Door Lock PSA01

I. Specification/Function

1. Battery
1-1 Four AA (1.5V) Alkaline batteries.

2. Low Battery
2-1 The batteries should be changed immediately once you see the LED flash red and hear constant beeps for about 10 seconds after pressing the programming button.

2-2 All settings are retained in the memory and will not be affected even if the battery is completely dead.

2-3 The lock can still be operated by the key override even if there is no power.

3. LED Indicator
3-1 LED flashes green once to indicate successful operation.

3-2 LED flashes green twice after successful programing.

3-3 LED flashes red 3 times when there is an operation error.

3-4 LED flashes red 5 times after incorrect user codes have been entered 5 times in a row, operation will stop for 45 seconds (Refer to 17).

3-5 LED flashes orange 3 times when system has been restored to default setting.

3-6 LED flashes orange slowly while in programming mode.

4. Audio Indicator
4-1 1 beep sound indicates a successful operation.

4-2 2 long beeps indicates a successful programming.

4-3 3 beeps indicate an operation error.

4-4 3 long beeps indicate that system has been restored to default setting.

4-5 5 beeps indicates lockout mode after 5 incorrect user code entries. Operation will stop for 45 seconds. (Refer to 17)

4-6 10 rapid beeps indicate the battery power is low.

5. Programming Code
5-1 The preset Programming Code is 0000. Please delete and create your own personal code when programming for the first time.

5-2 Only one Programming Code is allowed.

5-3 Programming Code is only for programming the lock; you can't unlock the door by entering the Programming Code.

5-4 Programming Code must be 4-10 digits in length.

5-5 Programming Code can be changed anytime if needed.

6. User Code

6-1 The preset User Code is 1234. Please delete and create your personal code when setting the lock for the first time.

6-2 Up to 6 User codes can be saved.

6-3 User Code is only for activating the lock, not for programming.

6-4 User Code can be deleted or changed anytime if needed.

7. Delete Individual User Code

7-1 User Codes can be deleted individually. You may reuse a User Code even if they were deleted before.

7-2 To delete individual code, you need to enter the Programming code.

8. Delete All User Codes At Once

8-1 All the User Codes can be deleted at once. You may reuse same User Codes even if they were deleted before.

8-2 Auto-locking and Keypad locking functionality will be invalid after deleting all User Codes and the lock can only be operated by key override. All the electrical functions will be restored after creating new User Codes.

8-3 To delete all user codes, you need to enter the Programming code.

9. Temporarily Disable All User Codes

9-1 Auto-locking and Keypad locking functionality will be invalid when User Codes are temporarily disabled. The lock can only be operated by the key override during that time.

9-2 Repeat the programming steps again to restore the User Codes.

10. Create a Disposable User Code

10-1 Disposable user code can only be used one time and then they are no longer valid.

10-2 You can reset same number as Disposal User Code.

10-3 To create a Disposable User Code, you need to enter the Programming Code.

11. Restore Preset Factory Code

11-1 You can restore the lock to the Factory default codes by pressing "R" button on the interior receiver module below the batteries if you forget the Programming Code or you want to cancel all previous settings.

11-2 After resetting, the Programming Code would be 0000; the User Code would be 1234 again.

12. Unlocking the door

12-1 The door can be unlocked by key override or by entering a User Code on keypad from outside or by the interior turn-piece from the inside.

12-2 To unlock the door on keypad, enter the User Code and then press the Programming/Enter button.

13. Lock the door

13-1 The door will be locked by key override or by pressing the Programming Button on keypad from the outside or by the interior turn-piece from the inside.

14. Incomplete Door Closing / Opening

14-1 If the latch bolt is not extended/retracted completely when it is locked/unlocked by the keypad, you will see the LED flash red 3 times(twice) and hear 3 beeps (no beeps if the mute is on). You will then need to enter the user code to unlock the door to fully retract the bolt and then press the Programming/Enter button to lock the door again.

14-2 If the latch bolt gets stuck or can't extend/retract completely all the time, please check if the strike aligns with the latch bolt perfectly and adjust the strike to proper position. After long period of use, the latch bolt might get stuck if the door becomes misaligned.

