problems you may encounter.

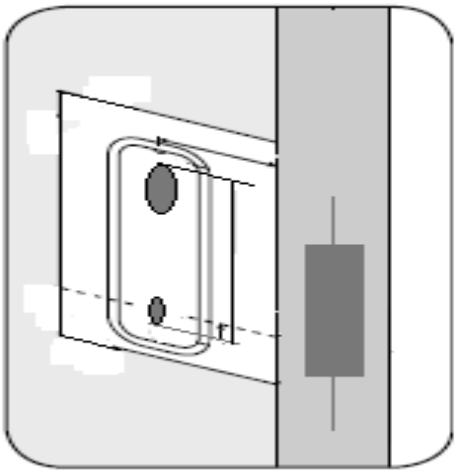
1.1 Tools Required

These tools maybe used in this instruction
Power Drill with 8MM, 16MM, 20MM, drill bit
Phillips screwdriver
Chisel
Straightedge
Drawing pen

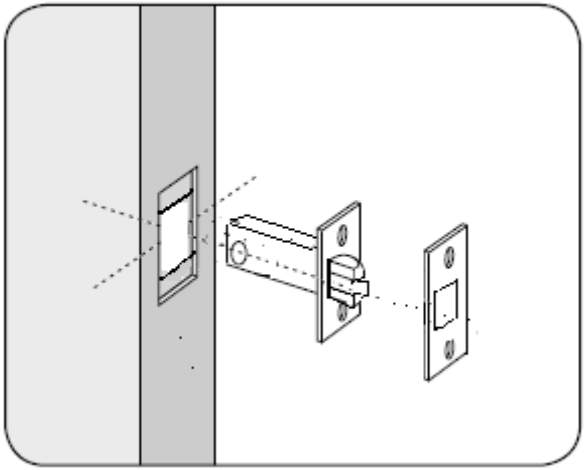
1.2 Installation steps

Lightly mark a height line on the edge and both faces of the door, and on the doorjamb, to indicate the top of the lock when fitted with the height line. Attach the template along the line you draw.

1. Mark the 4x 8mm, 32 mm and the 20mm holes. Mark the centre of the door edge on the Centre Line of Latch. Remove the template and apply it to the other side of the door, aligning it accurately with the first Centre Line of Latch mark. Mark the 25X 50 mm square and 95X30 square again.



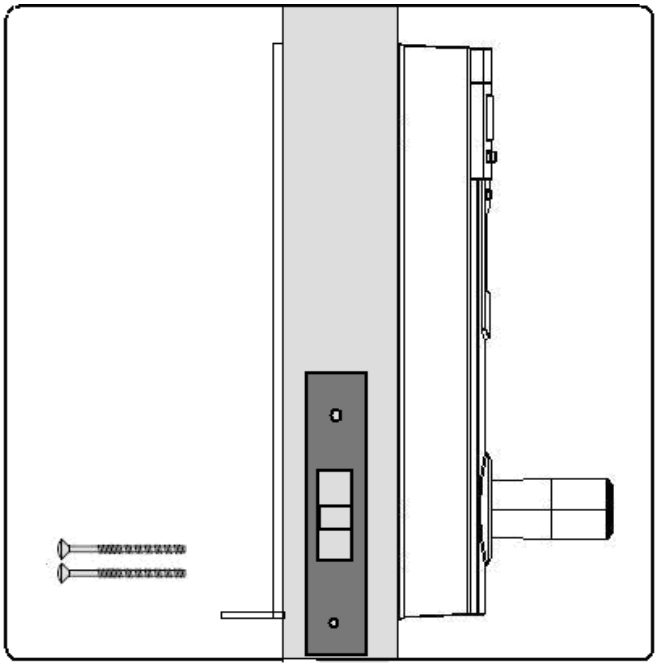
2. Keeping the drill level and square to the door, drill a 25mm hole to accept the latch. Drill the 8mm, 20mm and 32 mm holes from both sides of the door to increase accuracy and to avoid splintering out the door face. Clear a 32mm square hole from the 4x 16mm holes.



3. Put the latch into the hole and, holding it square to the door edge,

draw around the faceplate. Remove the latch and score the outline with a Stanley knife to avoid splitting when chiseling. Chisel a rebate to allow the latch to fit flush to the surface. Fix the latch with the wood screws, with the bevel towards the door frame.

4. Install Front body: first attach the seal. export the cable from the hole, then fix the front plate with two screw in below hole of fixed plate , shown as following figure



5. Install back body. Connect the lock front and back body with link cable through the hole; put the spring and axis, ensure plugs are correctly inserted into the back body slot, then connect inside and outside with square shaft; check that the lock plate and the mortise latch connections are properly aligned; finally screw the lock plate in the door.

6. Install the batteries and Battery Pack Cover: please ensure that the batteries are inserted correctly, and then close the Pack Cover.
7. After the installation is completed, read the user's handbook to check and inspect all functions of the fingerprint lock.

Note:

Because doors that hang LEFT or RIGHT (and open to outside and inside) are dissimilar. mark a line that meets the actual door to determine the installation template,

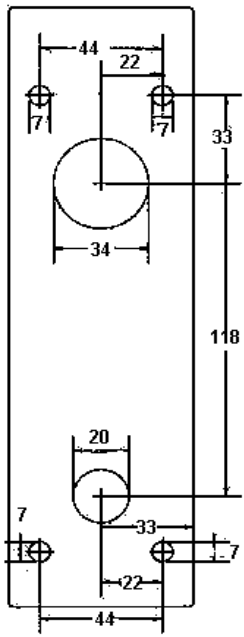
Make sure correctly connect between front and back body with the Linking Cable.

Mark a vertical line on the doorjamb half the door thickness away from the doorstop. This gives the centre line of the strike plate. Align the Strike Plate on the height line; with the arrow heads aligned with the centre line, draw around the apertures for the latch. Chisel out the latch aperture, making sure the hole is clean.

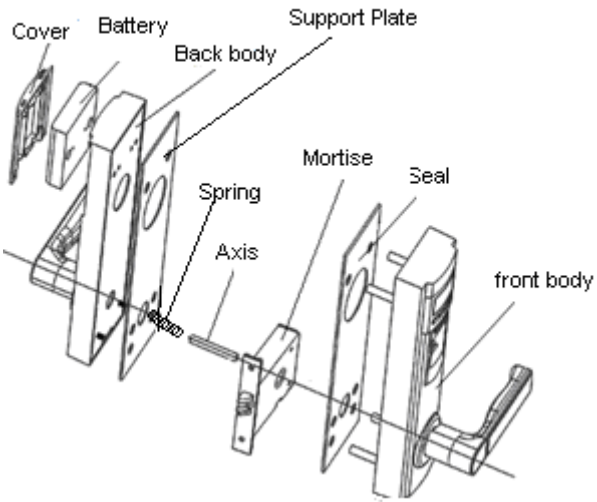
Fix the strike plate with the top screw only and gently close the door. Ensure that the latch enters its aperture easily and holds the door without too much 'play'.

Check:

The Lock body and the doorframe are vertical, not inclined. After the door closes nothing is loose. Check that the latch bolt will retract when the lever handle is depressed. Check the operation of the inside lever handle. If there is any binding of the handles or the latch then loosen the bolts and reposition the plates slightly until the correct position is obtained, then retighten the bolts.



Dimensions for drilling holes, 70mm backset to centre.



