USER GUIDE
Furniture Lock
(model : FX200)

Passtech Co., Ltd.

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We have our development center in South Korea to provide technical support. For any technical assistance can contact our technical support team as below;

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1. Understanding FX200 FURNITURE LOCK

1.1 What is FX200 FURNITURE LOCK?

- FX200 locker locks are the locker lock operated by either 13,56 MHz RF Card Key.
- FX200 can work as both offline (standalone) or online mode.
- To set FX200 as online system, additional peripherals such as Access point, Server and client software are necessary.

NOTE **Refer Esmart Ultra client user manual for online lock system setup.**

1.2 Operating cards

Card Name	Description	Card type
Key card	• Security Key value to be loaded to locks at scanning. • Then, the locks will accept only the RFID cards which have the same security key value.	Mifare 1KB
Setup card	• Lock will be programmed with various options at scanning. • Setup card can be set from Lock Installation Software (LIS).	
Master I card	• All locks will be open at scanning. • User card registration in the lock will be deleted and the lock will be ready to accept new user card.	
Master II card	• Locks will be open or close without User card registration deletion. • Useful when user needs to open lock temporarily.	
Owner card	• Master cards registration to be deleted at scanning this card on locks. • After Owner card scanning on lock, scan new master cards to register to the lock.	
Maintenance card	• Lock to be programmed with various options at scanning as you set. • Time, Master cards registration, Master code, etc can be updated without changing lock ID.	
Audit trail card	• Latest 150 event history to be collected at scanning. • Card number, event type (open & close), time of event, user name, etc to be collected.	Mifare 4KB
Lock info card	• Various information of lock can be collected into this card. • One Lock info card can collect information from up to 40 locks. • Lock ID, Operation mode, Power status, software version, time, auto opening and more to be collected.	

*****This furniture lock system is using in Hotel, Office and any place which is without residential area.

2. Types of Lock Operating Scenario

FX200 locker locks are designed to work for the various operation requirements by simple set up process. Following operation modes can be programmed before or after lock installation.

2.1   Free Selection (Shared Use)

- User card is not assigned to any certain lock but
    User is free to select any empty locker to occupy.
- Programmable to make LED lamp blinked to
    represent locker is in use. (In-use lamp)
- Programmable to use multiple lockers (up to 5)
    with one User card. (Multi-lock)
- Programmable for Time based operation.

2.2   Assigned Mode (Permanent Use)

- Each locker is assigned to each User card
    in advance.
- Programmable to use multiple lockers (up to 5)
    with one User card. (Multi-lock)
- Also, programmable for multiple user cards (up to 8)
    to one locker. (Multi-user)
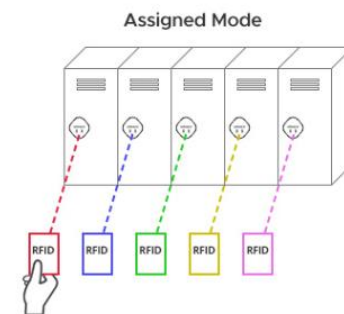
2.3   Smart Assign mode (Shared or permanent use)

- User can select any empty locker and the user is assigned to the chosen locker.
- Without the help of administrator, user can freely change the assigned locker to any empty locker.
- Programmable to make LED lamp blinked to represent locker in use.
- Programmable to set specific time to release the assigned locker to empty locker after the
    changing the locker.
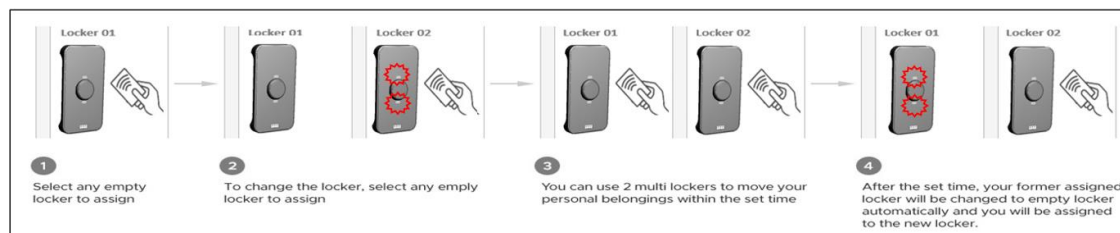
3.   Lock Operation

3.1 RF tag uses

① FX200 can be set with two different credential acceptance modes.