15. To Activate / Deactivate Auto-Locking Function

15-1 The door will automatically lock itself within 10-99 seconds when this function is activated.

15-2 This function is NOT preset default; it can be set if needed.

15-3 The preset delay-time is 30 seconds; you can adjust the period if desired.

15-4 Repeat the same programming steps to cancel Auto-Locking function if needed.

15-5 The system will beep twice if the latch bolt gets stuck or is not extended/ retracted completely. If this occurs, you will need to the User Code again to retract the bolt completely. The auto-locking function will then be restored.

16. Toggle Mute On/Off

16-1 You will hear beep sounds when pressing keypad, programming or after incorrect errors. The sound can be turned off if needed.

16-2 LED illumination is still functioning even when mute is enabled. Because you will not hear any alarms for battery indication or incorrect entrees, we suggest not enabling mute if it is not necessary.

16-3 The motor sound cannot be muted.

17. Code Protection Function

17-1 The lock will go into lockout mode after 5 incorrect usercode entries in a row. Lock Out mode will expire after 45 seconds.

18. Illumination

18-1 The LED Keypad will light up when pressing any button for ease of use in the dark.

19. Include/Exclude To Z-Wave™ Network

19-1 After installing the PSA01 on the door and placing the battery in, it is ready to be added to Z-Wave network. Be sure PSA01 is not in any other Z-Wave network. If you don't know, just run exclusion first. (Refer to part V 11 section),

20. Z-Wave™ Specification

20-1 frequency

868.40 MHz, 869.85 MHz(EU),
908.40 MHz, 916.00 MHz(US),
922~927 MHz(JP/TW),
921.40 MHz, 919.80 MHz(ANZ),
869.00 MHz(RU),
865.20 MHz(IN),
916.00 MHz(IL),

20-2 Range

Minimum 40 meters indoor,
90 meters outdoor line of sight.

20-3 Operating Temperature

$-10^{o}C \sim 40^{o}C$

# II. Installation Instructions
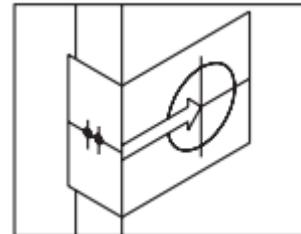
The BACKSET is the distance between the center of cross bore and edge bore of the door. Adjustable latch fits both BACKSET of 2-3/8"(60mm) and 2-3/4"(70mm). Please follow the steps shown below for BACKSET adjustment.

Latch Backset Adjustment:

Rotate the latch case as diagram on the right for backset 2-3/4"(70mm) or reverse direction for 2-3/8"(60mm).
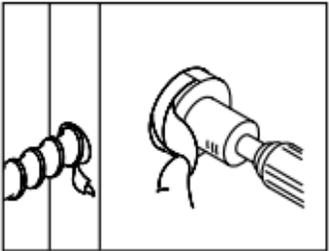
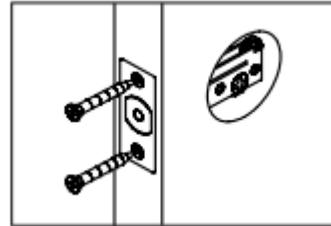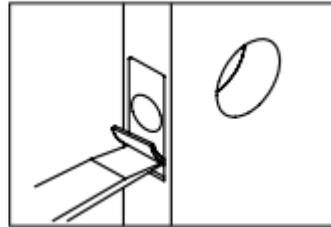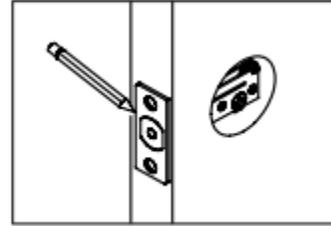

2-3/4" (70mm)
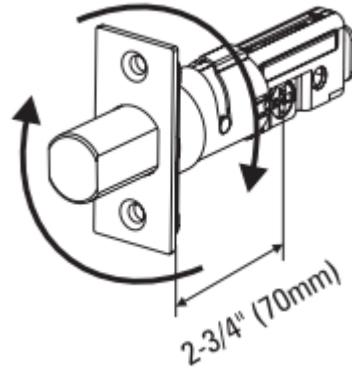
1. Mark the Door With Template
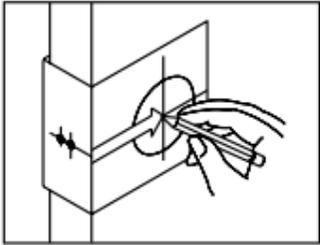
Select the height and backset as desired on the door face; use the TEMPLATE as an indication to mark the center of the circle on the door face and the center of the door edge.