The sketch map for lock installation

Please note:

1. It is suggested you run the initialization if the fingerprint lock installation is pre-installed. This shall delete any existing user fingerprint or passwords, and restore the default settings from the factory. The initial factory default password is "1,1,1,1,1,1,1,1,1,1,1,1", or 12 times 1 (one).
2. During the matching, registration or deletion operations, power to the lock must be maintained. Otherwise data loss in the fingerprint lock may occur. Before replacing the batteries, the lock should be shut-down.(not active)
3. Replace the batteries only with the same or equivalent type as recommended by the manufacturer.
4. When installing the fingerprint lock, please read and follow the

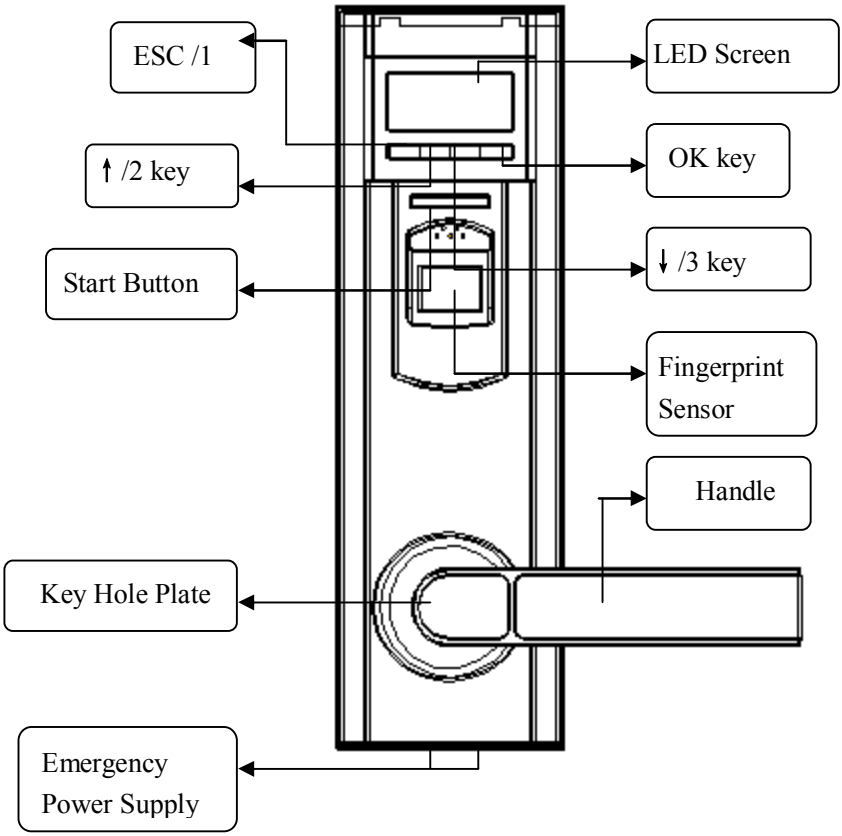
instructions. Do not insert the plugs of the linking cables in reverse or the wrong way. Incorrect connections may cause the lock to malfunction, and cause loss of warranty.

1.3 Fingerprint lock overview

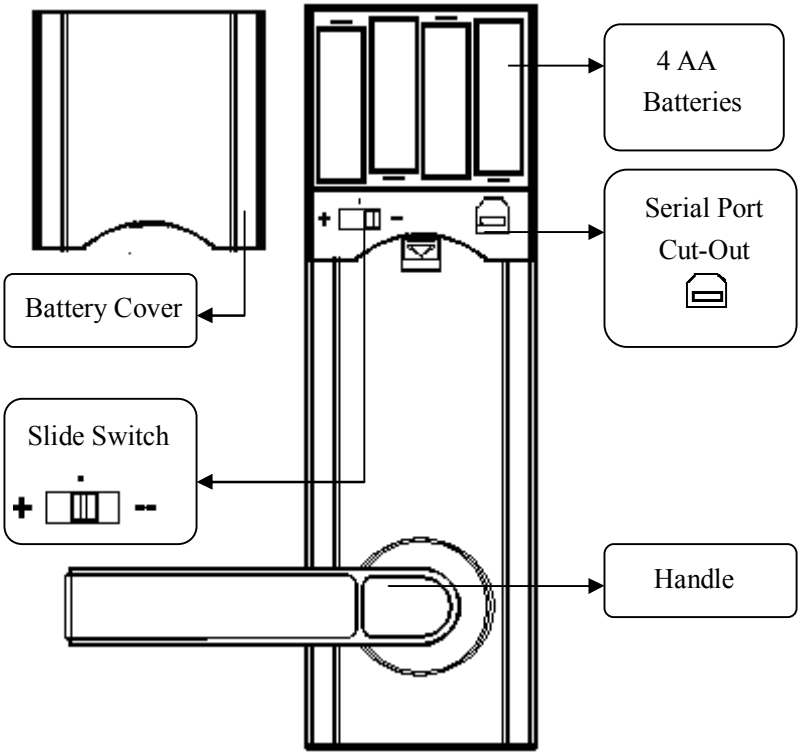
1) The lock integrates fingerprint verification technology with passwords, to unlock. Dual verification (through binding) to unlock is also available for high security areas.
2) Unlock: by fingerprint, password or a combination.
3) Registration: Fingerprint registration, Password registration,
4) Master administrator, managers and users have different levels of role privileges. Manager qty can be adjusted.
5) Audit trail download to computer for fingerprint and transaction data (Only for L2000).
6) Real-time clock and date (Only for L2000).
7) External emergency power supply in case of flat batteries.
8) Door lock can be set to passage mode.
9) Users fingerprint and password can be deleted at the same time.
10) There are two levels of battery power management. When the voltage reaches the first level, the user is prompted to replace the batteries. When the voltage is lower than the second level, the lock shall automatically shutdown.
11) Customizable demo character and graph (message). This is shown on the LED screen when the lock powers up.

1.3.1 View fingerprint lock from front and back

Front



Back



Key button and the slide switch definition

ESC key: exit key, used as the number ' 1 ' for password input. After registration or deletion, hold down this key for two seconds to exit. It is also a short cut key for the modify password key.

↑ **Key**: Add key - used as the number '2' for password input, choose or increase a corresponding value by degrees when in registration or deletion mode. Used as a short cut key for registration.

↓ **Key**: Reduce key - used as the number '3' for password input, choose or decrease by degrees a corresponding value when in registration or deletion mode. Used as a short cut key for deletion.

OK Key: Confirm key - used to confirm operations, and also as a short cut key to the function settings/mode.

Start Key: Press this key to power up/activate the lock.

Slide switch: Move this switch to set the operation status. The position of the slide switch from left right respectively; "−" position is delete all, " • "position is ordinary working statue, "+" position is passage mode. Move the position of the slide switch only when the lock is active. Moving the switch in standby mode does nothing.

About the display

LED button: When the fingerprint lock is on standby, press this key to wake up the fingerprint lock. In normal workings, the LED will show a blue colour. If an error occurs, the LED buton will be in red.

LED screen: Shows the numbers, letters and the operation prompts.

Fingerprint sensor: Used to capture and match fingerprints. When the fingerprint sensor is active, it will turn green in colour.

Key jack: This jack is used in the mechanical key emergency to unlock

Emergency power: When the battery power of the lock is too low, the Emergency power connector can be used to provide access.

Serial port: Used for connecting with a computer for Audit Trail download. (L2000 model)

2. Operating Instructions

2.1 General Operation

After you have setup your lock using the instructions below, general operation for use is as follows.

①: Press the start button on the front of the lock. The LED display will show 'HELLO' (or your custom message if selected) and the fingerprint sensor will turn on.

②: Place your enrolled finger onto the sensor glass or enter your password via the keys under the LED display. After entering your password, press the 'OK' button to enter.

③: If successful the lock will display your ID number and you will hear the lock motor engage. Open the door immediately as the lock will automatically relock in 4seconds. The lock shall then display the current time, then shutdown. (L2000 model)

④: If unsuccessful, the lock shall display 'ER-1' and the buttons will turn red. The lock will return to the start mode.