② RF tag mode accepts RF tag

③ These modes can be set from Maintenance card (or setup card)

[RF tag only]

3.2 Assigned Mode

3.2.1 Open & Close by RF card key

① RF card key can be used anytime.

Touch the lock + Put User Card on the Lock.

3.2.2 Open & Close by smartphone

(1) How it works

- Visitor receives RFID user card at the front desk and goes to the locker assigned to this card.
- Then he downloads Passtech Mobile App from Google play store and install it into his smartphone and then wakes up the lock with the user card and registers himself directly into the mobile App.
- From that time on, the lock can be operated through a smartphone.
- Mobile access key expires as soon as the user card is no more valid.

- Thus, the smartphone is fully synchronized with RF user card.

(2) Setting up the lock and user card issue

Since BLE mobile access key is fully synchronized with RF user card, the first step is to set up the locker lock with set up card in Assigned mode and issue the user card and assign it to the locker. To do so, please refer to the Lock Management System User Guide Ver. 5.0.

(3) Registration via Mobile App

Run the mobile App. If you are not registered yet, the registration page will show up right after you start the mobile application. Otherwise, go to Menu and press the "Registration" button for a new registration.

To register via the Mobile App, follow the instructions that will appear on your mobile device screen. The instructions are like following:
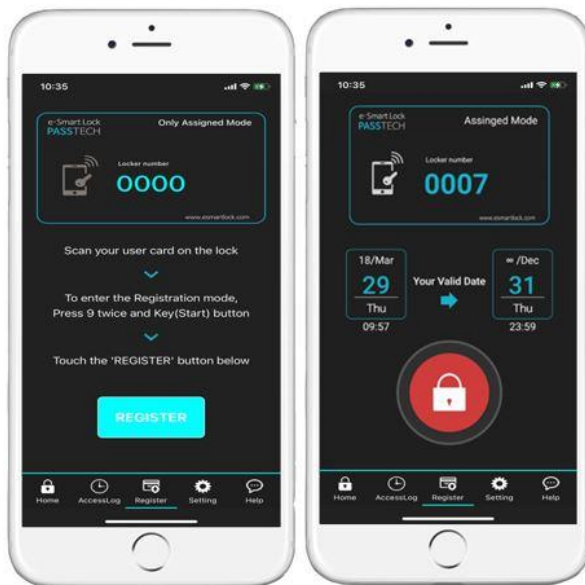
- Scan your user card on the lock.
- To enter registration mode, touch the lock (the registration mode's on when the lock's LED is blinking)
- Touch the "Register" button below.

Now, when registration is done, your mobile key in your smartphone is fully synchronised with the user card and ready to operate the lock. It means that the information from the user card corresponds with that of the mobile key, including the validity period. Thus, the information about the valid date will automatically appear on the mobile device screen.

The registration is a one-time process, so you don't need to do it more than once for one

locker.

To open the locker, press the "lock icon" button on your mobile device monitor.

(4) Multi-user and multi-locker

There are four operation scenarios for BLE mobile access locking solution. An unlimited number of mobile devices can be assigned to one locker by syncing up with a card, but one mobile device can have only one card assigned, whereas one phone can operate up to 5 locker locks at the same time if its RF card have 5 locks assigned.

(5) Access Log

To check the history of the mobile access key, visit the "Access Log" in the Menu bar.
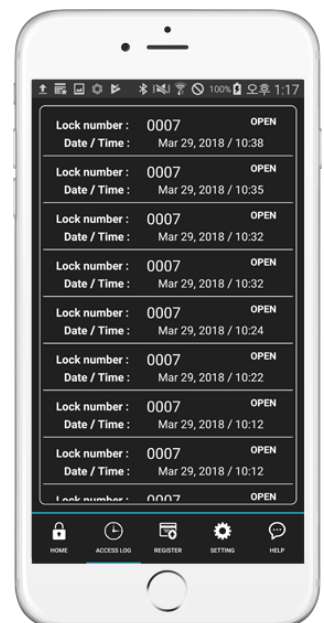
3.3   Free Selection Mode

3.3.1 Open & Close by RF card key
① Touch the lock + Put User card on the lock.

3.3.2 Open & Close by Smartphone

(4) How it works

❶ Download 'Passtech Mobile Access' APP and run it

❷ Choose 'Free mode' on setting tab

Free mode

❸ Touch the button on the APP to operate a lock

①Download Passtech Mobile App from Google play store and install it into his smartphone

②After running the App, choose 'Free mode' on the setting tab.