2. Drill Holes

Using the marks as a guide to drill a hole 2-1/8"(54mm) through the door face for the lockset, then a hole of 1"(25.4mm) for latch.
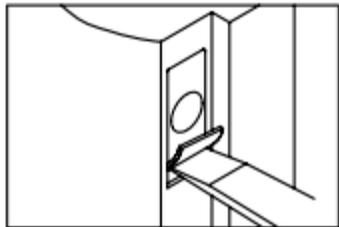
3. Install Latch

a. Insert the latch and ensure it is paralleled to the door face.
   Mark the outline of the faceplate, then take out the latch.

b. Chisel 1/8"(3mm) deep along the outline to allow the faceplate to be aligned with the door edge.

c. Insert the latch and tighten it with screws.
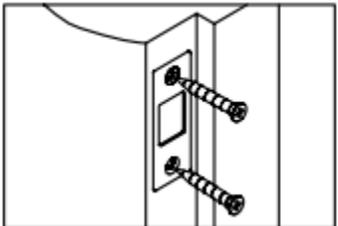   Note: Please use tapping screws for metal door.

4. Install Strike
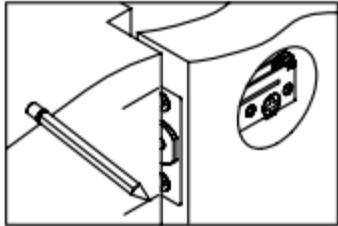
a. To identify the center of strike:
   Close the door, on the basis of the faceplate mark horizontal center line of strike.
   Ensure the center of faceplate and the enter of strike are aligned.
   Use the mark as a guide outlines the strike.

b. Chisel 5/64"(2mm) deep along the strike outline to allow the strike to be aligned with the doorframe.

c. Insert the strike and tighten it with screws.
   Note: please use tapping screws for metal door.

5. Install Keypad Assembly

a. Ensure that the latch bolt is retracted.

b. Please refer to the diagram below for Cylinder Installation.
   Place deadbolt against keypad with tailpiece in horizontal position inserted through hub of the latch.

c. Pass the IC wire under the latch to the interior side of the door.

Cylinder
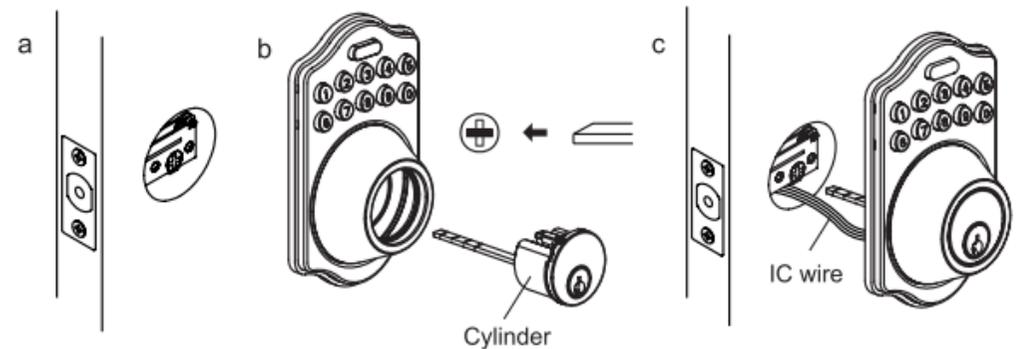
IC wire

6. Install Inside Mounting Plate

Pass the IC wire through the wire hole of the mounting plate.
Fix the mounting plate with screws.
If outside lock assembly is lopsided, please loosen the screws to adjust its position and tighten the screws again.