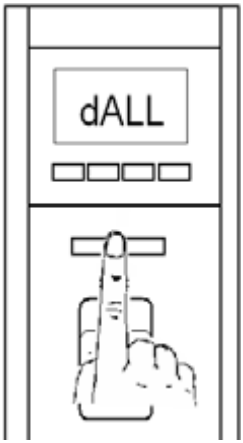
Note: After 3 unsuccessful fingerprint attempts, the sensor window will shutdown. You can now only enter via a password or wait until the lock shuts down so you can restart again. If entering only passwords, the lock will shutdown after 3 unsuccessful attempts. Restart the lock to try again.

2.2 Initialization

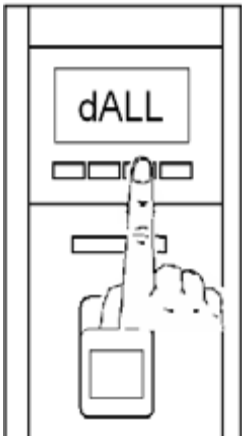
Setting the lock back to the factory default settings.

①: Move the slide switch to the minus position. + --

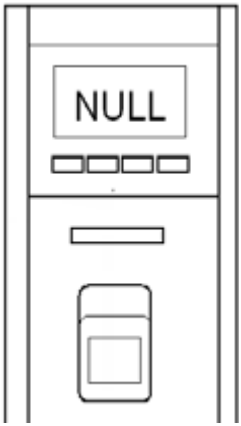
②: Press the start button. The LED screen will show ‘dALL’ and the start button will show a blue colour. Both will flash on and off and the unit will beep every 2 second



③: Hold down the" ↓ " key for 3 seconds. ‘dALL’ will reappear on the LED and flash as above. Unit will emit a short beep every 1/2 second



④: Simultaneously hold down both the ‘OK’ and ‘ESC’ keys for 5 seconds. All passwords and fingerprints stored in the lock shall be deleted. If the operation is successful, the LED screen will show ‘NULL’ for 3 seconds. If the operation fails to delete, note any error code which may appear on LED screen.

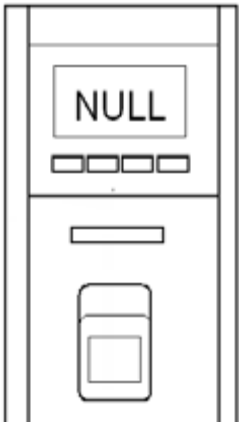


2.3 Master Administrator Registration

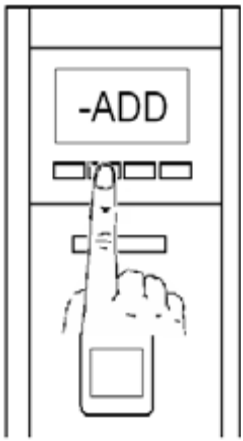
Master Administrator (ID 1) has total control over the lock.

①: Move the slide switch to the middle position + ▭ --

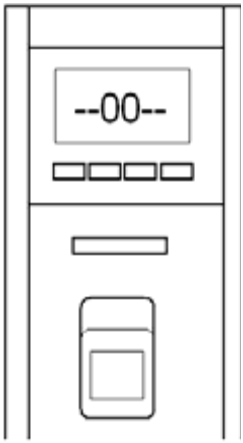
Press the start button. LED will display 'NULL' and the start and key buttons will flash blue in colour.
At this time, the lock shows no registered fingerprints/passwords in the system..



②: Hold down " ↑ " key for 3 seconds. The LED Screen display will show 'P-01" flashing, then change to "-ADD".



③: Input the factory password of 111111111111, 12 times 1.
Press the OK button to confirm. The LED display will change from 'ADD' to '-00-'.

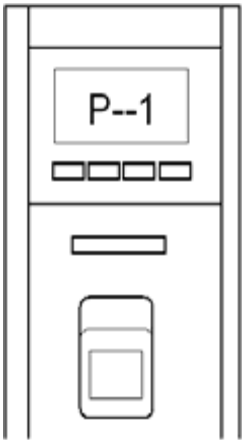


Master Administrator registration is now ready by either fingerprint or password. For fingerprint enrolment, you will need 3 successful images to register a finger.
Place a finger onto the sensor glass. The LED will show '01-2' where

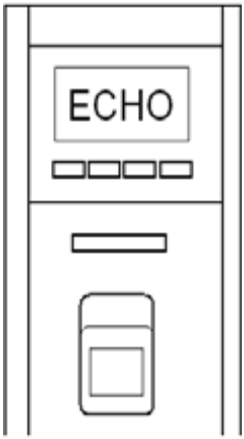
'01' is the registered user number and 2 is how many readings the sensor has completed. After 3 successful readings, the LED will show 'SAVE' for 2 seconds.
After 3 seconds, the word 'SAVE' will change to 'A- -x'.
To register another fingerprint, repeat the process. Up to 10 fingerprints can be enrolled to one ID number.
Note: You must also enroll a password/code at this stage. A password cannot be added at a later date.

The method to Input a Password: 'ESC' key = number '1'; ↑ key = number'2'; ↓ key = number'3'.'OK'= enter or confirm.

A group of passwords consists of a number with 6-12 digits. Only one password is permitted for each ID registered.
Note: failure to enter any number or press any key (during password registration) over a time of 6 seconds will automatically reset the lock status. If this happens, please re-enter your number again.
①: The LED screen will change to 'A –x', as per the register fingerprint instructions. After inputting a group of passwords, 'P-xx' will be displayed. 'xx' is the password figure you input, shown as 'P– 1'. 'P' = password and '1' = number of user passwords inputted so far.



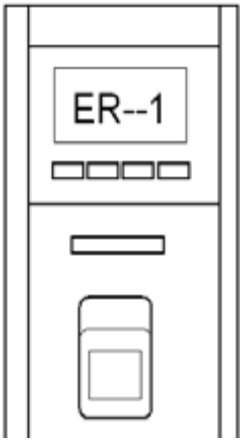
②:After inputting your password, press the ‘OK’ button. The LED screen will now show the word ‘ECHO’.



③: Echo means to re-enter your password again. If the password you have just entered has already been used by someone else, the screen will show ‘OLD’ and you will need to repeat the process again with a new number.

Upon a successful entry, you will see the word ‘SAVE’ on the screen.

After 3 seconds, the screen will return to the registration mode. If no action is taken, you will get an error message ‘ER-1’ show.



After 1 second, the screen will return to the registration interface. Once you have finished, press the ‘ESC’ button to take you back to the main interface.

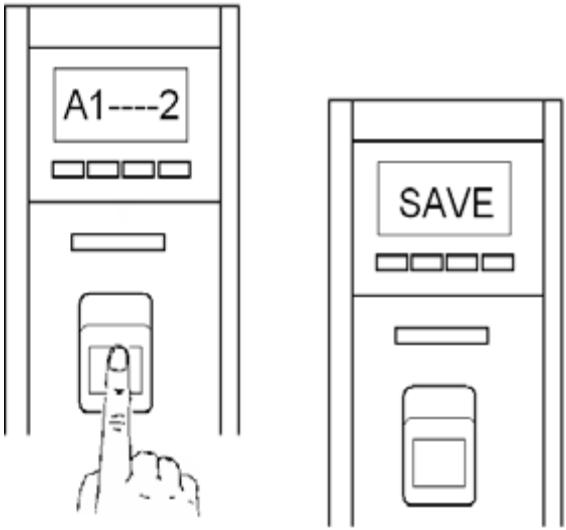
Master Administrator registration is now complete.