③Then, you can freely choose any available lock to operate.

NOTE **To access your mobile device, please set your lock for CSN Free mode and change the usage mode to Free mode from the Passtech APP from your mobile device.**

3.4   Open in Emergency

①   In case User loses his(her) card, Operator can open the lock by Master Card I.

②   Master card can be set by Set up Card.

③   Once Master card I is used to open the lock, the lock reverts to default position

④   User Card ID will be erased from the lock if Master Card I has the function to delete the User ID.

4.   Card Operation

4.1   Owner Card

The role of the Owner card is to delete the Master card registration. Therefore, Owner card will be used to delete current master card registration in the lock, and make the lock to be ready to register new Master Card.

It is simple to delete the Master card registration and to register new master card in the lock :
- ① Put the Owner card to the lock until lock sounds beep (one time) and red lamp lights.
- ② Now, all Master card registration is deleted from the lock.
- ③ After *Owner card scanned, put new master cards to register to the lock*

4.2   Master Card

4.2.1   Functions of the Master Card I & II

① There are two types of Master cards.

◆   Master card I : Alarm Off, Locker open and User card deletion.
  Useful card at user card lost.
  After Master card I scanned on a lock, the lock is ready to
  accept new user card.

◆   Master Card II : Alarm Off and Locker open and close.
  Useful card for temporary lock open or close.
  Previous user card is still assigned to the lock.

② Maximum five Master cards can be registered in a lock.

4.2.2   Replacing old Master cards with New Master cards

There are two ways to delete the lost Master card and register new Master card in the lock.

(1) Using Maintenance Card
①   Read the master cards (all Master cards to be used in a lock) to register in each lock at Maintenance menu in LOS program (or online client program).

②   Put the Maintenance card to the reader, and download the master card chip numbers to the Card.

③   Put the Maintenance card to the locks, then, new Master cards will be registered to the lock, and lost master card will be blocked.

(2) Using Owner Card

①   Delete the old master card registrations in the lock (refer to the 4.1) with Owner Card.

②   Put new master cards to each lock so as to register new master cards. Then, old master card you lost will not be used.

☞ All existing Master cards needs to be registered again together with new Master card because all master card registrations were deleted if Owner card is used.

4.3   User Card

4.3.1   Free Selection (Shared Use)

The initial status of the lock in Free Selection mode is open (Latch is inside).

(1) Initial Use

①   Select the empty locker.
②   Put your belongings in the locker.
③   Touch to wake up the lock, and place your card (or any form of user key) to the front body of the lock.
④   Wait until the Green LED lights and Beep sounds once.
⑤   Latch will move out, and lock is closed.
⑥   Close the door. The lock will be remained at locking state.

(2) Open the lock

①   Touch to wake up the lock.
②   Put your user card to the front body of the lock.
③   Lock will check the lock ID and key of the user card (or any form of user key).
④   Lock will emit Green LED and beep sound once it is right user card.
⑤   Latch will be moved and locker will open.
⑥   User information will be erased from the lock so that new user can use the empty lock.

☞ In free selection mode, lock and card need to read and write the each other's information. So

please do not sway the card until the latch is moved.

4.3.2 Assigned Mode (Permanent Use)

The initial status of the lock in Assigned Mode is closed status (latch out)

① Touch to wake up the lock.

② Put the User Card to the front body of the assigned lock.

③ Lock checks the card, if the key of the user card is correct, Lock will emit green LED lights and beep sound once. Then, lock will be opened, and closed again in 5 seconds.

④ To close the locker, just close the door. Lock will remain the closed status.

4.3.3 Replacing old User card with New User card

(1) Free Selection

① Issue new user card by LOS (Locker Operation System) program.

② In case the locker is closed, put Master Card to the lock to open the lock.

③ Put new User card to the lock, then lock will accept new User card, and missing card will not be accepted.

④ In case the locker is opened, just put the new user card to the lock, and the lock will register this new user card key. Old User key will not be accepted.

(2) Assigned Mode

① Issue new User card (with assigned locker Number) for Assigned mode.

② Put Master Card to the lock to delete the old user card, and put the new User card to the lock.

③ Lock will accept the new user card only, and old user card registration will be deleted.

④ In case the lock is set for multiple users, lock revision should be updated when new user card is issued by LOS program. Then, Lock updates it's revision number when new user card is scanned. The other user cards which are assigned to this locker also needs to be reissued with updated lock revision by LOS program.