Mounting Plate

Screws

IC wire
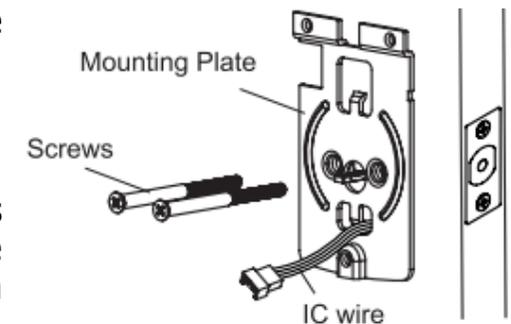
7. Identify Door Handling

Face the door from outside, the door is left handed if the hinge is on the left-hand side of the door, whereas the door is right handed if the hinge is on the right-hand side of the door.
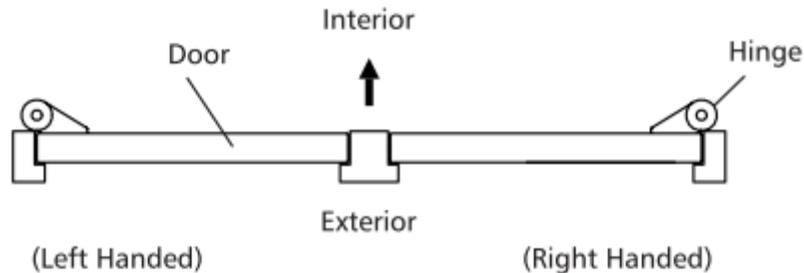

8. Adjust Turn Piece

Turn the turn piece to left for 45 degrees when it's right-handed door.
Turn the turn piece to right for 45 degrees when it's left-handed door.
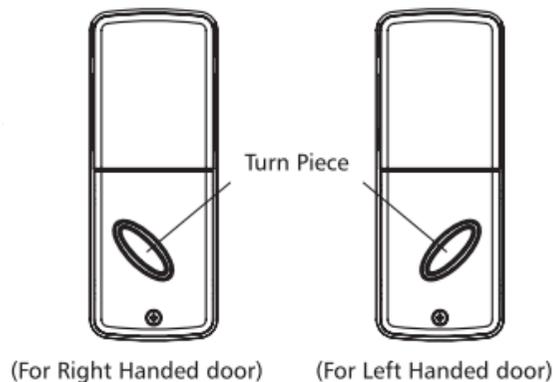
9. Install Receiver Module

a. Remove the battery cover (push it up and pull it out).

b. Connect the IC wire and ensure the tailpiece is engaged with turn piece, then attach receiver module to the door with screws.
It's optional to use wood screws. (Wood screws only for wood door)

c. Insert 4(AA) 1.5V alkaline batteries and put the battery cover back to the receiver module.

1. Programming/Enter Button
Programming/Enter Button is utilized for unlocking the door after entering the user codes, clearing errors and programming the lock. It's also lock button.