2.4 Fingerprint and Password registration

The L2000 is allowed to register 240 ID numbers. Each ID number is able to register 10 fingerprints and a password. The ID numbers start from 1. When an ID number is deleted, it completely erases all fingerprints and the password. Each password is unique. No password can be used twice (including the exit-factory password).
There are two modes of registration – manager and general user.
Manager setup must be completed before general users.

2.4.1 Manager set-up

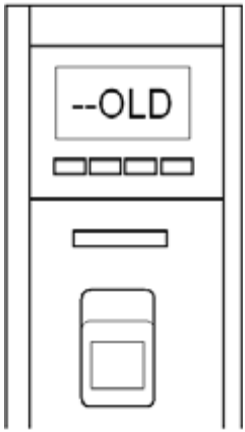
①: Move the slide switch to the middle position  Press the start button. LED will display 'HELLO' and the start and key buttons will flash blue in colour.
②: Hold down the " ↑ " key for 3 seconds. The LED Screen display will show 'P-01" flashing, then change to "-ADD".
③: The administrator or an enrolled manager will need to enter their fingerprint or password to continue.
④: When the LED display changes to 'A--1' and flashes, the green light in the fingerprint sensor will turn on. Please input your selected finger for enrolment. You will need 3 successful images to register. The LED will show '01-2' where '01' is the registered user number and 2 is how many readings the sensor has completed. After 3 successful readings, the LED will show 'SAVE' for 2 seconds.



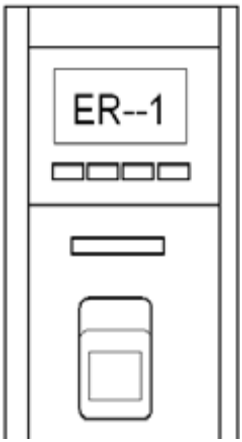
After 3 seconds, the word ‘SAVE’ will change to ‘A- -x’. You must now register any extra fingerprints or a password under the same user number. eg ‘01’. **They cannot be added on later**!

Continue the operation until all fingerprints have been registered.

①: If a fingerprint has already been already registered, the display will show ‘-OLD’. Shown as following figure.



②: If a fingerprint fails to register, the prompt “ER - 1" will appear.



After 1 second, the screen returns to the registration interface. The enrolled finger count (for that finger) will be reset if any errors occur. If you continuously fail to register fingerprints after 10 attempts, the lock will automatically shut down.

Note: When capturing fingerprints, ensure that your core fingers are used. The preferred area on your finger to use is the innermost recurring

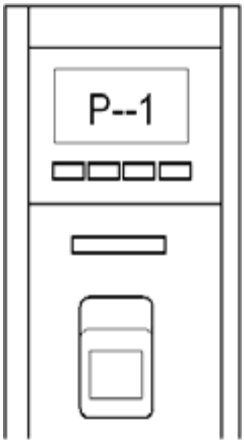
ridge point. Please keep your finger parallel to the sensor window. This will limit any errors due to placement of your finger onto the sensor.

2.4.2 Password registration

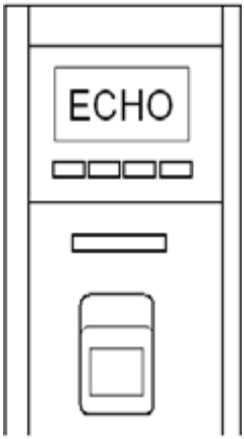
The keys used to Input a Password: 'ESC' key = number '1'; ↑ key = number'2'; ↓ key = number'3'.'OK' = enter or confirm.

A group of passwords consists of a number with 6-12 digits. Only one password is permitted for each ID registered.
It is suggested that a minimum of 8 numbers be entered for the password. This allows higher security and less chance of the same number being used.
Note: failure to enter any number or press any key (during password registration) over a time of 6 seconds will automatically reset the lock status. If this happens, please re-enter your number again.

How to input a password.
①:The LED screen will change to 'A –x', as per the register fingerprint instructions. Enter your number using the keys, 'P-xx' will be displayed. 'xx' is the amount of numbers you have entered, shown as 'P– 1'. 'P' = password and '1' = number of user passwords inputted.



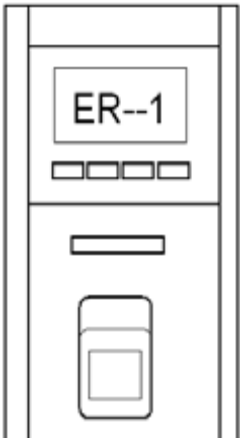
②: After inputting your password, press the ‘OK’ button. The LED screen will now show the word ‘ECHO’.



③: Echo means to re-enter your password again. If the password you entered has already been used, the screen will show ‘OLD’ and you will need to repeat the process again with a new number.

Upon a successful entry, you will see the word ‘SAVE’ on the screen.

④: After 3 seconds, the screen will return to the registration mode. If no action is taken, you will get an error message ‘ER-1’ show.



After 1 second, the screen will return to the registration interface. Once you have finished, press the ‘ESC’ button to take you back to the main interface.

Repeat the above procedures until all managers have been set-up.

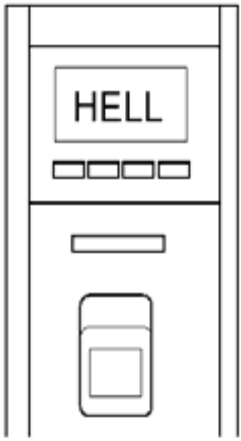
Note - the number of managers must now be set by the master

administrator under the function setting.
The manager has authority only over an ordinary user.

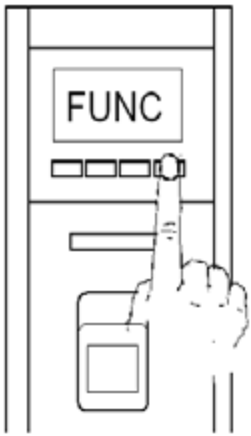
2.4.3 Setting the number of Managers

The number of managers allowed is set by the Master Administrator, and cannot be more than 10. The ID number must be within 1 ~ 10; Eg – manager number is 5, that means users ID 1 ~ 5 are managers (1 is fixed for master admin).
Moreover after deleting all ID numbers, if the ID number which next time registers (is smaller than 10), it shall be automatically appointed to a manager.

①: Move the slide switch to the middle + -- position. Press the start button (flashes blue). The LED screen will display "HELLO".



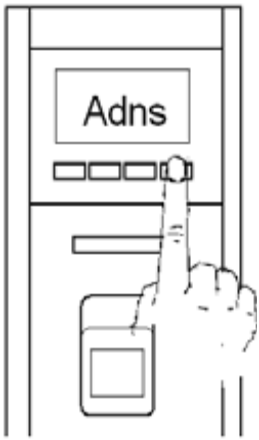
②: Hold down the "OK" key for 3 seconds. The LED screen displays "FUNC" (Utter a "do" sound and the sensor will light up green).



③: An administrator has to place their fingerprint or enter their password to continue (the sensor then turns off). After 2 seconds the LED screen displays "bind" (utters a "do" sound). [L1000 only]

Note: For the L2000, the first interface display is "dATE".

④: Use the " ↑ " and choose "Ands" then press the "OK" key. Enter the interface to set the total amount of managers.



Scroll using the " ↑ " or " ↓ " key to increase/decrease the amount of managers required. The total amount of managers is limited to an amount between ‘1 and 10’.

⑤: Press the "OK" key to confirm the saved value. The display will show "SAVE" for two seconds, then return to the main menu.

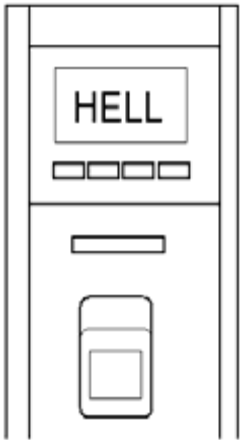
Note: This function can only be set by the master administrator.