4.4 Maintenance card

① Program Maintenance card as you want from LOS (or online client software)

② Put Maintenance card to each lock, lock will be set as you programmed in step 1.

③ Time of the lock, Master cards change, Wireless online channel, Auto status update, etc

can be updated with Maintenance card.

4.5   Audit Trail card

① Put Audit Trail Card to the lock.

② The latest event data (up to 150 events) will be downloaded from lock to the Card. Wait until melody is on.

③ Read the Card at LOS program, and 150 event data will be saved to the PC.

4.6   Lock Info card

① Put Lock info Card to the lock.

② Various lock information data will be downloaded from locks to the Card. One card can collect up to 40 locks.

③ Read the Card at LOS program, and all data will be saved to the PC.

④ Lock ID, operation mode, Power status, time, auto opening setting status, RF channel and more will be indicated.

NOTE   **For further information about all system cards and how to issue, refer to LMS / LOS or Esmart ultra client manual.**

5. Indication Instruction

1)   Open/Close：GREEN LED on for 0.2 second, one beep sound for 0.2 second.

2)   Successful programming：Melody.

3)   Indicate for mistake：RED LED flashes 3 times, 3 beep sounds

4)   Low voltage：RED LED blinks 5 times, and beep sounds 5 times.

6. Specification

Item	Detail
Material	Polycarbonate
Communication	2.4Ghz Zigbee(ONLINE COMUNICATION) BLE
Security	AES128
Open/Close	RFID CARD, Wireless Control
Power Supply	5VDC Wired power
RFID	Mifare Classic & Desfire at default, ISO14443 Type A
Indicator	Buzzer
Dimension	Front) 35.25mm*64.50mm*6mm Back) 71.75mm*71.75mm*25mm
Operation TEMP	0℃ ~ 50℃
Other	USB Charger, Inner lights(LED)
Certification	CE, FCC

ANNEX A   Beep & LED Table

Beep	LED	Description
1 x short beep	1 x Green(2sec)	OK
2 x short beep	1 x Red(2sec)	Operation Error
3 x short beep	1 x Red & Green in turn(2sec)	Time over
Do-Re-Mi Melody	1 x Red & Green in turn(2sec)	Successful Set up / mode change / Time setting
5 x short beep	5 x Red & Green	Lack of power supply voltage
Do-Re-Mi Melody	2 x Red & Green	Successful connection between front and back bodies.
1 x short beep	1 x Green	Off the Alarm by Control card
Melody	1 x Green	Successful registration of Owner Card/ Master Card
No Beep	Both Green and Red LED blinks	1) Owner Card is not registered. 2) In case of Shift or Week-day operation mode, Alarm for shift or Time due.
No Beep	Red on/off	Owner card is registered, but Master card is not registered.
No Beep	Green on/off	Owner & Master card are registered, but User card is not registered in Assigned Mode.

Master card registration in the lock was failed.	1) Master card registration should be followed after deleting old Master card in the lock by Owner card. 2) Put Master card on the lock before waiting time is out after Owner card.
Cannot open the lock with Master card	Master card is not registered in the lock. Please Register the Master card in the lock.

Cannot open or close the lock by User card	1. Check the Setting of User card by LOS.
	  (1) Free Selection Mode
	    ● Validity / Operation mode / Lock ID / Number of locks this user card can be used.
	  (2) Assigned Mode
	    ● Validity /Operation Mode / Lock ID / Number of locks this user card can be used.
	2. Old User card may be still in the memory of the lock. Erase the card information from the lock by Master card, then register again with the User card.

When lock was touched to wake up, five beep sounds with Red lamp.	Lack of power supply voltage sign. Check the power supply.
Latch does not move, while Card and lock operates in normal.	Too many goods may press the lock body or door. Push the locker door to make the space for the latch movement.

7　Regulatory Statement

FCC Part 15.105 statement (Class A)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Part 15.21 statement

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

RF Exposure Statement (MPE)

The antenna(s) must be installed such that a minimum separation distance of at least 20 cm is maintained between the radiator (antenna) and all persons at all times.

Supplier's Declaration of Conformity

47 CFR § 2.1077 Compliance Information

Responsible Party –

Cardcom

Address: 1301 S. Beach Blvd. Ste-P La Habra, CA 90631

Tel.: 562-943-6300

E-mail: esmartlock@cardcom.com