2. Number Buttons
Enter the user codes (4-10 digits in length) and program the lock via number buttons.
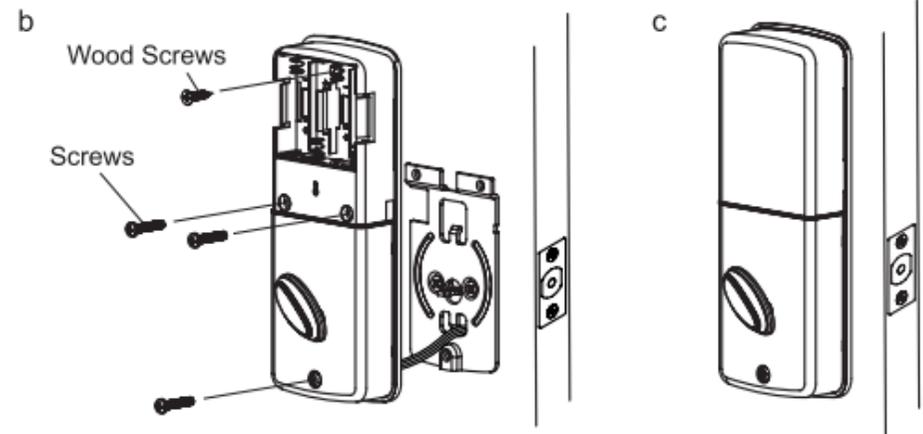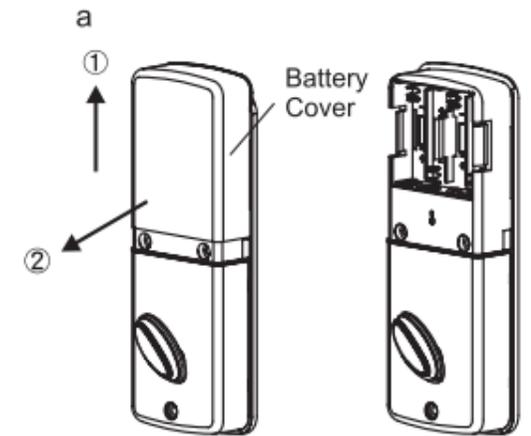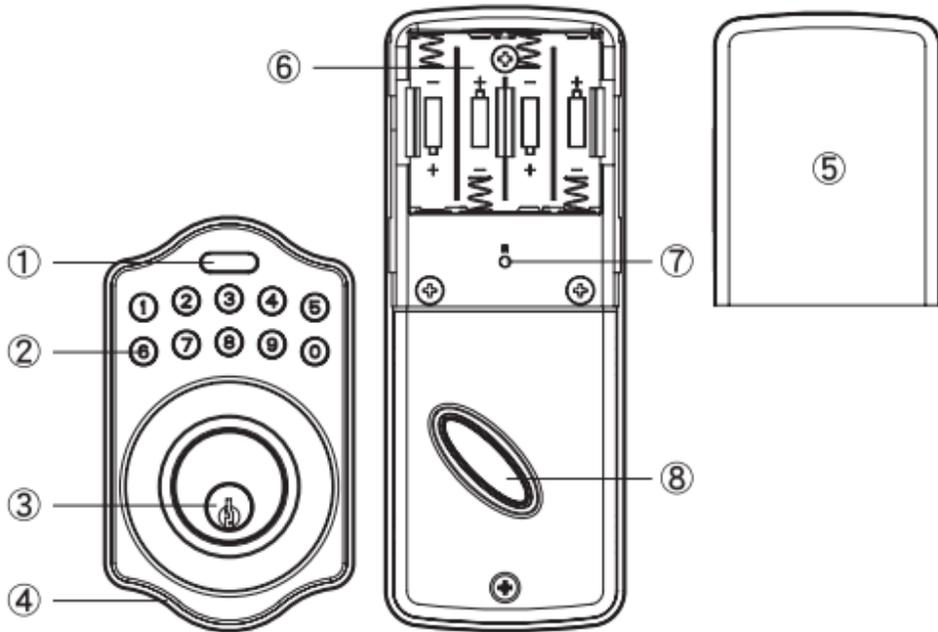
3. Cylinder
Lock or unlock the latch bolt by key from exterior.

4. Washer
Protects the lock from water damage.

5. Battery Lid
Slide the lid to change the batteries or access reset button.

6. Battery Holder
Uses 4 AA (1.5V) alkaline batteries.

7. R Button Holder
Restore default setting.

8. Turn-Piece
Retract/Extend the latch bolt from interior.

III. Pass Code & Function Set up

1. Keep the lock in the unlock position while programming.

2. Run the door-handling identifying process (Refer to programming table) before function set up when installing for first time or restoring default setting.

3. Please change default Programming Code (0000) and User Code (1234) when setting up for the first time.

4. LED flashes orange slowly while programming. Upon a correct input, LED flashes green twice with 2 long beeps. LED flashes red 3 times

   with 3 beeps when incorrect input.(If a mistake is made during programming, wait for 6 seconds or press programming button to clear then program again.)

5. Do not pause longer than 6 seconds while programming or you will need to start again.

6. You can lock/unlock this product by either key override or user code. Please refer to the following programming table for function set up.

IV. Remark

1. We recommend the use of alkaline batteries in order to stabilize the power supply.
2. Do not mix alkaline batteries with regular zinc-carbon ones nor should you mix brands.
3. Do not use any chemical liquid or lubricating oil with additives to clean the lock body, it will damage the surface or even mainboard.