3. User registration

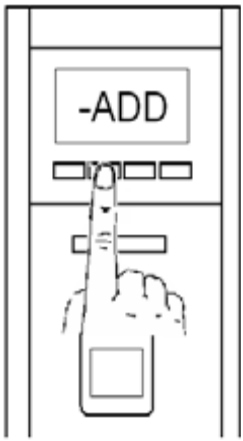
The ID number divides into three kinds of:
1: Master administrator, the ID number is 1, which is fixed
2: Manager
3: Ordinary User - all other users are classed as an ordinary user.
Eg; all ID numbers above 10, where 10 is the amount of managers set as per above.

3.1 Steps for User registration

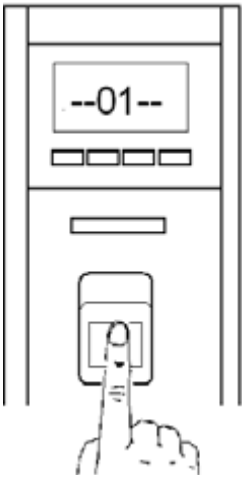
①: Move the slide switch to middle + -- . Press the start button (LED button flashes blue). The fingerprint sensor will activate with a green light. The LED screen shows "HELLO" moving to the left.



②: Hold down the " ↑ " key for 3 seconds, the LED will show ‘P-01” flashing, then change to ‘-Add’.

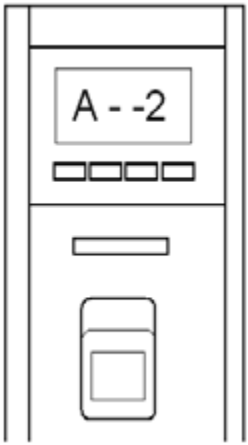


③: A manager will need to enter their fingerprint or password to continue. Next, the lock will not unlock, but show the ID number of the manager.



After 2 seconds, you will enter the registration mode. The LED screen

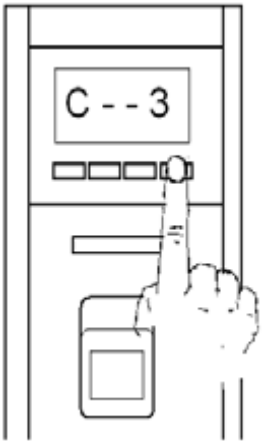
will show "A--2".



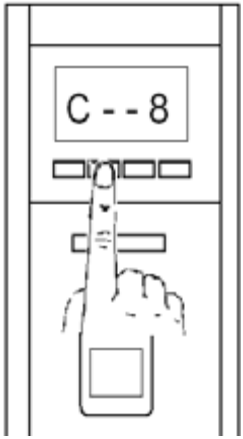
For “A--2"; the "2" is registered ID number. This ID number is the next available smallest empty ID number for an ordinary user.

The registration process is the same as registering a manager on page 23 of this manual.

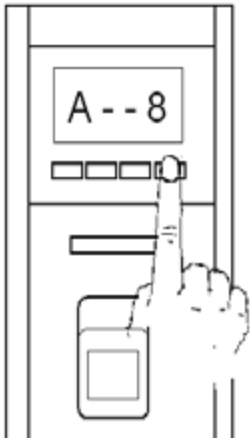
④: You may change the ID number, by holding down the "OK" key for 2 seconds. The LED screen display changes to "C--x". C-ID",



Shown above, "3" is the next available ID number. The " ↑ " key or " ↓ " key is used to increase or decrease the ID number by degrees (by holding down this key, you can quickly add or reduce the ID number). * The managers ID number cannot be selected, and the new ID number will automatically increase. The LED screen will show "A--x", where "x" is the new ID number you wish register.



⑤: Press the "OK" key to choose the new ID number. The display will show "A--X" after 2 seconds, where X is the new ID number. Shown as below, "A--8", the "8" is the new ID number.

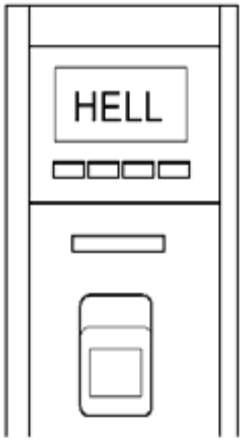


Follow the earlier procedures for enrolling a fingerprint and password on 2.4 Fingerprint and Password registration of this manual.

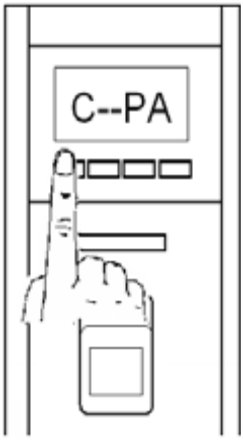
Note: After deleting all ID's, the first registered ID number is automatically assigned to the manager. If you continuously register 10 ID number only, the registration ID number is continual, IE: it is not allowed to skip. "1" is automatically assigned to the master admin. For each new registration ID number (including ordinary user ID number) the binding value by default is 1. This means that a user's identity (ID) has to match with their fingerprint or password.

3.2 Change a user's password.

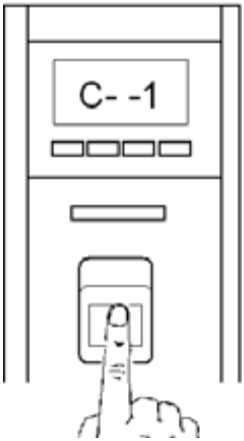
①: Move the slide switch to the middle + -. After pressing the start button (LED button flashes blue), the LED screen changes to "HELLO".



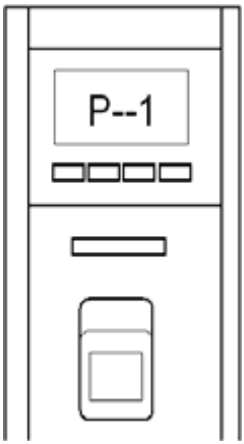
②: Hold down the "ESC" key for 3 seconds. The LED screen show ‘P-01” flashing, then change to "C-PA".



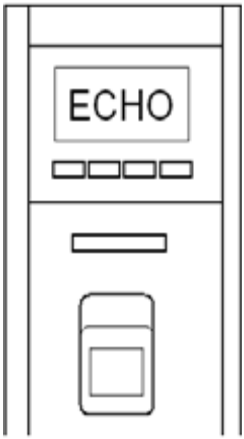
③: After an ordinary user or manager, (who has the password), matches their fingerprint or the password successfully, the display shows their ID number for 2 seconds. It then enters the revision password mode. The LED screen shows "C--x", where "x" is the user's ID number, shown as below.



④: Input your new password. The LED screen will display "P-xx"; the "x" is the figure you input, shown as following, the "1" is the new input password.

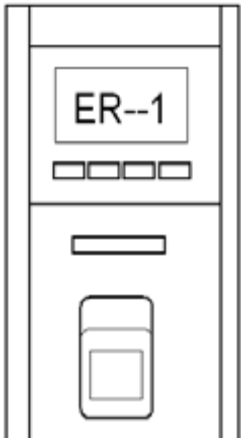


⑤: After inputting a new passwords of 6 ~ 12 numbers, press the "OK" key to confirm the inputted password. The LED screen will then show "ECHO". Please re-enter your password.



⑥: After re-entering the password, press the "OK" key. If the password you input in twice is the same, the LED screen will show "SAVE" for 2 seconds. The lock will then power down.

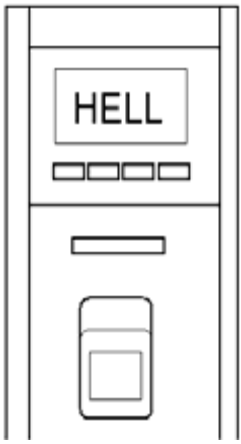
If your password is incorrect or already taken, then the LED will show "ER-1".



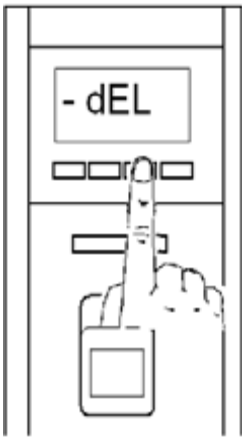
After 3 seconds, you may revise/re-enter another password.

3.3 Deletion of user fingerprint and password

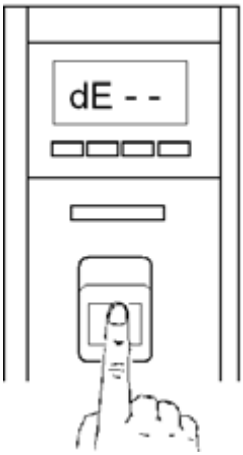
①: Move the slide switch to the middle + -- . Press the start button (button flashes blue), the LED screen shows "HELLO":



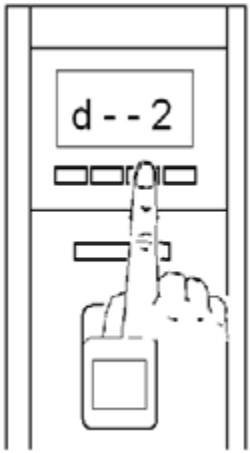
②: Hold down the " ↓ " the key for 3 seconds. The LED will show ‘P-01” flashing, then change to "-dEL".



③: After a manager enters their fingerprint or password successfully, the managers ID number displays for two seconds. The LED screen will change to "-dL--". You are now in delete mode.

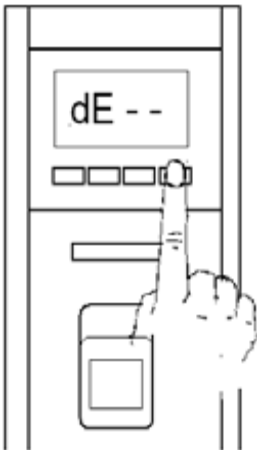


④: Press the " ↓ " key or " ↑ " to increase or decrease the registered ordinary user ID number by degrees (hold down this key to quickly add or reduce). This time the LED screen will now show "d--x"; where the "x" is the registered ID number. Shown in the following figure, "2" is the new user ID number.



⑤: Press the "OK" key to delete this ID number. The delete process can take up to ten seconds. After a successful deletion, the LED screen will

display "dL - -" for 3 seconds.



⑥: Another method to delete a fingerprint is at step 4, place the finger which you want to be deleted on the fingerprint sensor face. After verification is successful, the LED screen will show "d--x" for 3 seconds, "x" is this fingerprint ID number. Press the "OK" key to delete this ID number.

If a fingerprint is not enrolled the LED screen shows "NONE" for 2 seconds, then returns to the ‘dL- -‘mode.

⑦: After 10 unsuccessful entries, the lock will automatically shutdown.

After deletion has been completed, check to confirm that the users’ fingerprint or password has been removed.

Note: When deleting any fingerprint, please ensure you do not lose power to the unit. Loss of power during the operation may result in total deletion of the lock database.

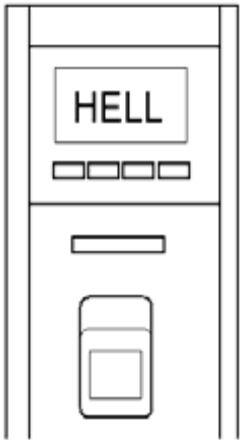
The manager/administrator is only able to delete ordinary users. To delete a manager’s ID number, the master administrator must revise the manager’s integer set. For example, if you want to delete a manager whose ID number is 3, you need to configure the number of managers to

2 first. Change the ID number 3 to an ordinary user. You can now delete this ID number. Remember to reset the number of managers.

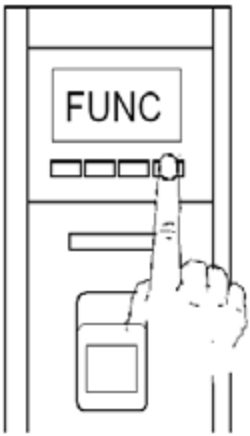
4. Lock function settings

4.1 How to access the menu functions

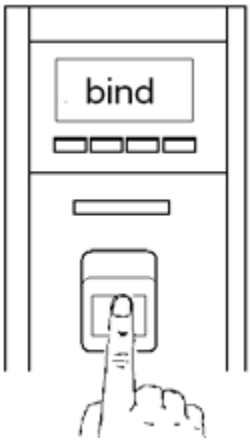
①: Move the slide switch to the middle + -- position. Press the start button (flashes blue). The LED screen will display "HELLO". If there are no registered fingerprints in the lock, the display will show ‘NULL’.



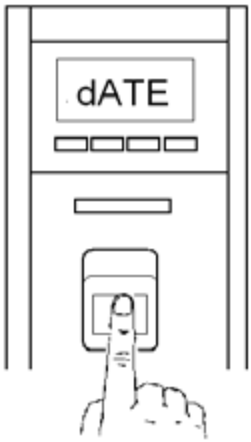
②: Hold down the "OK" key for 3 seconds. The LED screen displays "FUNC" (Utter a "do" sound and the sensor will light up green).



③: An administrator has to place their fingerprint or enter their password to continue (the sensor then turns off). After 2 seconds the LED screen displays "bind" (utters a "do" sound). [L1000 only]



Note: For the L2000, the first interface display is "dATE".



Scroll " ↓ " " ↑ " key to shift menu option:
Bind: Set the lock to bind mode.
Disp: Set up the initial demo-character
Adns: Set the number of manager ID num
Load: Download the datum from the fingerprint lock.
dATE: Set the clock (only for L2000)

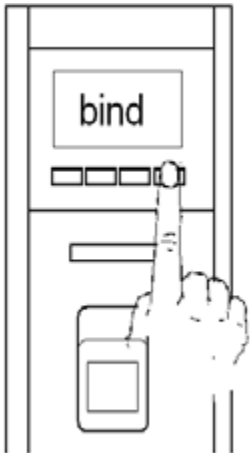
4.2 Configuring the clock (time setting)

①: Enter the menu and choose the "dATE" item. Press the "OK" key to enter the clock setting mode.
②: There are 6 clock settings. The LED screen displays in order - Year, Month, Date, Hour, Minute, Second (values in the following table). You may press the " ↓ " or" ↑ " key to increase or decrease the value by degrees (Hold down these keys to quickly add or reduce). Press the "OK" key to confirm/enter and to move to the next setting value. Pressing the "ESC" key returns you to the menu interface.

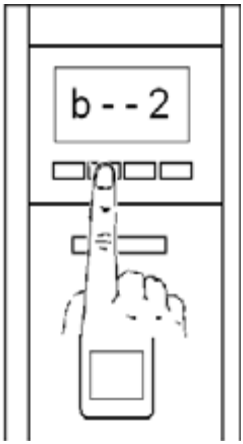
No.	Option	scope
1	Year	0-99
2	Month	1-12
3	Date	1-31
4	Hour	0-23
5	Minute	0-59
6	Seconds	0-59

4.3 Set binding ID to unlock

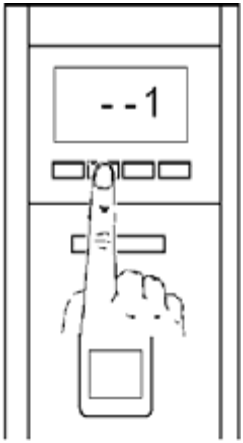
To set binding ID to unlock, it means that a user's ID number has multiple fingerprints or fingerprint and passwords.
User's can be identified by either fingerprint or by a combination of fingerprint and password. When a user successfully enters a fingerprint or inputs a password to perform verification, the LED screen displays "ONCE". At this time, you need to successfully match the fingerprint/s or the password again until you satisfy the set number of fingerprint or passwords applied to that ID number. The lock will then be able to be opened.
①: Choose the "bind" item, Press "OK" key to enter option.