V. Function Programming

Programming Code (PC) , User Code (UC)

1. Detect Left/ Right Hand Door Installation

Enter PC ➡ EZSET ➡ 0 ➡ EZSET

Remark: Before running this program, ensure that the lock is in the unlock position (deadbolt not extended). Please run the door-handing identifying process before programming the lock for the first time or if default settings are restored.

2. Add New User Code

Enter PC ➡ EZSET ➡ 1 ➡ EZSET ➡ Enter New UC ➡ EZSET

Remark: Up to 6 User Codes can be saved. User Code should be 4-10 digits in length.

3. Delete An Existing User Code

Enter PC ➡ EZSET ➡ 2 ➡ EZSET ➡ Enter the UC you want to delete ➡ EZSET

4. Delete All User Code At Once

Enter PC ➡ EZSET ➡ 3 ➡ EZSET

Remark: Auto-locking and keypad locking functionality will be invalid when User Codes are deleted. The Lock can only be operated by key override during that time.

5. Change Programming code

Enter PC ➡ EZSET ➡ 4 ➡ EZSET ➡ Enter New PC ➡ EZSET

6. Toggle Auto-lock On/Off

Enter PC ➡ EZSET ➡ 5 ➡ EZSET

Remark: The preset delay-time is 30 seconds; you can change the time to anything between 10-99 seconds. Repeat the steps to cancel the Auto-locking function.

7. Set Auto-lock Time Delay

Enter PC ➡ EZSET ➡ 6 ➡ EZSET ➡ Enter Seconds (10~99) ➡ EZSET

Remark: 10-99 seconds delay-time available.

8. Toggle Mute On/Off

Enter PC ➡ EZSET ➡ 7 ➡ EZSET

Remark: Repeat same steps to turn beeper On/Off.
LED illumination will still function when mute is On. But there will be no any alarm.

9. Enable/Disable All User Code

`Enter PC` ➡ `EZSET` ➡ ⑧ ➡ `EZSET`

Remark: Auto-locking and keypad locking functionality will be invalid when User Codes are deleted. The Lock can only be operated by key override during that time. Repeat the steps to enable the User Codes again.

10. Create a Disposable User Code

`Enter PC` ➡ `EZSET` ➡ ⑨ ➡ `EZSET` ➡ | Enter new disposable UC | ➡ `EZSET`

Remark: Disposable code will be no longer valid once being used.

11. Include/Exclude to Z-Wave Network

`Enter PC` ➡ `EZSET` ➡ ① ➡ ⓪ ➡ `EZSET`

Remark: If you are not sure if the device has been included, just exclude it first then include. If it has been included or excluded successfully, it will beep twice, and LED will flash green light twice.

12. Restore all preset lock settings

Press ⓡ

Remark: Press "R" button under the battery cover for over 5 seconds. After you hear 3 long beeps, the lock will reset to factor default settings. After resetting, you must run the door-hand identifying process before re-programming.

VI. Z-Wave function

Function	Description
Include	1. Have Z-Wave^{TM} Controller entered inclusion mode. 2. Press the Include/Exclude function in part V 11 section. 3. If included successfully, it will beep twice, and LED flashes green twice.
Exclude	1. Have Z-Wave^{TM} Controller entered exclusion mode. 2. Press the Include/Exclude function in part V 11 section. 3. If excluded successfully, it will beep twice, and LED flashes green twice.
Reset	1. Press the Restore function in part V 12 section
Lock	1. Z-Wave^{TM} Controller use Command Class Door Lock 2. Use Command Door Lock Operation Set 3. Set value to FF, it means door secured.
Unlock	1. Z-Wave^{TM} Controller use Command Class Door Lock 2. Use Command Door Lock Operation Set 3. Set value to 00, it means door unsecured.
• Failed or success in add/remove the node ID can be viewed from Z-Wave^{TM} Controller.	

Notice 1: Always RESET a Z-Wave^{TM} device before trying to add it to a Z-Wave^{TM} network.

VII. Z-Wave^{TM} Message Report

When you lock or unlock the door, the device will report the door lock status as an event to the controller.

* Door Lock Status Report:

When you lock or unlock the door, the device will unsolicited to send the report to the nodes in the group 1.