②: Scroll using the " ↓ " or " ↑ " keys to select a registered ID number. (Holding down this key quickly adds or reduces ID numbers which have been registered). Shown in the following figure, "2" is the ID number which has already been registered. Press the "OK" key to confirm.



③: Scroll using the " ↓ " or " ↑ " keys to increase/decrease the binding value by degrees. The binding value may be between 0 ~ N. Shown in the following figure, the binding value is "1".

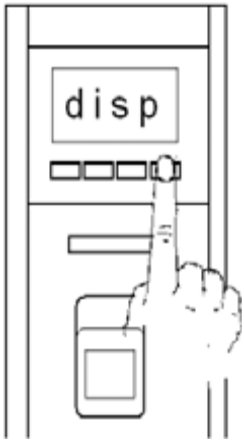


If the binding value = 0: then access is disabled for this ID number.
The binding value = 1, single fingerprint or password required.
If the binding value is greater than 1, then multiple fingerprints or passwords are required. Eg - if you set this value to 3, under this ID number, a user is denied access until 3 fingerprints or passwords are verified successfully.
④: Press the "OK" key to save your settings. The LED will show "SAVE" for two seconds. Press the "ESC" key to return to the main menu.
Note:

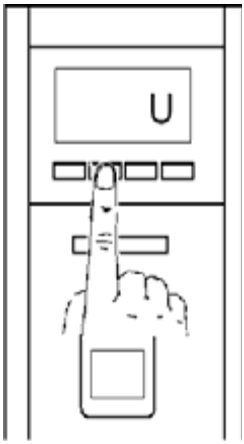
- The binding value of the master administrator is the smallest one. It can only be 1.
- Master administrator is permitted to set the binding value for any ID number.
- A manager is only permitted to set an ordinary user's binding value.

4.4 Changing the LED display character/message

①: Enter the menu, and choose the "DISP" item. Press the “OK" key to enter the initial demo character mode.

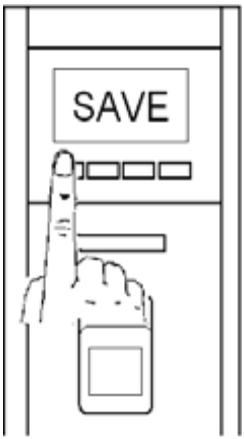


②: Scroll using the" ↓ " or " ↑ " key to choose the character graph (holding down the keys to quickly add or reduce). Press the ‘OK’ key to enter/confirm.



Shown above, the figure " U " U character has been selected. Press the OK key to enter. Scroll " ↓ "or " ↑ "to select or replace the set character. There are a total of 12 initial demo characters, and 27 kinds of graphs to configure.

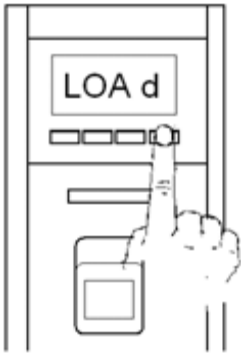
After character setting is completed, press the "ESC" key for 2 seconds to exit. The LED screen displays "SAVE", then returns to the menu.



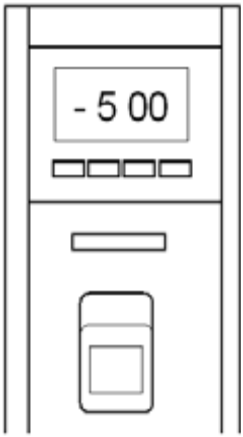
Note: After the initial demo character set is completed, the original display that says "HELLO" (from right to left) will change to the character/message which the user has just set up.

4.5 Audit trail download (L2000 model)

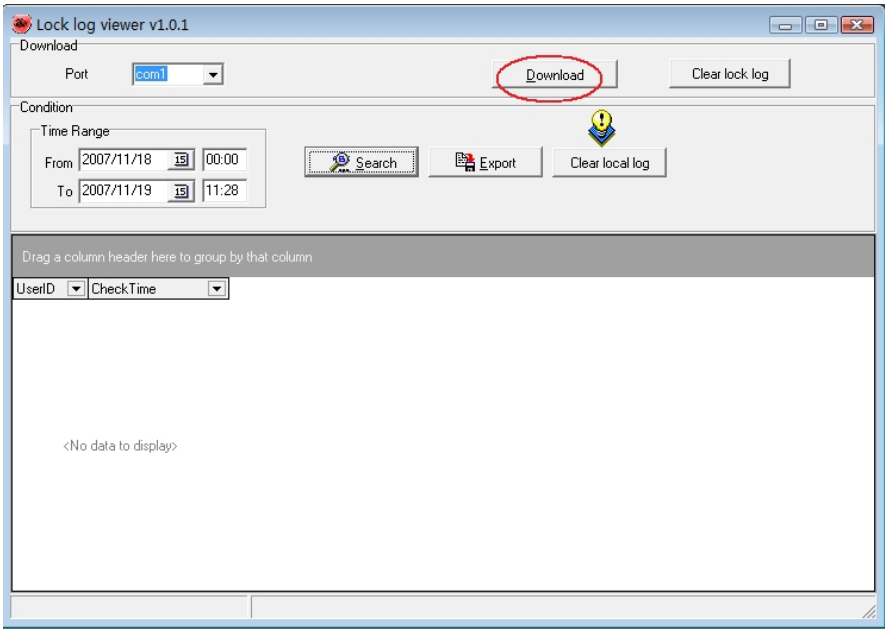
①: Connect the serial port cable provided to the COM on the lock body, and to your computer. Enter the menu, and choose the "LOAd" item. Press the "OK" key to enter the downloading data interface.



②: The LED screen will countdown from 5 minutes.



③: Open the program which has already been installed on your computer. Click the "download" button, which shall start the download of data onto your computer.



④: After the system prompts that the download is finished, click on the inquiry tabs to view all the records.

Note: only fingerprint records (including management records) are able to be downloaded. Password records are not able to be downloaded.

• "Clear lock log" - all records in the fingerprint lock will be deleted.

• **Caution**: This function will cause all records in the fingerprint lock to be eased.

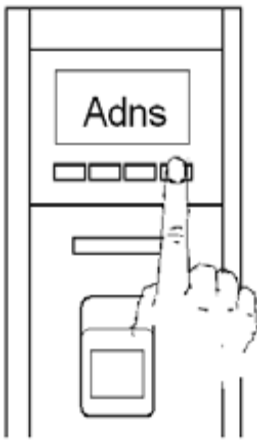
• "Clear local log" - all records within the pc database will be deleted

• After the download count down finishes, the lock shall then

auto-return to the menu interface. If the data download is finished before, press the "ESC key to exit from this function.

4.6 Setting the number of Managers.

①: After entering the menu, choose "Ands" then press the "OK" key. Enter the interface to set the total amount of managers.

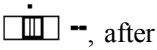


②: Scroll using the " ↓ " or " ↑ " key to increase/decrease the amount of managers required. The total amount of managers is limited to an amount between '1 and 10'.

③: Press the "OK" key to confirm the saved value. The display will show "SAVE" for two seconds, then return to the main menu.

Note: This function can only be set by the master administrator.

5. Viewing equipment information

①: Move the switch to the middle position  , after pressing the start button. (LED button turns blue). Fingerprint sensor will turn on and the LED screen shows "HELLO".

②: Input the exit factory password of 111111111111,(12 x 1). Press the 'OK' key to view the equipment information. There are 4 types of information (-XXX, --XX, XXXX and XXXX).

Each unit will display for approx 3 seconds. The LED screen will automatically scroll to the next unit information. The lock will shut down after displaying all information.

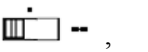
- XXXX: Shows the remaining capacity of the number of fingerprint.

-XXX: Shows the total amount of ID numbers.

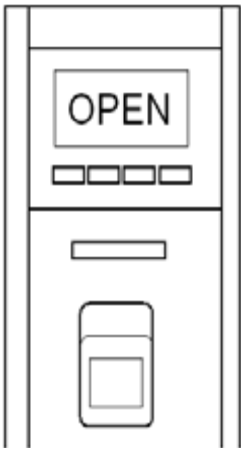
--XX: Shows the amount of registered managers. (Amount of ID numbers)

XXXX: Shows the equipment version or model. (1,000 means L1000, 2000 means L2000).

5.1 Passage mode.

①: Press the start key and move the slide switch to the Plus  , (lock makes a "do" sound every 1/2 second, and the LED turns blue).

The sensor will light up green, and the LED screen flashes the word "OPEN".



②: Once a user successfully verifies their identity, the lock shall unlock, and the LED screen shifts to show "staff's ID" and "opens the door time"(lock makes a "do" once a second, the fingerprint sensor lamp is now off).

The lock is now in passage mode. Turn the handle to open the door.

When a user wishes to cancel passage mode, move the slide switch to the middle position, press the start button to power up. The lock will automatically close, and the LED screen will show "-OFF". After 2 seconds, the lock will automatically shut down. Passage mode is now cancelled.

Note: after all fingerprints or passwords have been deleted, passage mode will be lost. It is recommended to restore the lock to the closed position before deleting all data.

5.2 Additional information.

5.2.1 Alarm

When operating the fingerprint lock and an error occurs, please refer the LED screen message to the following codes below:
1)"ER- 1": the error arises from an operation fault. The entered password is incorrect, or maybe caused by the incorrect positioning of the finger on the sensor.
2)"ER-2": RS232 communication occur error between zem100 board and MCU board. When this error appears, the fingerprint matching function is disabled, only the password can be used to unlock. Registration, delete, changing of the password and other functions is prohibited or disabled.
3)"ER-3": error occurs when the FLASH memory (on the MCU board) read-write data breaks down. Immediately shut down lock power.
4)"FULL": at fingerprint and password registration, all ID numbers have already been registered. No more users can be registered until an existing user is deleted.
5)"-OLD": the fingerprint or password has already been registered by the user or by another person.
6)"LBAT": reminds the user that the batteries need changing. Replace the batteries as soon as possible.

5.2.2 Buzzer, LED screen and LED button

1）**Buzzer**

A. Long ring: User operation mistake. When a user performs fingerprint-matching and the fingerprint has not been registered.
B. short two rings: prompt user operates successfully. Like the manual fingerprint matching is successful.
C. intermittent long sound: The fingerprint locks have the breakdown, or is in the exceptional status .for example: Battery voltage is insufficient and so on.
D. intermittent short sound: The prompt user operation is unusually operation, to help protect your fingerprint lock from potential damage, such as set the door to passage mode, deletes completely, download and so on

2) **LED button**

A. red colour light: Prompt user operation mistake.
B. blue colour light continues bright: prompt user operation is successful.
C. red colour light continues to flash: there is a problem with the fingerprint lock. The battery voltage could be low or an error.
D. blue color light continues to flash: normal operation mode.

3) **LED screen**:

A. the LED screen flashes, the user can operate the key or the fingerprint matching.
B. the LED screen display, display related operation result. This time the user operation pressed key or fingerprint matching refer is invalid

4) **Fingerprint sensor window**:

The fingerprint sensor indicated it is permitted user to press the fingerprint; when the fingerprint window lamp shuts down, indicated the user now does not press the fingerprint.

5.2.3 Battery low voltage protection function

There are two levels of operation for the battery voltage. When the voltage reaches the first level, but is higher than the second level, user's have to replace the battery. At this time the LED screen will show "LBAT", and the buzzer will emit a 2.5 seconds /1 long sound. The user is only permitted to unlock by either a fingerprint or the password.
Registration, deletion, and other functions are disabled. When the supply voltage is lower than the second level, the lock will automatically shut down power (lock will immediately close and data saved).
When the battery's voltage is insufficient, users should replace the batteries as soon as possible. Do not let the battery voltage to drop too low to activate the locks. Failure to change the batteries will result in using the key or the external power supply to operate the lock.

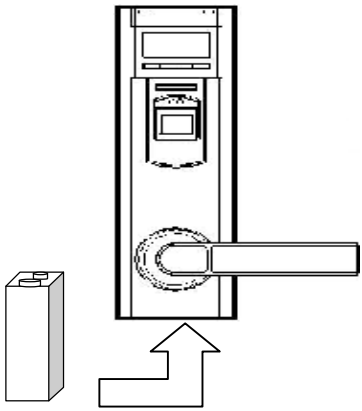
5.2.4 Automatically exit and shut down

The lock under normal operation, will exit and the power off after a successful verification. It will also power off after 3 unsuccessful attempts to unlock by the password.
Once the fingerprint sensor is activated, (under normal operation) it shall operate for only 6 seconds. If a user does not use the fingerprint sensor or input a password, the lock will automatically exit and shut down power.
Whilst in register and delete mode, if you fail 10 times to match fingerprints registrations, then the lock will be power off. Whilst in register, delete, deletes all, or modify password modes, holding down the "ESC" key for 2 seconds will exit the program and power off.

If you do not press a key or place a fingerprint for 20 seconds, then the procedure will also automatically shut down power. Pressing the "ESC" key in menu mode will exit the program. If no other key is used for 20seconds, then the lock also automatically exits and powers off.
If the supply voltage is lower than the preset second voltage level, the lock will shut down immediately.

5.2.5 Using the external power supply

External power (direct-current) can be used to provide temporary power to unlock (with either fingerprint or password) if the battery level drops below the allowable limit. When using temporary power, you cannot register, delete, enter the special functions or menu settings. Connect 8 V DC ~ 12V DC, (electric current > =250mA) to the two points under the front of the lock. The external power supply connection does not differentiate between positive and negative polarity.



Note: When using the 9volt external battery, after opening the lock, do not disconnect the power until the lock has returned to its normal

position – let lock motor close first.
Failure to let the lock return to the neutral position will leave the lock in open mode, and may not reset after changing the batteries.

5.2.6 Using the emergency mechanical key to open the door

If the electronics of the lock fail, the emergency mechanical key can be used to open the door lock.
Attach one end of the magnetic clasp (on the key ring) onto the key lid on the handle. Pull and remove the key lid.
After inserting the key into the key hole, rotate for 90°. Operate the handle and open the door.

6. Technical Specifications

Sensor Resolution:	Optical 500 DPI
L1000:	150 fingerprints; 150 groups of passwords; 150 ID number
L2000:	450 fingerprints; 240 groups of passwords; 150 ID numbers.
Recording capacity:	50,000 fingerprint operations
Matching mode:	1: N
False Acceptance Rate	(FAR): <= 1%
False Rejection Rate	(FRR): <= 0.0001%
Power source:	4 AA- alkaline battery or 4 AA rechargeable battery (1.2V 1800mA.h). Working voltage range 6.8V~3.7.
The number of cycles	> = 4,000 times
Size	240H x 70W x 79Dmm
Application	0 - - 45 ℃
Humidity:	10% - 80%

Information in this document is subject to change without notice
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