Door Lock Operation Report (V2)
Unlock Current Door Lock Mode: Door Unsecured=00 Lock Current Door Lock Mode: Door Secured=FF

VIII. Over the Air Firmware Update

The device supports the Z-Wave firmware update via OTA.
Let the Z-Wave^{TM} Controller into the firmware update mode, chose the hex file to update. Wait for 10~15 minutes.
At that time, **_please don't remove the battery_**, otherwise it will cause the firmware to be broken, and the device will not function. Result will show in Z-Wave^{TM} Controller log.

IX. Security Network

The device supports the security function. When the device is included with a security controller, the device will auto switch to the security mode. In the security mode, the follow commands need to use Security CC wrapped to communicate, otherwise it will not response.

    COMMAND_CLASS_VERSION,
    COMMAND_CLASS_DOOR_LOCK,
    COMMAND_CLASS_USER_CODE,
    COMMAND_CLASS_ASSOCIATION_V2,
    COMMAND_CLASS_ASSOCIATION_GRP_INFO
    COMMAND_CLASS_FIRMWARE_UPDATE_MD_V2

X. Z-Wave Supported Command Class

    COMMAND_CLASS_ZWAVEPLUS_INFO,
    COMMAND_CLASS_MANUFACTURER_SPECIFIC,
    COMMAND_CLASS_SECURITY,
    COMMAND_CLASS_DEVICE_RESET_LOCALLY,
    COMMAND_CLASS_BATTERY,
    COMMAND_CLASS_POWERLEVEL
    COMMAND_CLASS_VERSION,
    COMMAND_CLASS_DOOR_LOCK,
    COMMAND_CLASS_USER_CODE,
    COMMAND_CLASS_ASSOCIATION_V2,
    COMMAND_CLASS_ASSOCIATION_GRP_INFO
    COMMAND_CLASS_FIRMWARE_UPDATE_MD_V2

XI. Simple Troubleshooting

1. After the installation of lockset and batteries, the door will not lock and three short beeps are heard when you press the Programming button.

Cause: The door-handling identifying process is not yet complete.
Solution: Please execute the door-handling identifying process as soon as the installation of the lockset is completed.

2. After the installation of the lockset and batteries, there is no response when you press any button (no sounds are heard, and the backlight does not work).

Cause: It could be a problem caused by the batteries or improper connection of the cable.
Solution: Check to see if the battery polarities have been reversed or if the battery is dead. If so, please re-install or change the battery. If not, please check if the cable is appropriately connected.

3. Failure the first time when executing the door-handling identifying process (the red light flashes three times, and three short beeps are heard).

Cause: Wrong door-handling or door-handling in the memory was changed.
Solution: Press the R button to restore the system to factory default setting and re-execute door-handling identifying process.

4. Although the first execution of the door-handling identifying process succeeded, the latch does not work. (It seems that the motor runs but the latch bolt is stuck, and the turn piece inside can be rotated.)

Cause: Low battery.
Solution: Please replace with new batteries.

5. The lock has been functioning normally, but suddenly, the latch bolt locks up, and the turn piece inside cannot be rotated, not even with the key.

Cause: The detection of latch bolt position is abnormal.
Solution: Please take out one battery first, then press any button on the front panel for electric discharge, and put the battery back.
The latch bolt will automatically re-detect its position subsequently.
Warning: If the latch gets stuck frequency, please check if the opening of the strike aims at the central position of the latch bolt, if the latch bolt can extend freely, or if the hinges are deformed or tilted.

6. The door can be locked normally, but three short beeps are heard and the door would not unlock when the user code was entered and the programming button is pressed.

Cause: The functioning of the micro-switch is abnormal.
Solution: Please unlock the door with the keys first and then contact the distributor for inspection and maintenance.

7. While the door is closed, you hear the latch bolt coming out when you press the programming button to lock the door; however, three short beeps are heard. Conversely, while the door is open, no beeps are heard when locking the latch bolt.

Cause: (1) The depth of latch bolt hole is insufficient.
        (2) The latch bolt is not aimed at the opening of the strike.
Solution: (1) Please dig the latch bolt hole for the strike deeper(min. Depth of 2.5 cm).
          (2) Please adjust the strike to the appropriate position.